# Editorial Pages

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

e-ISSN: 2081-9390

Quarterly

published since 01/06/2010 years

Our Dermatol Online

***www.odermatol.com***

**Editor in Chief:**
Piotr Brzeziński, MD PhD
**Address:**
ul. Andersa 5/8, 76200 Słupsk, Poland
tel. 48 692121516, fax.48 598151829
e-mail: **brzezoo77@yahoo.com**

**Publisher:**
Our Dermatology Online
ul. Andersa 5/8, 76200 Słupsk, Poland
tel. 48 692121516, fax.48 598151829
e-mail: **brzezoo77@yahoo.com**

**Indexed in:**

system of opinion of scientific periodicals INDEX COPERNICUS (3,44)
EBSCO
DOAJ (Directory of Open Acces Journals)
Geneva Foundation for Medical Education and Research (GFMER)
International Committee of Medical Journal Editors (ICMJE)
Bielefeld Academic Search Engine (BASE)
NewJour
Google Scholar
Open J-Gate
WorldCat
e-journal
WorldWideScience.org

| | | |
|---|---|---|
| **Previous website:** | since issue 1.2010 to issue 2.2010 | **www.ndermatol.like.pl** |
| | since issue 2.2010 to issue 3.2011 | **www.odermatol.like.pl** |
| | since issue 4.2011 | **www.odermatol.com** |
| **Previous shortcut:** | since issue 1.2010 to issue 3.2011 | **N Dermatol Online** |
| | since issue 4.2011 | **Our Dermatol Online** |

## Editorial Board:

# CONTENTS

DOI: 10.7241/ourd.20122.17

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# A STUDY ON THE CUTANEOUS MANIFESTATIONS OF DIABETES MELLITUS

## BADANIA NAD SKÓRNYMI MANIFESTACJAMI CUKRZYCY

Neerja Puri

*Consultant Dermatologist, Punjab Health Systems Corporation, India*

**Corresponding author:** Dr. Neerja Puri neerjaashu@rediffmail.com

Our Dermatol Online. 2012; 3(2): 83-86
Date of submission: 02.12.2011 / acceptance: 13.01.2012
Conflicts of interest: None

**Abstract**
The cutaneous manifestations of diabetes mellitus are varied. We conducted a study of fifty patients having diabetes mellitus coming from the department of dermatology and medicine. The commonest cutaneous feature of diabetes were pyodermas seen in 40% patients, dermatophytosis seen in 36% patients, pruritis diabetic thick skin seen in 20 % patients, diabetic dermopathy seen in 16% patients, diabetic bulla and rubeosis seen in 8% patients each and meralgia paraesthetica and diabetic foot seen in 4% patients each. About the associations of diabetes mellitus, achrchordons were seen in 8% patients, vitiligo and perforating dermatoses were seen in 6% patients each, granuloma annulare, eruptive xanthomas, acanthosis nigricans, necrobiosis lipoidica and oral lichen planus were seen in 4 % patients each and xanthelasma was seen in 2% patients.

**Streszczenie**
Skórne manifestacje cukrzycy są zróżnicowane. Przeprowadziliśmy badania pięćdziesięciu pacjentów, chorych na cukrzcę z odziału dermatologii i medycyny. Najczęstszą skórną cechą cukrzycy były piodrmie - 40% pacjentów, grzybice - 36% pacjentów, pruritis diabetic thick skin - 20% chorych, dermatopatia cukrzycowa - 16% chorych, cukrzycowe pęcherze i rumień - 8% pacjentów oraz meralgia paraesthetica i stopa cukrzycowa - 4% pacjentów. Towarzyszące cukrzycy achrochordons obserwowano u 8% pacjentów, bielactwo i dermatozy perforacyjne obserwowano u 6% pacjentów, ziarniniak obrączkowaty, wysiewne kępki żółte, acanthosis nigricans, necrobiosis lipoidica i oral lichen planus obserwowano u 4% pacjentów oraz xanthelasma obserwowano u 2% pacjentów.

**Key words:** diabetes mellitus; microvascular; insulin; metabolic; dermatosis
**Słowa klucze:** cukrzyca; mikrokrążenie; insulina; metabolizm; dermatozy

## Introduction

Diabetes mellitus is a worldwide problem and the most common endocrine disorder [1]. Its prevalence is increasing in the present scenario of a sedentary lifestyle in the general population. Abnormalities of insulin and elevated blood glucose level lead to metabolic, vascular, neurological and immunological abnormalities. Affected organs include the cardiovascular, renal and nervous systems, eyes and the skin. The skin is affected by both the acute metabolic derangements and the chronic degenerative complications of diabetes [2]. Although the mechanism for many diabetes associated skin conditions remains unknown, the pathogenesis of others is linked to abnormal carbohydrate metabolism, other altered metabolic pathways, atherosclerosis, microangiopathy, neuron degeneration and impaired host mechanisms [3]. The association of certain skin diseases with diabetes mellitus has been fairly well recognized with an incidence rate ranging from 11.4 to 71% [4,5]. Skin manifestations in diabetes mellitus are common and expressed in numerous forms. If one considers metabolic effects on microcirculation and changes in skin collagen, prevalence approaches 100 percent [6]. Findings range from the presenting manifestations of the disease to signs of long term involvement, from the mundane to indications of serious, even life threatening problems.

## Materials and Methods

Fifty patients having diabetes mellitus coming from the department of dermatology and medicine were taken up for the study. A detailed history was elicited in each case with particular reference to cutaneous complaints and including details regarding duration, history of evolution, progression and treatment modalities, if any. A detailed dermatological examination, serum cholesterol, liver and kidney function tests and electrocardiogram were carried out. Assessment of diabetic retinopathy was done by an opthamologist. Assessment of diabetic neuropathy was done on the basis of the criteria detailed by Foster [7]. Relevant microbiological and histopathological investigations were carried out to confirm the clinical diagnosis.

## Results (Tabl. I-III)

The data was collected and the results were analyzed.

| SR NO | Duration of disease (yrs) | No of patients | Percentage |
|---|---|---|---|
| 1 | < 1 | 8 | 16 |
| 2 | 1-2 | 10 | 20 |
| 3 | 2-5 | 24 | 48 |
| 4 | >5 | 8 | 16 |
| | **Total** | 50 | 100 |

**Table I. Duration of diabetes mellitus**

| SR NO | Associations | No of patients | Percentage |
|---|---|---|---|
| 1 | oral lichen planus | 2 | 4 |
| 2 | vitiligo | 3 | 6 |
| 3 | perforating dermatoses | 3 | 6 |
| 4 | granuloma annulare | 2 | 4 |
| 5 | eruptive xanthomas | 2 | 4 |
| 6 | achrochordons | 4 | 8 |
| 7 | acanthosis nigricans | 2 | 4 |
| 8 | necrobiosis lipoidica | 2 | 4 |
| 9 | xanthelasma | 1 | 2 |

**Table II. Associations of diabetes mellitus**

| SR NO | Associations | No of patients | Percentage |
|---|---|---|---|
| 1 | dermatophytosis | 18 | 36 |
| 2 | candidiasis | 6 | 12 |
| 3 | pyodermas | 20 | 40 |
| 4 | pruritis | 14 | 28 |
| 5 | diabetic dermopathy | 8 | 16 |
| 6 | meralgia paraesthetica | 2 | 4 |
| 7 | diabetic bulla | 4 | 8 |
| 8 | rubeosis | 4 | 8 |
| 9 | diabetic thick skin (finger pebles) | 10 | 20 |
| 10 | diabetic foot | 2 | 4 |
| 11 | nail changes | 12 | 24 |

**Table III. Cutaneous features of diabetes mellitus**

## Discussion

In our study, the majority of patients were between 41- 50 years and the mean age of patients was 42.5 years. Females outnumbered males and female:male ratio was 2.57:1. Regarding the duration of diabetes mellitus 16% patients had duration of diabetes less than 1 year, 20% patients had duration of diabetes less than between 1 – 2 years, 48% patients had duration of diabetes less than between 2 – 5 years and 16% patients had duration of diabetes more than between 5 years. 96% patients had Non insulin dependent diabetes mellitus (NIDDM) and 4% patients had insulin dependent diabetes mellitus (IDDM). The commonest cutaneous feature of diabetes were pyodermas (Fig. 1) seen in 40% patients, dermatophytosis seen in 36% patients (Fig. 2), pruritis diabetic thick skin seen in 20 % patients, diabetic dermopathy (Fig. 3) seen in 16% patients, diabetic bulla (Fig. 4) and rubeosis seen in 8% patients each and meralgia paraesthetica and diabetic foot (Fig. 5) seen in 4% patients each. About the associations of diabetes mellitus, achrochordons were seen in 8% patients, vitiligo and perforating dermatoses were seen in 6% patients each, granuloma annulare, eruptive xanthomas, acanthosis nigricans, necrobiosis lipoidica and oral lichen planus were seen in 4 % patients each and xanthelasma was seen in 2% patients.

In majority of diabetics, the duration of disease was less less than 6 years. As the duration of diabetes increases, there is non enzymatic glycosylation of dermal collagen and mucopolysacharides, leading to various cutaneous manifestations [8]. Uncontrolled diabetes increases the risk of development of micoangiopathy and related complications or sequelae [9,10]. From the foregoing account, we conclude that the skin is involved in diabetes quite often and whenever patients present with multiple skin manifestations, their diabetics status should be checked and controlled; or if they are obese, a high index of suspicion should be kept regarding their diabetic status [11,12]. The recognition of these findings is the key to treatment and prevention.

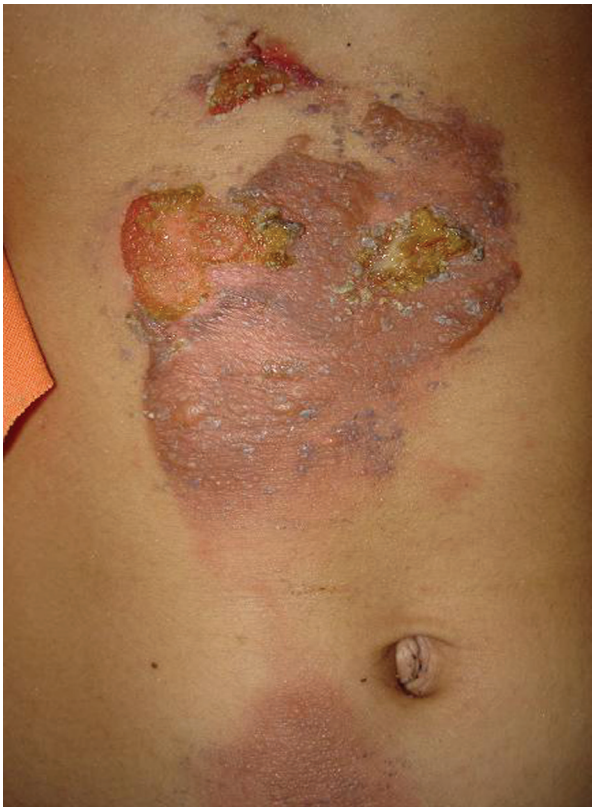


**Figure 1. Pyoderma on the abdomen of a 30 years old female**

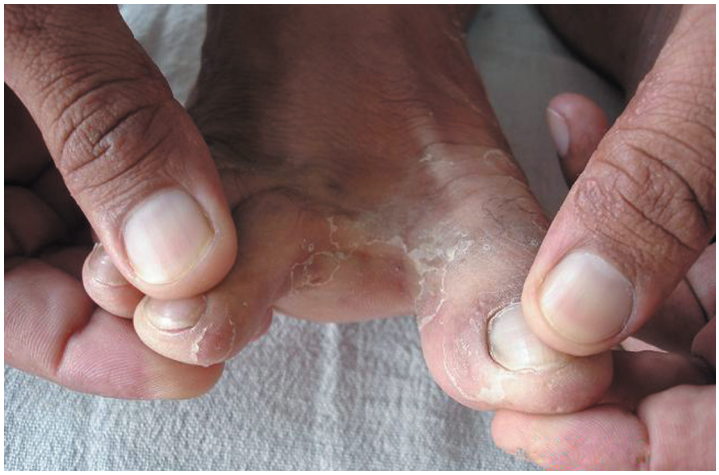


**Figure 2. Candidal intertrigo of toe webs in a 40 year male**

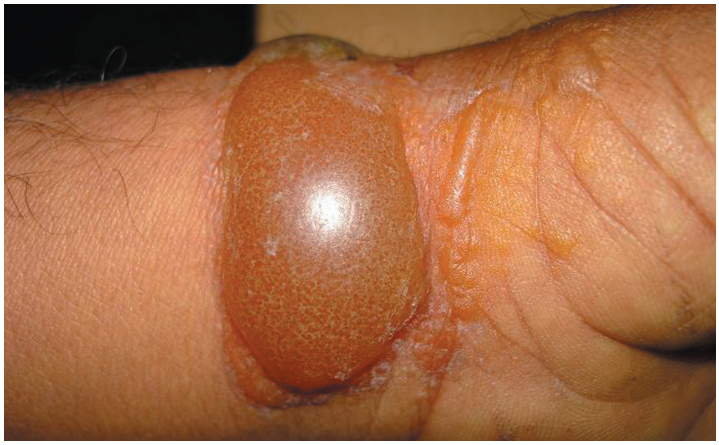


**Figure 3. Diabetic bulla in a 47 year old male**

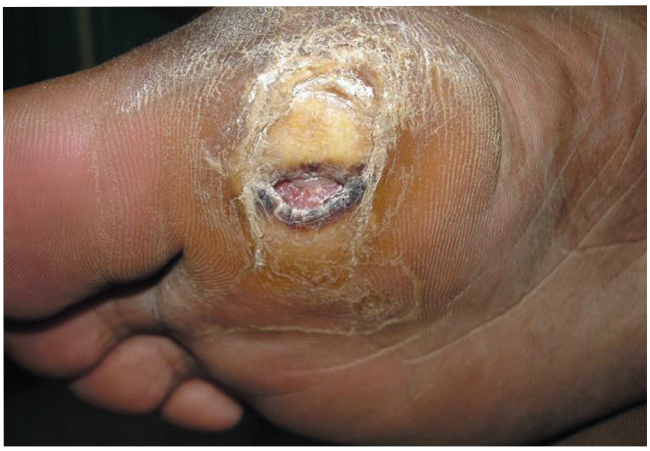


**Figure 4. Diabetic foot ulcer in a 52 year male**

Diabetes mellitus is a common condition which frequently has skin manifestations. The attachment of glucose to protein may result in aprofound effect on structure and function of that protein, and account for clinical manifestations of the disease [13,14]. It has been suggested that increased crosslinking of collagen in diabetic patients is responsible for the fact that their skin is generally thicker than that of non-diabetics. Advanced glycosylation end products are probably responsible for yellowing of skin and nails [15]. Increased viscosity of blood due to stiff red blood cell membranes results in engorgement of the post-capiliary venules in the papillary dermis,detected as erythema of the face, or periungual erythema. It is suggested that these skin changes may eventually be used as a reflection of the patient's current as well as past metabolic status [16,17].

Candida infection of the web spaces usually involves the 3-4 web space of the hands or the 4-5 web spaces of the toes. This area has a tendency to retain moisture due to occlusion from apposing surfaces of skin. Presumably the increased sugar content of the skin encourages the establishment of this infection. The clinical appearance is awhite patch of skin, often with central peeling. Toe web space involvement is often mistaken for a dermatophyte infection, but the diagnosis can be confirmed on potassium hydroxide preparation [18]. Toe web space infections may lead to inflammation and fissuring that can serve as a portal of entry for bacterial infection in a compromised diabetic foot [19]. The oxygen demand of the subsequent inflammation may exceed the ability of the diabetic microcirculation, leading to gangrene. It is for that reason that tines pedis should be aggressively manged in patients with neurovascular compromise. Involvement of the toe nails by dermatophytes is common among elderly diabetics as it is in the population at large. The infection itself is of little consequence, but the nail dystrophy which results may make proper nail care more difficult for the patient. Thickening of skin of the hand is a common occurrence, with a range of manifestation from simple pebbling of the knuckes to the diabetic hand syndrome [20]. The diabetic hand syndrome consists of thickened skin over the dorsum of the digits and limited joint mobility, especially of the interphalangeal joints.

The earliest desription of this phenomenon was apparently the observation that insulin-dependent diabetes was occasionally complicated by painful stiff hands [21]. More common is simple thickening, and some have demonstrable involvement of the dorsum of the feet. Clinical clues which suggest such a athickening include difficulty in tenting the skin, pebbled or rough skin on the knuckles or periungual region, and decreased skin wrinkiling following immersion in water [22]. Atrophic hyperpigmented macules on the shins, so called diabetic dermopathy, has been termed the most common cutaneous finding in diabetes [23]. It is usually noted as irregularly round or oval, circumscribed, shallow lesions vary in number from few to many, which are usually bilateral but not symmetrically distributed. They are asymptomatic and often overlooked. Diabetic dermopathy probably represents post-traumatic atrophy and post-inflammatory hyperpigmentation in poorly vascularized skin [24]. Another curious phenomenon in diabetes mellitus is the spontaneous appearance of blisters on the extremities. These lesions are not the result of trauma or infection. They tend to heal without treatment. From the foregoing account, we conclude that the skin is involved in diabetes quite often and whenever patients present with multiple skin manifestations, their diabetic status should be checked and controlled; or if they are obese, a high index of suspicion should be kept regarding their diabetic status. The recognition of these findings is the key to treatment and prevention.

## REFERENCES


1. Jennifer L, John E: Diabetes mellitus. In: Irvin MF, Arthur Z, Klaus W, Austen KF, Goldsmith LA, Katz SI, editors. Dermatology in general medicine, 6th ed. Mc Graw Hill. Medical publishing Division: New York; 2003. p:1651-61.
2. Mahajan S, Koranne RV, Sharma SK: Cutaneous manifestations of diabetes mellitus. Indian J Dermatol Venereol Leprol 2003; 69: 105-108.
3. Yosipovitch G, Hodak E, Vardi P, Shraga J, Karp M, Sprecher E, et al: The prevalence of cutaneous manifestations in IDDM patients and their association with diabetes risk factors and microvascular complications. Diabetes care 1998; 21: 506-509.
4. Nigam PK, Pande S: PAtern of dermatoses in diabetes. Indian J Dermatol Venereol Leprol 2003; 69: 83-85.
5. Wahid Z, Kanjee A: Cutaneous manifestations of diabetes mellitus. J Pak Med Assoc 1998; 48: 304-305.
6. Romano G, Moretti G, Di Benedetto A, Giofre C, Di Cesare , Russo G, et al: Skin lesions in diabetes mellitus: Prevalence and clinical correlation. Diabetes Res Clin Pract 1998; 39: 101-106.
7. Foster DW: Diabetes mellitus. In, Harrisons principles of internal medicine. eds Braunwald E, Isseblacher K J, Petersdorf R J, Wilson JD, MacGraw- Hill, New York 1987, 1791-1793.
8. Alteras I, Saryt E: Prevalence of pathogenic fungi in the toe webs and the nails of diabetic patients. Mycopathologica 1979;67: 157-159.
9. Sawhney MP, Tutakne MP, Rajpathak SD: Clinical study of diabetic dermangiogathy. Indian J Dermatol Venereol Leprol 1996; 56: 18-21.
10. Shemer A, Bergman R, Linn S, Kantor Y, Friedman–Birnbaum R: Diabetic dermatopathy and internal complications in diabetes mellitus. Int J Dermatolo 1998; 37: 113-115.
11. Giligor RS, Lazarus GS: Skin manifestations of diabetes mellitus. In , Diabetes Mellitus, eds Rifkin H, RAskin P, Brady co, Louana 1981, 313.321.
12. Perez MI, Kohn SR: Cutaneous manifestations of diabetes mellitus. J Am Acad Dermatol 1982; 7: 427-455.
13. Huntley AC: The cutaneous manifestations of diabetes mellitus Am Acad Dermatol 1982; 7; 427-455.
14. Sehgal VN, Sanker P: Some aspects of skin diseases and diadetes mellitus. Indian J Dermatol Venereal 1965; 31: 264-269.
15. Delbridge L, Ellis CS, Roberston K, Lequesne LP: Non-enzymatic glycosylation of keratin from the stratum corenum of the diabetic foot. Br J Dermatol 1985: 112: 547-554.
16. Feeringer T, Miler F: 3rd . Cutaneous manifestations of diabetes mellitus. Dermatol Clin 2002; 20: 483-492.
17. Roo GS, Poi GS: Cutaneous manifestations of diabtes mellitus: a clinical study. Indian J Dermatol Venereal Leprol 1997; 63: 232-234.
18. Lugo-Somolinos A, Sanchez JL: Prevalence of dermatophytosis in patients with diabetes. J Am Acad Dermatol 1991; 26: 408-410.
19. Altereas I, Saryt E: Prevalence of Pathogenic fungi in the toe-webs and toe-nails of diabetic patients. Mycopathologia 1979; 67: 157-159.
20. Collier A, Matthews AM, Kellett HA, Clarke BF, Hunter JA: change in skin thickness associated with cheiroarthropathy in insulin dependent diabetes mellitus. Br Med J 1986; 292: 93-96.
21. Lundbaek, K: Stiff hands in long term diabetes. Acta Med Scand 1957; 158: 447-451.
22. Fitzcharles MA, Duby S, Wadeel RW, Banks E, Karsh J: Limitation of joint mobility in adult noninsulin-dependent diabetic patients. Arm rheum Dis 1984; 43: 251-257.
23. Sawhney MP, Tutakne MP, Rajpathak SD: Clinical study of diabetic dermagiopathy. Indian J Dermatol Venerol Leprol 1996; 56: 18-21.
24. Shemera A, Bergman R, Linn S, Kantor Y: Diabetic dermopathy and internal complications in diabetes mellitus. Int J Dermatol 1998; 37: 113-135.

*DOI: 10.7241/ourd.20122.17.1*

# A STUDY ON THE CUTANEOUS MANIFESTATIONS OF DIABETES MELLITUS

by Neerja Puri

comment:
Dr. Al-Mashaleh Manal Sulaiman

Our Dermatol Online. 2012; 3(2): 87

Date of submission: 02.02.2012 / acceptance: 05.02.2012
Conflicts of interest: None

Nearly one-third of diabetic patients have some type of dermatologic manifestation [1]. With time, the skin of all diabetic patients is affected in some form or another. Dermatologic manifestations of the disease can range from the more benign granuloma annulare to the more sinister diabetic ulcer [2]. Cutaneous signs of DM are extremely valuable to the clinician. For example, diabetic bullae, diabetic dermopathy, necrobiosis lipoidica diabeticorum, and the scleroderma-like syndrome of waxy skin with limited joint mobility can alert the physician to the diagnosis of diabetes. Eruptive xanthomas reflect the status of glucose and lipid metabolism. Cutaneous signs appear to be closely linked to increased glycosylated haemoglobin, an indicator of poor control of blood glucose levels [3]. The importance of cutaneous manifestations in diabetic patients is highlighted by Puri in an elegant study published in our journal. The author had looked thoroughly into the prevalence and pattern of cutaneous manifestations in diabetic patients and its correlation to disease duration and status, the author also mentioned other rare cutaneous diseases and its relation to diabetes mellitus. As emphasized in the article recognition of these findings is a key for treatment and prevention. This article will add more awareness and benefits to the physician and patient toward better health and clinical outcome.

**REFERENCES**

1. Perez MI, Kohn SR: Cutaneous manifestations of diabetes mellitus. J Am Acad Dermatol. 1994; 30: 519-531; quiz 532-534.
2. Meurer M, Stumvoll M, Szeimies RM: [Skin changes in diabetes mellitus]. Hautarzt. 2004; 55: 428-435.
3. Shahzad M, Al Robaee A, Al Shobaili HA, Alzolibani AA, Al Marshood AA, Al Moteri B: Skin manifestations in diabetic patients attending a diabetic clinic in the Qassim region, Saudi Arabia. Med Princ Pract. 2011; 20: 137-141.

*Correspondence:*

Dr. Al-Mashaleh Manal Sulaiman
King Hussein Medical Center, Royal Medical Services, Amman, Jordan

*E-mai: manal_mashaleh@yahoo.com*

DOI: 10.7241/ourd.20122.18

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# A STUDY ON THE CLINICAL AND HORMONAL PROFILE OF THE PATIENTS WITH HIRSUTISM

BADANIA NAD KLINICZNYM I HORMONALNYM PROFILEM PACJENTÓW Z HIRSUTYZMEM

Neerja Puri

*Consultant Dermatologist, Punjab Health Systems Corporation, India*

**Corresponding author:** Dr. Neerja Puri *neerjaashu@rediffmail.com*

Our Dermatol Online. 2012; 3(2): 88-91

Date of submission: 02.12.2011 / acceptance: 12.01.2012

Conflicts of interest: None

**Abstract**

Hirsutism is the presence of terminal hairs in a male-like pattern in females, due to elevated male hormone levels. Females with hirsutism are often overweight and have metabolism disturbances as insulin resistance and impaired glucose tolerance. We selected fifty patients of hirsutism from the department of dermatology for the study. A thorough physical examination with specific emphasis on signs of virilization (including frontal baldness, loss of female body contours, increased muscularity, acne, clitoromegaly, and atrophy of breast) was done in all the patients.

**Streszczenie**

Hirsutyzm to obecność u kobiet męskiego typu owłosienia, ze względu na podwyższony poziom hormonów męskich. Kobiety z hirsutyzmem mają często nadwagę i zaburzenia przemiany materii, takie jak oporność na insulinę i upośledzenie tolerancji glukozy. Wybraliśmy pięćdziesięciu chorych z hirsutyzmem z oddziału dermatologii do badania. U wszystkich pacjentów zostało wykonane dokładne badanie fizykalne ze szczególnym naciskiem na objawy wirylizacji (w tym przednie łysienie, utrata kobiecego konturu ciała, przyrost mięśni, przerost łechtaczki, trądzik i zanik piersi).

**Key words:** Ferriman-Gallwey scoring; hirsutism; polycystic ovaries; terminal hairs; androgen

**Słowa klucze:** punktacja Ferriman-Gallwey; hirsutyzm; zespół policystycznych jajników; włosy terminalne; androgen

## Introduction

Hirsutism is defined as male-pattern growth of terminal body hair in women in androgen-stimulated locations such as face, chest, and areolae [1]. Hirsutism can be classified broadly into 2 groups viz. androgen induced and non-androgen induced [2,3]. Androgen induced can either be due to excessive endogenous androgen production (ovarian/ adrenal) or exogenous due to drugs. Central over production of androgens, increased peripheral conversion of androgens, decreased metabolism and enhanced receptor binding are potential causes of hirsutism [4,5]. Non-androgen induced hirsutism can be idiopathic, familial or drug induced.

Other accompanying signs and symptoms of hyperandrogenism include acanthosis nigricans, obesity, pelvic mass, signs or symptoms of virilization, features of Cushing's syndrome, acne, increased sebaceous activity and alopecia [6]. The modified Ferriman-Gallwey (F-G) score is used to determine the severity of hirsutism by assessing the extent of hair growth in nine key anatomical sites [7]. Simple laboratory measurement of total and free testosterone, dehydroepiandrosterone sulfate, and androstenedione identifies about half of the patients with hyperandrogenism. The rate, pattern and distribution of hair growth at these sites is influenced by various factors including an individual's genetic makeup and hormonal status. A disturbance in the complex interaction between these factors can lead to a male pattern of hair growth in a female [8,9]. Hirsutism may be idiopathic, i.e. secondary to increased responsiveness of the hair follicles to normal circulating levels of androgens, or it may result from an excess of androgens and other hormones. The source of the excess androgens may be either the ovaries, the adrenals or increased peripheral conversion of weak androgenic hormones to more potent ones [10].

## Materials and Methods

We selected fifty patients of hirsutism from the department of dermatology for the study. Specific points recorded in the history included: age of onset, duration, rate of progression of the disease, marital status of the patient and the presence of symptoms of virilization (i.e. deepening of voice, thinning of scalp hair, increased muscularity, increased sebum production, acne, decreased breast size, and oligomenorrhoea). A complete physical assessment including height, weight and body mass index was done in

all the patients. Family history of the disease and history of psychiatric illness and its treatment were also specifically sought for. The levels of serum testosterone, sex hormone binding globulins, luteinizing hormone (LH), follicle stimulating hormone (FSH), prolactin, cortisol and abdominal and pelvic ultrasound for adrenals and ovaries were carried out in all the patients. Thyroid function tests, growth hormone level, dehydroepiandrosterone sulfate. A thorough physical examination with specific emphasis on signs of virilization (including frontal baldness, loss of female body contours, increased muscularity, acne, clitoromegaly, and atrophy of breast) was done in all the patients. Ultrasound assessment was done in all the patients to rule out any polycystic ovarian disease.

**Aims**

1. To study the clinical, biochemical and hormonal profile of the patients with hirsutism.
2. To study the various associated features of patients with hirsutism.

**Results** (Tabl. I-III)

The data was collected and the results were analyzed statistically.

| SR NO | Causes of hirsutism | Number | Percentage |
|---|---|---|---|
| 1 | Idiopathic hirsutism | 25 | 50 |
| 2 | Polycystic ovarian disease | 20 | 40 |
| 3 | Congenital adrenal hyperplasia | 1 | 2 |
| 4 | Hypothyroidism | 4 | 8 |

**Table I. Various causes of hirsutism**

| SR NO | Associations | Number | Percentage |
|---|---|---|---|
| 1 | obesity | 10 | 20 |
| 2 | acne | 19 | 38 |
| 3 | striae | 9 | 18 |
| 4 | acanthosis nigricans | 7 | 14 |
| 5 | androgenetic alopecia | 8 | 16 |
| 6 | menstrual irregularities | 11 | 22 |

**Table II. Various associations of hirsutism**

| SR NO | Ultrasonographic findings | Number | Percentage |
|---|---|---|---|
| 1 | normal | 30 | 60 |
| 2 | unilateral cysts | 12 | 24 |
| 3 | bilateral cysts | 6 | 12 |
| 4 | bilaterally enlarged ovaries with multiple cysts | 2 | 4 |
| 5 | adrenal pathology on ultrasound | 1 | 2 |

**Table III. Ultrasonographic findings of the patients with hirsutism**

## Discussion

The mean age of presentation was 22.4= 2.48 years. Total and free testosterone and 17 hydroxy progesterone was higher in the patients with PCOD (p value < 0.05). Average Ferriman Gallway score was 11.8. Family history of hirsutism was present in 14% patients. The face was the most common site, while the chest and abdomen were the next most common sites. Serum testosterone levels were raised in two patients, one of whom had PCOD and the other had Idiopathic hirsutism. The LH/FSH ratio was elevated (>2) in four patients. All of them had PCOD. Serum Prolactin was increased in eight patients. Of these, two patients had hypothyroidism, three patients had PCOD, and three had idiopathic hirsutism. One patient had elevated 17-hydroxyprogesterone levels and DHEAS. This patient was diagnosed as having congenital adrenal hyperplasia.

Regarding the causes of hirsutism, idiopathic hirsutism was seen in 50% patients, PCOD was seen in 40% patients, hypothyroidism was seen in 8% patients and congenital adrenal hyperplasia was seen in 2% patients. The commonest associated abnormality seen with hirsutism was acne seen in 38% patients, menstrual irregularities were seen in 22% patients, obesity was seen in 20% patients, striae in 18% patients, androgenetic alopecia was seen in 16% patients and acanthosis nigricans was seen in 14% patients. The ultrasonographic findings were normal in 60% patients, PCOD was seen in 40% patients with 24 % patients showing unilateral cysts, 12% patients showing bilateral cysts, bilaterally enlarged ovaries with multiple cysts were seen in 4 % patients and adrenal pathology on ultrasound was seen in 2% patients.

About five percent of women in the reproductive age group in the general population are hirsute, while about 25% of normal young women have

some terminal hair in the face, areola or lower abdomen. The growth of terminal hair in male pattern is determined by the androgens and the intrinsic potential of the hair follicles to respond to the hormonal changes [11,12].

The sensitivity of the hair follicle to androgens is largely governed by the alpha reductase activity in the skin, which is responsible for the conversion of testosterone to dihydrotestosterone. The severity of hirsutism does not correlate well with the level of androgens, because the response of the androgen dependent hair follicle varies considerably within and between individuals. The source of testosterone in a female is the ovaries and the adrenals. Androgen dependent hirsutism may be caused by disorders affecting the adrenals or ovaries, exogenous administration of androgens or a combination of these factors [13,14]. Approximately half the women with mild hirsutism (FG score of 8-15) have idiopathic hirsutism. The most common identifiable cause of hyperandrogenic hirsutism appears to be polycystic ovarian syndrome [15,16]. Insulin resistance with compensatory hyperinsulinemia has been associated with PCOD and is thought to contribute to other features of the metabolic syndrome. Hyperandrogenism has been found to manifest clinically by frontal balding, acne, hirsutism, and clitoromegaly [17].

FG used a scoring system loosely based on that of Garn, evaluating 11 body areas, including the upper lip, chin, chest, upper back, lower back, upper arm, forearm, upper and lower abdomen, thighs and lower legs. A score of 0–4 was assigned to each area examined, based on the visual density of terminal hairs, such that a score of 0 represented the absence of terminal hairs, a score of 1 minimally evident terminal hair growth, and a score of 4 extensive terminal hair growth [18]. Terminal hair hairs can be distinguished clinically from vellus hairs primarily by their length (i.e. >0.5 cm), coarseness, and pigmentation. In contrast, vellus hairs generally measure <0.5 cm in length, are soft and non-pigmented. Biologically active free testosterone is responsible for hair growth and is regulated by sex hormone-binding globulin. The causes of androgenic hirsutism can be exogenous due to drugs (testosterone, dehydroepiandrosterone sulfate, danazol, corticotropin, high-dose corticosteroids, metyrapone, phenothiazine derivatives, anabolic steroids, androgenic progestin, and acetazolamide) or excess endogenous androgen of adrenal or ovarian origin [19,20]. Various causes of ovarian hyperandrogenism are PCOD and virilizing ovarian neoplasia (Luteoma of pregnancy, arrhenoblastomas, leydig cell tumors, hilar cell tumors, thecal cell tumors, etc.). However, PCOD alone accounts for 75-80% cases of hyperandrogenism [21]. Clinically the most common sign of hyperandrogenism in PCOD is hirsutism. The prevalence of hirsutism in PCOD varies between 17% and 83% [22]. Since gonadotrophins are released in a pulsatile manner their concentration varies over the menstrual cycle and a single measurement of LH and/or FSH may not be a sensitive method for diagnosis. Adrenal hyperandrogenism is uncommon and seen in congenital adrenal hyperplasia, late-onset adrenal hyperplasia, Cushing's syndrome, pituitary adenomas that produce excess corticotropin or prolactin and acromegaly. Other less common causes include anorexia nervosa, hypothyroidism and porphyria. Idiopathic hirsutism, also called simple or peripheral hirsutism, is diagnosable in women who have normal ovulatory function and normal androgen profile. Only 5-15% of hirsute women qualify for this diagnosis by these criteria [23].

## Conclusions

Thus, our data shows that PCOS is the commonest cause of hirsutism in our clinical practice and that it is prominent among young obese females, which reflects the worldwide pattern. Our findings call for an early intervention strategy to prevent or reduce metabolic syndrome in this subgroup of the population. Further prospective studies on a larger scale are needed, however, to verify our findings.

## REFERENCES


1. Erkkola R, Ruutianen K: Hirsutism: definition and etiology. Ann Med 1990; 22: 99-103.
2. Hatch R, Rosenfield RL, Kim MH, Tredway D: Hirsutism: implications, etiology and management. Am J Obstet Gynecol 1981; 140: 815-830.
3. Brooksbank BW: Endocrine aspects of Hirsutism. Physiol Rev 1961; 41: 623-676.
4. Conway GS, Honour JW, Jacobs HS: Heterogeneity of the polycystic ovary syndrome: Clinical, endocrine and ultrasound features in 556 patients. Clin Endocrinol (Oxf) 1989; 30: 459-70.
5. Mckenna TJ: Hirsutism and polycystic ovary syndrome. In: Grossman A, editor. Clinical Endocrinology. London: Blackwell Scientific; 1992. p. 691-712.
6. Moran C, Tapia MC, Hernandez E, Vazquez G, Garcia-Hernandez E, Bermudez JA: Etiological review of hirsutism in 250 patients. Arch Med Res 1994; 25: 311-314.
7. Ferriman D, Gallwey JD: Clinical assessment of body hair growth in women. J Clin Endocrinol Metab 1961; 21: 1440-1447.
8. Barth JH, Catalan J, Cherry CA, Day A: Psychological morbidity in women referred for treatment of hirsutism. J Psychosom Res 1993; 37: 615-619.
9. The Rotterdam ESHRE /ASRM -sponsored PCOS Consensus Workshop Group. Revised 2003 consensus on diagnostic criteria and long term health risks related to polycystic ovary syndrome. Feril Steril 2004; 81: 19-25.
10. Gatee OB, Al-Attia HM, Salama IA: Hirsutism in the United Arab Emirates: a hospital study. Postgrad Med J 1996; 72: 168-71.
11. Carmina E, Rosato F, Janni A, Risso M, Longo RA: Relative prevalence of different androgen excess disorders in 950 women referred because of clinical hyperandrogenism. J Clin Endocrinol Metab 2006; 91: 2-6.
12. Azziz R, Sanchez LA, Knochenhauer ES, Moran C, Lazenby J, Stephens KC, et al: Androgen excess in women: Experience with over 1000 consecutive patients. J Clin Endocrinol Metab 2004; 89: 453-462.
13. Ehrmann DA: Polycystic ovary syndrome. N Engl J Med 2005; 32: 773-777.
14. Azziz R, Carmina E, Sawaya ME: Idiopathic hirsutism. Endocr Rev 2000; 21: 347-362.
15. Azziz R, Woods KS, Reyna R, Key TJ, Knochenhhauer ES, Yildiz BO: The prevalence and features of the polycystic ovary syndrome in an unselected population J Clin Endocrinol Metab 2004; 89: 2745-2749.
16. Balen AH, Coway GS, Kaltsas G, Techatrasak K, Manning PJ, West C, et al:. Polycystic ovary syndrome: the spectrum of the disorder in 1741 patients. Hum Reprod 1995; 10: 2107-2111.

17. Barbieri RL, Ryan KJ: Hyperandrogenism, insulin resistance, and acanthosis nigricans syndrome: a common endocrinopathy with distinct pathophysiologic features. Am J Obstet Gynecol 1983; 147: 90-101.
18. Ferriman D, Gallwey JD: Clinical assessment of body hair growth in women. J Clin Endocrinol Metab 1961; 21: 1440-1447.
19. Carmina E: Prevalence of idiopathic hirsutism. Eur J Endocrinol 1998; 139: 421-423.
20. Taponen S, Martikainen H, Jarvelin M, Laitinen J, Pouta A, Hartikainen A, et al: Hormonal profile of women with self-reported symptoms of oligomenorrhea and/or hirsutism: Northern Finland Birth Cohort 1966 Study. J Clin Endocrinol Metab 2003; 88: 141-147.
21. Balen AH, Laven JS, Tan SL, Dewally D: Ultrasound assessment of the polycystic ovary: International consensus definition. Hum Reprod Update 2003; 9: 505-514.
22. Rotterdam ESHRE/ASRM sponsored PCOS consensus workshop group 2004 revised 2003 consensus on diagnostic criteria and long term health risk related to polycystic ovary syndrome. Hum Reprod 2004; 19: 41-47.
23. Jahanfar S, Eden JA: Idiopathic hirsutism or polycystic ovary syndrome? Aust NZ J Obstet Gynnecol 1993; 33: 414-416.

*DOI: 10.7241/ourd.20122.18.1*

# A STUDY ON THE CLINICAL AND HORMONAL PROFILE OF THE PATIENTS WITH HIRSUTISM

by Neerja Puri

comment:
Daisuke Tsuruta, MD PhD

Our Dermatol Online. 2012; 3(2): 92

Date of submission: 31.01.2012 / acceptance: 05.02.2012
Conflicts of interest: None

Dr. Puri underwent analyses of 50 hirsutism patients in light particularly of virilization clinically, causes of hirsutism, associated diseases of hirsutism and pervic ultrasonograpy [1]. The population of hirsutism patients in the study is relatively high considering that hirsutism is rather rare disease. From his/her study, I have known that almost half the hirsutism patients are caused by unknown, idiopathic origin and the other 40% are by polycystic ovarian disease and rarely by congenital adrenal hyperplasia or hypothyroidism. The major underlying diseases of hirsutism are obesity, acne, striae, acanthosis nigricans and menstrual irregularities. So, we have to check and treat these dermatologic or systemic disorders if we see hirsutism patients.

Ultrasonography showed that 40% of hirsutism patients showed ovarian cysts. These detailed ultrasonographic analyses are extremely helpful for physicians: if we see polycystic or monocystic ovary by ultrasonography accidentally, we have to check virilization signs. Further accumulation of patients of hirsutism patients is required to confirm if this speculation is true. I also propose to see if the differences of race can affect these findings. Even so, I was highly impressed by this analysis reported by only one author.

**REFERENCES**

1. Puri N: A study on the clinical and hormonal profile of the patients with hirsutism. Our Dermatol Online 2012; 3: 88-90.

*Correspondence:*

Dr. Daisuke Tsuruta, PhD
Department of Dermatology, Kurume University School of Medicine, and Kurume University Institute of Cutaneous Cell Biology, Japan

*E-mai: dts211@gmail.com*

DOI: 10.7241/ourd.20122.19

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# CYTOTOXIC AND ANTIGEN PRESENTING CELLS, AND NON-BASEMENT MEMBRANE ZONE PATHOLOGY IN A CASE OF BULLOUS PEMPHIGOID

## KOMÓRKI CYTOTOKSYCZNE I PREZENTUJĄCE ANTYGEN ORAZ PATOLOGIA STREFY POZA GRANICĄ SKÓRNO-NASKÓRKOWĄ NA PRZYKŁADZIE PEMPHIGOIDU PĘCHERZOWEGO

Ana Maria Abreu Velez[1], Vickie M. Brown[2], Michael S. Howard[1]

[1]*Georgia Dermatopathology Associates, Atlanta, Georgia, USA*
[2]*Family Dermatology, Milledgeville, Georgia, USA*

**Corresponding author:** Ana Maria Abreu-Velez, MD PhD *abreuvelez@yahoo.com*

Our Dermatol Online. 2012; 3(2): 93-99 Date of submission: 28.08.2011 / acceptance: 17.02.2012
Conflicts of interest: None

**Abstract**

**Background:** When performing direct and indirect skin immunofluorescence (DIF, IIF) in bullous pemphigoid (BP) utilizing single fluorophores such as fluorescein isothiocyanate (FITC), the presence of "background" fluorescence is commonly described. **Aim of reporting this case:** Our laboratory has noted that what is termed "background" could represent a complex immune response in BP, that may be present in addition to the classical deposits of immunoglobulins and/or complement at the dermal/epidermal basement membrane zone (BMZ). Therefore, we simultaneously used multiple colored fluorophores to further investigate this possibility. **Case Report:** A 68-year-old male was evaluated for the presence of rapidly appearing vesicles and bullae on the chest, with additional pruritus. **Methods:** Skin biopsies for hematoxylin and eosin (H&E) staining, as well as for DIF, IIF, salt split skin and immunohistochemistry (IHC) analyses were performed. **Results:** H&E staining demonstrated a subepidermal blistering disorder. Within the dermis, a mild, superficial and deep, perivascular infiltrate of lymphocytes, histiocytes and eosinophils was observed. A few infiltrate cells displayed positive DIF staining for CD5, CD8 and CD45 around dermal blood vessels, nerves and eccrine sweat glands. In contradistinction, CD4, CD56 and Granzyme B staining was predominantly negative in these areas. DIF, IIF and salt split skin studies revealed a strong presence of IgG, Complement/C3, IgM and fibrinogen in linear patterns at the BMZ. Around the upper dermal perivascular infiltrate, HAM56 and CD68 positive cells were also noted. Positive DIF staining for CD1a was found suprajacent to the blister in the epidermis. Utilizing identical antibodies, we repeated our staining with the IHC technique, to address the issue of autofluorescence in DIF staining. Our IHC findings correlated with DIF and IIF results. **Conclusion:** Using multiple DIF fluorophores in this case of BP, we observed autoantibodies to structures such dermal nerves, blood vessels and eccrine sweat glands, that were not appreciated using FITCI alone. We propose the use of this technique in autoimmune skin diseases. In addition, we observed a prominent T cytotoxic cell infiltrate, that warrants further characterization.

**Streszczenie**

**Wstęp:** Podczas wykonywania bezpośredniej i pośredniej immunofluorescencji skóry (DIF, IIF) w pemfigoidzie (BP) wykorzystuje się pojedyncze fluorofory takie jak izotiocyjanian fluoresceiny (FITC), a obecność „tła" fluorescencji jest powszechnie opisane. **Cel niniejszego raportu:** Nasze laboratorium zanotowało, że to, co jest określane jako „tło" może stanowić kompleksową odpowiedź immunologiczną w BP, która może być obecna dodatkowo w postaci klasycznych depozytów immunoglobulin i/lub dopełniacza w skórze/naskórku strefie błony podstawnej (BMZ). Dlatego równoczesne stosowaliśmy wiele kolorów fluoroforów do dalszego zbadania tej możliwości. **Opis przypadku:** 68-letni mężczyzna był oceniany pod kątem obecności szybko pojawiających się pęcherzyków i pęcherzy na piersi, z dodatkowym świądem. **Metody:** Przeprowadzono biopsje skóry z barwieniem hematoksyliną i eozyną (H&E), a także DIF, IIF, split skóry i immunohistochemiczną (IHC) analizę. **Wyniki:** Barwienie H&E wykazało subepidermalne pęcherze. W obrębie skóry właściwej obserwowanio łagodne, powierzchowne i głębokie, okołonaczyniowe nacieki z limfocytów, histiocytów i eozynofilów. Kilka nacieków komórkowych wykazywało pozytywne zabarwienie DIF dla CD5, CD8 i CD45 wokół skórnych naczyń krwionośnych, nerwów i ekrynowych gruczołów potowych. W przeciwieństwie do teych badań, barwienia CD4, CD56 i Granzym B były przeważnie ujemne w tych obszarach. DIF, IIF i badanie splitu skórnego wykazały silną obecność IgG, komplement/C3, IgM i fibrynogenu w liniowych wzorach na BMZ. Pozytywne komórki zauważono również wokół górnych nacieków okołonaczyniowych w skórze, HAM56 i CD68. W bezpośrednio leżącym pęcherzu w naskórku stwierdzono pozytywne barwienie DIF dla CD1a. Wykorzystując identyfikację przeciwciał, powtarzaliśmy nasze barwienia techniką IHC, aby zająć się kwestią autofluorescencji w barwieniu DIF. Nasze badania IHC skorelowano z wynikami DIF i IIF. **Wnioski:** Wykorzystując wiele fluoroforów w DIF w tym przypadku BP, obserwowaliśmy autoprzeciwciała do takich struktur jak skórne nerwy, naczynia krwionośne i ekrynowe gruczoły potowych, które nie zostały określone za pomocą samego FITCI. Proponujemy wykorzystanie tej techniki w autoimmunologicznych chorobach skóry. Ponadto zaobserwowaliśmy znaczącą T cytotoksyczność komórek naciekowych, co wymaga dalszej charakterystyki.

**Key words:** bullous pemphigoid; cytotoxic T cells; nerves; blood vessels; sweat glands; mast cell tryptase
**Słowa klucze:** pemphigoid pęcherzowy; komórki T cytotoksyczne; naczynia krwionośne; gruczoły potowe; komórki tuczne; tryptaza

**Abbreviations and acronyms:** Bullous pemphigoid (BP), immunohistochemistry (IHC), direct and indirect immunofluorescence (DIF, IIF), hematoxylin and eosin (H&E), basement membrane zone (BMZ), mast cell tryptase (MCT).

## Introduction

Current theory maintains that the development of skin lesions in bullous pemphigoid (BP) results from destruction of components of the basement membrane zone (BMZ) within the dermal-epidermal junction, secondary to autoantibodies deposited at the BMZ [1,2]. Two glycoproteins of molecular weight 230 kD (BPAG1) and 180 kD (BPAG2) serve as primary autoantigens in BP [1-4]. In BP, histologic dermal perivascular inflammatory infiltrates containing lymphocytes and eosinophils are classically appreciated, and linear IgG and complement/C3 deposits observed along the BMZ of the dermal-epidermal junction [1-4].

## Case report

A 68-year-old male was evaluated for a two day duration of pruritic blisters on the chest. On physical examination, the chest displayed tense vesicles and bullae, with mild erythema at the lesional bases. A lesional skin biopsy was taken for hematoxylin and eosin (H&E) analysis. Biopsies for direct immunofluorescence and immunohistochemisty (DIF, IHC) studies were taken from the edge of the blistering area. Serum for indirect immunofluorescence (IIF) and salt split skin studies was also obtained [1].

**DIF, and IIF on salt split skin:** Our DIF and IIF were prepared and incubated with multiple fluorochromes, as previously described [1, 2, 4-13].

**IHC:** Performed as previously described [4-13]. For the IHC we utilized antibodies to IgG, IgA, IgM, IgD, IgE, Complement/C1q, Complement/C3c, Complement/C3d, anti-fibrinogen, anti-albumin, anti-kappa light chains, anti-lambda light chains, anti-CD1a, CD4, CD5, CD8, CD45, CD56, CD68, S100, mast cell tryptase (MCT), alpha 1 anti-trypsin, metalloprotinase matrix 9 (MMP9), linker of activated T cells (LAT), Zeta-chain-associated protein kinase 70 (ZAP-70) and ribonucleoprotein protein (RNP).

## Results

**Microscopic description:**

Examination of the H&E tissue sections demonstrated a subepidermal blistering disorder. Within the blister lumen, numerous eosinophils were present, with occasional lymphocytes also seen. Neutrophils were rare. Dermal papillary festoons were not observed. Within the dermis, a mild, superficial, perivascular infiltrate was noted, with additional mild, deep infiltrates around nerves and eccrine sweat glands. The dermal infiltrate contained lymphocytes, histiocytes and eosinophils. A PAS special stain showed reinforcement of the basement membrane zone (BMZ) of the dermal-epidermal junction, and no fungal organisms. DIF studies were performed utilizing simultaneous multiple antibody/multiple fluorochrome techniques, and revealed the following results: IgG (++, linear BMZ (salt split skin IIF demonstrated IgG on blister roof)1; IgA (-); IgM (+, linear band under the BMZ); IgG/M/A (++, linear at BMZ and on dermal eccrine glands and deep nerves); IgD(+/-, epidermal keratinocyte intracellular); IgE (-); Complement/C1q (-); Complement/C3 (+++, linear BMZ and on dermal eccrine glands); kappa light chains (++, linear BMZ and on dermal eccrine glands); lambda light chains (++, linear BMZ and on dermal eccrine glands); albumin (++, on dermal eccrine glands and deep nerves) and fibrinogen (++, linear BMZ, on dermal eccrine glands and deep nerves). (Fig. 1-3). The IHC studies showed a few infiltrate cells with positive staining for CD5, CD8 and CD45 around dermal blood vessels, nerves and eccrine sweat glands. In contradistinction, CD4, CD56 and Granzyme B staining was predominantly negative in these areas. DIF, IIF and salt split skin studies revealed a strong presence of IgG, Complement/C3, IgM and fibrinogen in linear patterns at the BMZ. Around the upper dermal perivascular infiltrate, positive IHC staining for HAM56 and CD68 was noted. Positive staining for CD1a was found suprajacent to the blister in the epidermis (Fig. 1-3). Finally, p53 antibody was positive on a few cells in the epidermis above the blister. Mast cell tryptase (MCT) was strongly positive around most of the upper dermal blood vessels, where the primary dermal inflammatory process was seen.

By using multiple fluorophores, in this case of BP we observed autoantibodies to structures such dermal nerves, blood vessels and eccrine sweat glands, that were not appreciated utilizing FITCI alone. Thus, we propose the use of this technique in autoimmune skin disease workup. In addition, we observed a predominant T cytotoxic cell infiltrate that warrants further characterization.

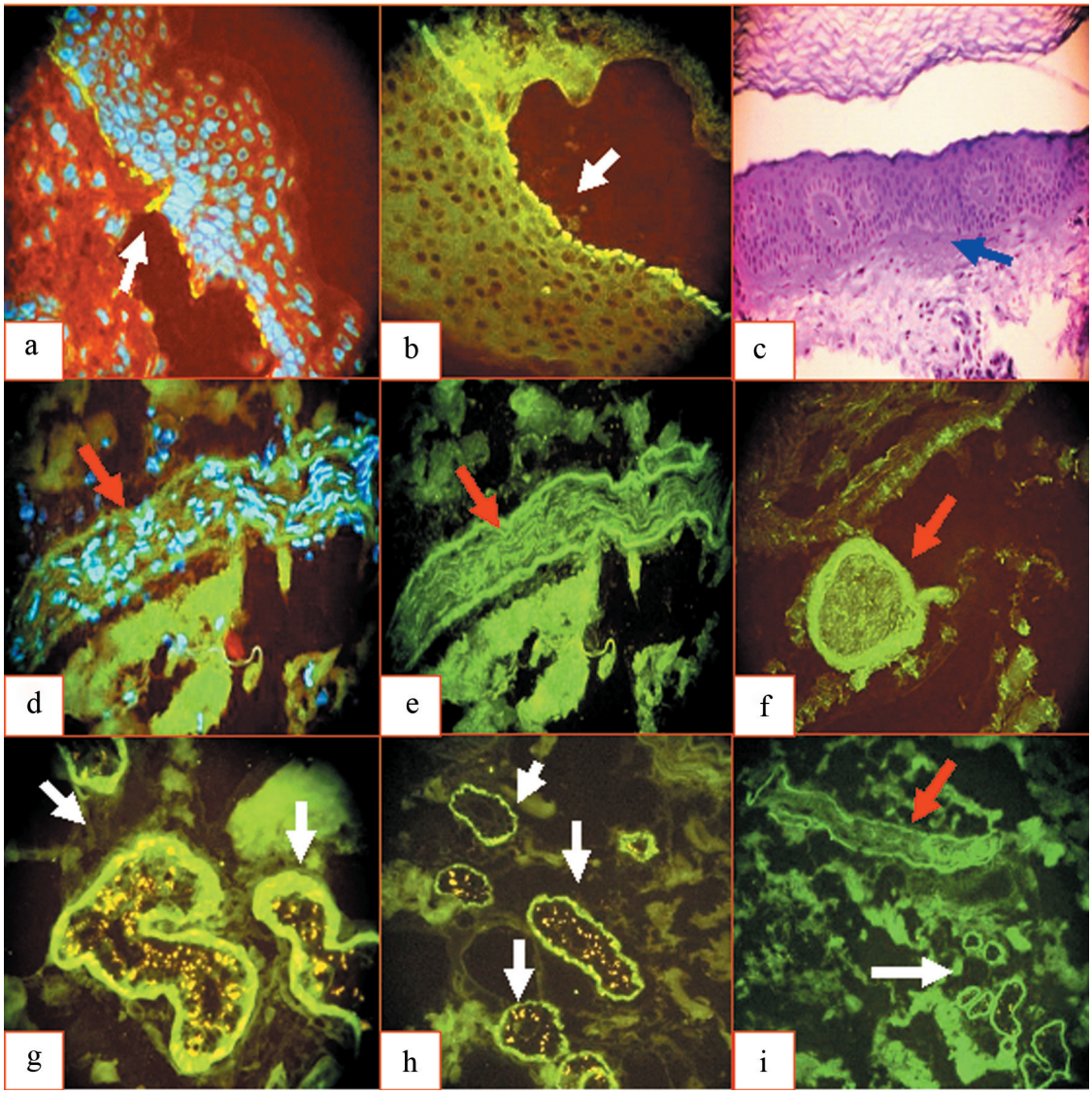



**Figure 1. a.** Positive BMZ staining utilizing 0.1 M sodium chloride salt split skin and indirect immunofluorescence (IIF). Note the positive staining on the upper/blister roof inner surface of the blister, using FITC conjugated anti-human complement/C3 (white arrow, yellow/green staining). The nuclei of the epidermal keratinocytes are counterstained with Dapi (light blue). **b.** Positive BMZ staining utilizing 0.1 M sodium chloride salt split skin and IIF. Note the positive staining on the lower/blister floor inner surface of the blister using FITC conjugated anti-human lambda light chain antibodies (white arrow, green staining). **c.** Positive PAS staining under the BMZ (blue arrow, red staining). **d.** Positive staining on a nerve with FITC conjugated anti-human IgG antibodies (red arrow, green staining). The neural cell nuclei are counterstained with Dapi (blue). **e.** Positive staining on a nerve utilizing FITC conjugated anti-human-IgG(red arrow, green staining). **f.** Positive staining on a nerve, using FITC conjugated anti-human fibrinogen (red arrow, green staining). **g.** Positive eccrine sweat gland staining with FITC conjugated anti-human-IgG (white arrows, yellow/green staining). **h.** Positive eccrine sweat gland staining utilizing FITC conjugated anti-human complement/C3 (white arrows, green staining). **i.** Simultaneous positive staining of a large, deep dermal nerve (red arrow) and a nearby eccrine sweat gland (white arrow) utilizing FITC conjugated anti-human-IgG (green staining).

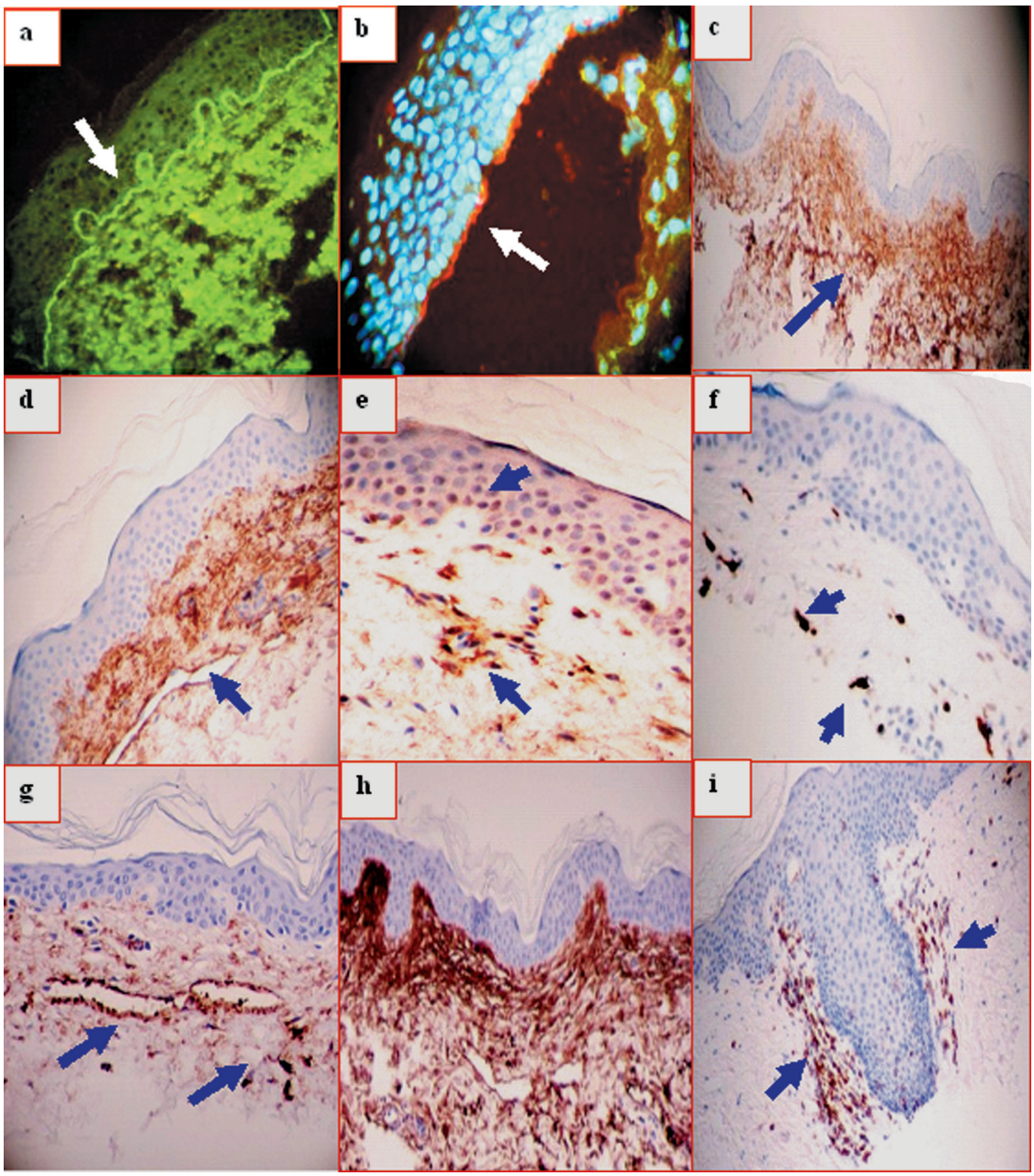



**Figure 2. a.** Positive linear staining on the BMZ utilizing FITC conjugated anti-human lambda light chain antibodies (white arrow, green staining). **b.** Positive linear staining on the BMZ utilizing Alexa 647 conjugated anti-human IgG (white arrow, red staining). **c.** Positive IHC staining for anti-human IgM in a pattern suggestive of dermal compartmentalization below under the BMZ (blue arrow, brown staining). **d.** Similar to c, but in this image, some upper dermal blood vessels are also positive for IgM(blue arrow, brown staining) **e.** Positive IHC staining with anti-human-IgE at the BMZ and on upper dermal blood vessels (blue arrows, brown staining). **f.** Positive IHC staining with mast cell Tryptase (MCT) around the upper dermal blood vessels (blue arrows, brown staining). **g.** Positive IHC staining with anti-human fibrinogen antibodies on upper dermal blood vessels (blue arrows, brown staining). **h.** Compartmentalization of IHC staining as a broad band under the BMZ with anti-human fibrinogen antibodies. Please note that the upper dermal blood vessels are also positive (brown staining). **i.** Positive IHC staining on a sub-epidermal cell infiltrate with CD5 antibodies (blue arrows, brown staining).

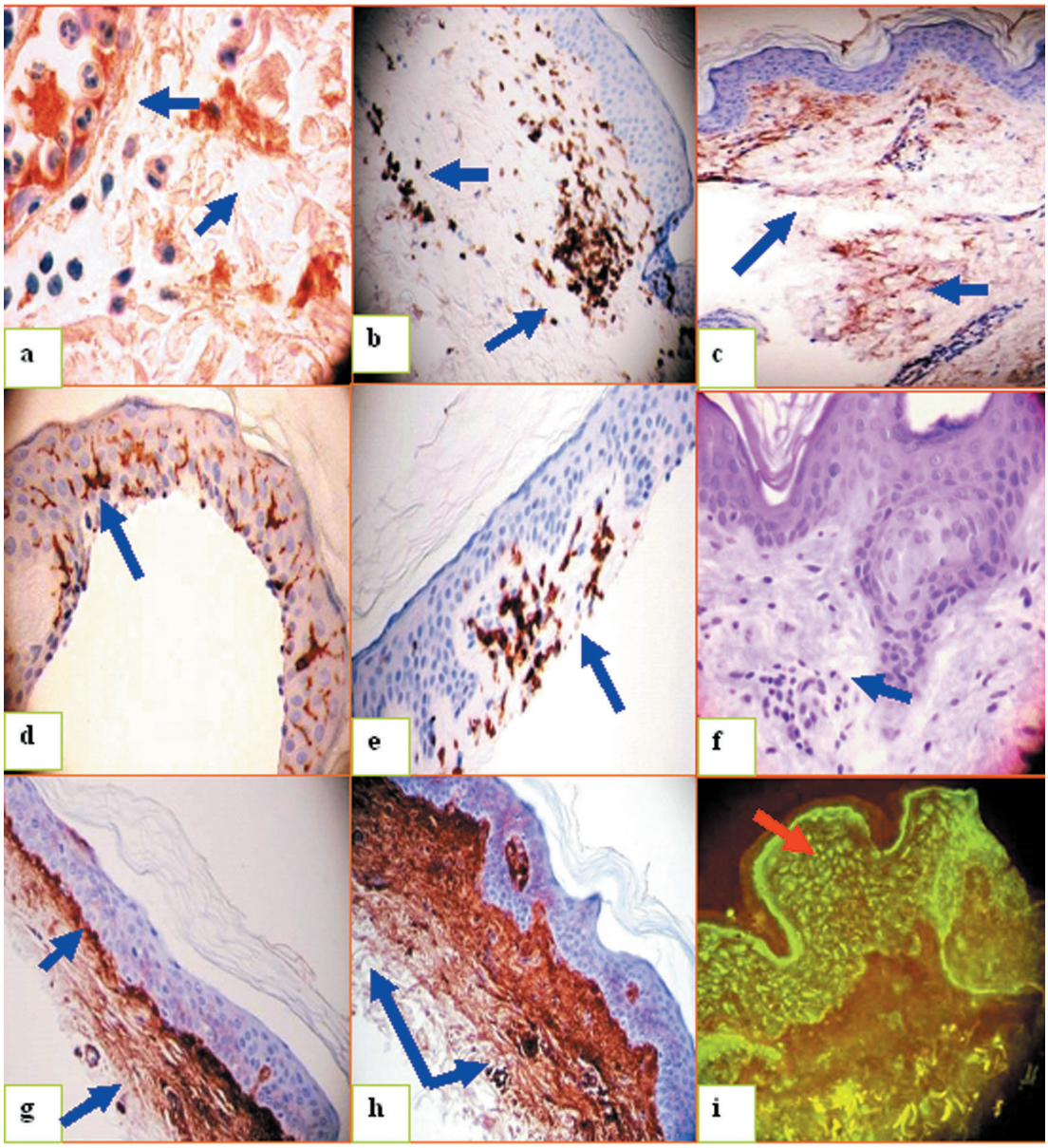



**Figure 3. a.** Positive IHC staining for anti-human albumin antibody, deposited on upper dermal blood vessels and small capillaries (blue arrows, brown staining). **b.** Positive IHC staining for CD45, on cells below the BMZ and surrounding upper dermal blood vessels (blue arrows, brown staining). **c.** Compartmentalization of IHC staining for Complement/C1q under the BMZ, and also involving upper dermal blood vessels and an eccrine gland ductus (blue arrows, brown staining). **d.** Positive IHC staining on Langerhans cells for CD1a, located within the epidermal stratum spinosum suprajacent to a bullous pemphigoid blister (blue arrow, brown staining). **e.** Positive IHC staining for CD3, on cells under the BMZ in the superficial dermis (blue arrow, brown staining). **f.** Eosinophils are noted on an H&E image, located within a perivascular upper dermal infiltrate (blue arrow). **g.** Positive IHC staining for Complement/C3 antibodies, present in a linear band along the BMZ and under the BMZ in a compartmentalized pattern in the upper dermis (blue arrows, brown staining). **h.** Note a similar IHC staining phenomenon as in g, but in this case using antibodies directed against human albumin (blue arrows, brown staining). **i.** Direct immunofluorescence (DIF) staining for FITC conjugated IgD; note the positive, punctate staining present within the epidermal stratum spinosum (red arrow, yellow/green staining).

## Discussion

Classic research regarding immunoreactivity in BP has focused primarily on reactivity against the BMZ. Multiple animal models have been utilized to study this disorder, including both active and passive forms [3,4,12]. Recently, some studies have focused not only on damage to the BMZ of the skin, but also on damage associated with dermal blood vessels and nerves. Recently, one study suggested that cardiovascular events and thromboembolic diseases are important causes of death in patients with BP; the risk of stroke after a diagnosis of BP (relative to the general population) was investigated in Taiwan. The study sample included 390 patients with BP, versus 1950 matched subjects in a comparison group [14]. Other authors have also reported statistically significant cardiovascular and neurologic alterations between patients affected by BP and matched control groups [14-18].

As we have previously noted, most classic skin immunofluorescence studies have been performed with monofluorochome techniques, frequently utilizing FITC. Utilizing this technique, additional FITC staining in areas other than the dermal-epidermal junction was disregarded as insignificant, background autofluorescence.

With the improvement of IHC techniques that allow differentiation between autofluorescence and genuine, diagnostic fluorescence [19,20], these previous assumptions regarding BP autofluorescence are under reconsideration.

In regard to our observed reactivity against dermal eccrine sweat glands and blood vessels, these structures are rich in integrins and other possible antigenic candidates. Soluble E-selectin (sE-selectin) represents an isoform of cell membrane E-selectin, an adhesion molecule synthesized only by endothelial cells. Soluble E-selectin has been reported to be significantly increased in the sera of the patients with BP [21-23]. One of the endothelial sE-selectin inducers is tumor necrosis factor-alpha (TNF-alpha), which is also able to enhance vascular endothelial growth factor (VEGF), a potent endothelium activator [21-23]. Thus, based on these reports and on our data, we suggest that further studies addressing BP autoreactivities in dermal sweat glands, nerves and blood vessels are warranted.

## REFERENCES


1. Jordon RE., Beutner, EH, Witebsky E, Blumental G, Hale WL, Lever WF: Basement zone antibodies in bullous pemphigoid. JAMA. 1967; 200: 751–756.
2. Ghohestani RF, Nicolas JF, Rousselle P, Claudy AL: Diagnostic value of indirect immunofluorescence on sodium chloride-split skin in the differential diagnosis of subepidermal autoimmune blistering dermatoses. Arch Dermatol. 1997. 133: 1102-1107.
3. Chan LS: Human skin basement membrane in health and in autoimmune diseases. Front Biosci. 1997; 15; 343-352.
4. Uitto J, Pulkkinen L: Molecular complexity of the cutaneous basement membrane zone. Mol Biol Rep. 1996; 23: 35-46.
5. Abreu-Velez AM, Smith JG Jr, Howard MS: IgG/IgE bullous pemphigoid with CD45 lymphocytic reactivity to dermal blood vessels, nerves and eccrine sweat glands. North Am J Med Sci. 2010; 2: 538-541.
6. Abreu Velez AM, Girard JG, Howard MS: IgG bullous pemphigoid with antibodies to IgD, dermal blood vessels, eccrine glands and the endomysium of monkey esophagus. Ms in press. N Dermatol Online. N Dermatol Online 2011; 2: 48-51.
7. Howard MS, Yepes MM, Maldonado-Estrada JG, Villa-Robles E, Jaramillo A, Botero JH, et al: Broad histopathologic patterns of non-glabrous skin and glabrous skin from patients with a new variant of endemic pemphigus foliaceus-part 1. J Cutan Pathol. 2010; 37: 222-223.
8. Abreu Velez AM, Howard MS, Hashimoto T: Palm tissue displaying a polyclonal autoimmune response in patients affected by a new variant of endemic pemphigus foliaceus in Colombia, South America. Eur J Dermatol. 2010; 20,74-8.
9. Abreu-Velez AM, Howard MS, Hashimoto T, Grossniklaus HE: Human eyelid meibomian glands and tarsal muscle are recognized by autoantibodies from patients affected by a new variant of endemic pemphigus foliaceus in El-Bagre, Colombia, South America. J Am Acad Dermatol. 2010; 63: 437-447.
10. Abreu Velez AM, Howard MS, Hashimoto K, Hashimoto T: Autoantibodies to sweat glands detected by different methods in serum and in tissue from patients affected by a new variant of endemic pemphigus foliaceus. Arch Dermatol Res. 2009; 301: 711-718.
11. Abreu-Velez AM, Howard MS, Yi H, Gao W, Hashimoto T, Grossniklaus HE: Neural system antigens are recognized by autoantibodies from patients affected by a new variant of endemic pemphigus foliaceus in Colombia. J Clin Immunol. 2011;3:356-368.
12. Abrèu Velez AM, Avila IC, Segovia J, Yepes MM, Bollag WB: Rare clinical form in two patients affected by a new variant of endemic pemphigus in northern Colombia. Skinmed. 2004; 3: 317-321.
13. Jordon RE, Sams WM Jr, Beutner EH: Complement immunofluorescent staining in bullous pemphigoid. J Lab Clin Med. 1969; 74: 548-556.
14. Yang YW, Chen YH, Xirasagar S, Lin HC; Increased Risk of Stroke in Patients With Bullous Pemphigoid: A Population-Based Follow-Up Study. Stroke. Stroke. 2011; 42: 319-323.
15. Langan SM, Groves RW, West J: The relationship between neurological disease and bullous pemphigoid: a population-based case-control study. J Invest Dermatol. 2011; 3: 631-636.
16. Cordel N, Chosidow O, Hellot MF, Delaporte E, Lok C, Vaillant L, et al: Neurological disorders in patients with bullous pemphigoid. Dermatology. 2007; 215: 187-191.
17. Foureur N, Descamps V, Lebrun-Vignes B, Picard-Dahan C, Grossin M, Belaich S, et al: Bullous pemphigoid in a leg affected with hemiparesia: a possible relation of neurological diseases with bullous pemphigoid? Eur J Dermatol. 2001; 11: 230-233.
18. Tseng KW, Peng ML, Wen YC, Liu KJ, Chien CL: Neuronal degeneration in autonomic nervous system of dystonia musculorum mice. J Biomed Sci. 2011. 28: 9.
19. Magro CM, Dyrsen ME: The use of C3d and C4d immunohistochemistry on formalin-fixed tissue as a diagnostic adjunct in the assessment of inflammatory skin disease. J Am Acad Dermatol. 2008; 59: 822-833.
20. Pfaltz K, Mertz K, Rose C, Scheidegger P, Pfaltz M, Kempf W: C3d immunohistochemistry on formalin-fixed tissue is a valuable tool in the diagnosis of bullous pemphigoid of the skin. J Cutan Pathol. 2010; 37: 654-658.

21. Ameglio F, D'Auria L, Cordiali-Fei P, Mussi A, Valenzano L, D'Agosto G, et al: Bullous pemphigoid and pemphigus vulgaris: correlated behaviour of serum VEGF, sE-selectin and TNF-alpha levels. J Biol Regul Homeost Agents. 1997; 11: 148-153.
22. D'Auria L, Cordiali Fei P, Pietravalle M, Ferraro C, Mastroianni A, Bonifati C, Giacalone B, et al: The serum levels of sE-selectin are increased in patients with bullous pemphigoid or pemphigus vulgaris. Correlation with the number of skin lesions and recovery after corsticosteroid therapy. Br J Dermatol. 1997; 137: 59-64.
23. Zebrowska A, Sysa-Jedrzejowska A, Wagrowska-Danilewicz M, Joss-Wichman E, Erkiert-Polguj A, Waszczykowska E: Expression of selected integrins and selectins in bullous pemphigoid. Mediators Inflamm. 2007; 31051.

**Funding source:** Georgia Dermatopathology Associates, Atlanta, Georgia, USA

DOI: 10.7241/ourd.20122.19.1

# CYTOTOXIC AND ANTIGEN PRESENTING CELLS, AND NON-BASEMENT MEMBRANE ZONE PATHOLOGY IN A CASE OF BULLOUS PEMPHIGOID

by Ana Maria Abreu Velez, Vickie M. Brown, Michael S. Howard

comment:
Dr Sho Hiroyasu, Daisuke Tsuruta, MD PhD

Our Dermatol Online. 2012; 3(2): 100-101

Date of submission: 21.03.2012 / acceptance: 21.03.2012
Conflicts of interest: None

As the most common autoimmune blistering disease, many dermatologists have made efforts to elucidate the mechanism of bullous pemphigoid (BP) to date. One of their most important findings is that the target antigens of BP autoantibodies are two protein components of the hemidesmosome, a 180-kDa transmembrane protein member of the collagen family (BP180/type XVII collagen/BPAG2) and a 230-kDa protein member of the plakin cytoskeleton linker family (BP230/BPAG1e) [1-4]. Although anti-BP230 autoantibodies in BP patients directly contribute to BP pathogenesis is a matter of controversy [5-6], several studies suggested that IgG autoantibodies against BP180 contribute to blister formation in BP [7-8]. Using the experimental animal models, Liu et al. showed that blister formation depends on complement activation, mast cell degranulation and neutrophil infiltration [9-11]. However, contrary to this conclusion, recent studies indicate that cultured keratinocytes treated with BP-IgG exhibit a reduction in adhesive strength and a loss in expression of BP180 [12]. Furthermore, recently, many groups pay attention to the association between BP and IgE autoantibodies against BP180 [13-15]. Most of above researches focused on the mechanism of blister and erythema formation in BP. In addition, some recent papers showed that cardiovascular and neurological diseases are associated with BP [16-19]. However, the contribution of these complications on the pathogenesis of BP is still absolutely unclear. Now Velez et al. convincingly showed autoantibody deposition and inflammation on dermal eccrine sweat glands, blood vessels and nerve, which may give us a hint of the mechanism which can cause cardiovascular and neurological diseases. Further studies are required.

## REFERENCES

1. Labib RS, Anhalt GJ, Patel HP, Mutasim DF, Diaz LA: Molecular heterogeneity of the bullous pemphigoid antigens as detected by immunoblotting. J Immunol. 1986; 136: 1231-1235.
2. Diaz LA, Ratrie H 3rd, Saunders WS, Futamura S, Squiquera HL, Anhalt GJ, et al.: Isolation of a human epidermal cDNA corresponding to the 180-kD autoantigen recognized by bullous pemphigoid and herpes gestationis sera. Immunolocalization of this protein to the hemidesmosome. J Clin Invest. 1990; 86: 1088-1094.
3. Stanley JR, Hawley-Nelson P, Yuspa SH, Shevach EM, Katz SI: Characterization of bullous pemphigoid antigen: a unique basement membrane protein of stratified squamous epithelia. Cell. 1981; 24: 897-903.
4. Stanley JR, Tanaka T, Mueller S, Klaus-Kovtun V, Roop D: Isolation of complementary DNA for bullous pemphigoid antigen by use of patients' autoantibodies. J Clin Invest. 1988; 82: 1864-1870.
5. Hall RP 3rd, Murray JC, McCord MM, Rico MJ, Streilein RD: Rabbits immunized with a peptide encoded for by the 230-kD bullous pemphigoid antigen cDNA develop an enhanced inflammatory response to UVB irradiation: a potential animal model for bullous pemphigoid. J Invest Dermatol. 1993; 101: 9-14.
6. Kiss M, Husz S, Janossy T, Marczinovits I, Molnar J, Korom I, et al.: Experimental bullous pemphigoid generated in mice with an antigenic epitope of the human hemidesmosomal protein BP230. J Autoimmun. 2005; 24: 1-10.
7. Liu Z, Diaz LA, Troy JL, Taylor AF, Emery DJ, Fairley JA, et al.: A passive transfer model of the organ-specific autoimmune disease, bullous pemphigoid, using antibodies generated against the hemidesmosomal antigen, BP180. J Clin Invest. 1993; 92: 2480-2488.
8. Nishie W, Sawamura D, Goto M, Ito K, Shibaki A, McMillan JR, et al.: Humanization of autoantigen. Nat Med. 2007; 13: 378-383.
9. Liu Z, Giudice GJ, Swartz SJ, Fairley JA, Till GO, Troy JL, et al.: The role of complement in experimental bullous pemphigoid. J Clin Invest. 1995; 95: 1539-1544.
10. Liu Z, Giudice GJ, Zhou X, Swartz SJ, Troy JL, Fairley JA, et al.: A major role for neutrophils in experimental bullous pemphigoid. J Clin Invest. 1997; 100: 1256-1263.

11. Chen R, Ning G, Zhao ML, Fleming MG, Diaz LA, Werb Z, et al.: Mast cells play a key role in neutrophil recruitment in experimental bullous pemphigoid. J Clin Invest. 2001; 108: 1151-1158.
12. Iwata H, Kamio N, Aoyama Y, Yamamoto Y, Hirako Y, Owaribe K, et al.: IgG from patients with bullous pemphigoid depletes cultured keratinocytes of the 180-kDa bullous pemphigoid antigen (type XVII collagen) and weakens cell attachment. J Invest Dermatol. 2009; 129: 919-926.
13. Zone JJ, Taylor T, Hull C, Schmidt L, Meyer L: IgE basement membrane zone antibodies induce eosinophil infiltration and histological blisters in engrafted human skin on SCID mice. J Invest Dermatol. 2007; 127: 1167-1174.
14. Fairley JA, Burnett CT, Fu CL, Larson DL, Fleming MG, Giudice GJ: A pathogenic role for IgE in autoimmunity: bullous pemphigoid IgE reproduces the early phase of lesion development in human skin grafted to nu/nu mice. J Invest Dermatol. 2007; 127: 2605-2611.
15. Fairley JA, Baum CL, Brandt DS, Messingham KA: Pathogenicity of IgE in autoimmunity: successful treatment of bullous pemphigoid with omalizumab. J Allergy Clin Immunol. 2009; 123: 704-705.
16. Chen YJ, Wu CY, Lin MW, Chen TJ, Liao KK, Chen YC, et al.: Comorbidity profiles among patients with bullous pemphigoid: a nationwide population-based study. Br J Dermatol. 2011; 165: 593-599.
17. Langan SM, Groves RW, West J: The relationship between neurological disease and bullous pemphigoid: a population-based case-control study. J Invest Dermatol. 2011; 131: 631-636.
18. Taghipour K, Chi CC, Vincent A, Groves RW, Venning V, Wojnarowska F: The association of bullous pemphigoid with cerebrovascular disease and dementia: a case-control study. Arch Dermatol. 2010; 146: 1251-1254.
19. Tsuruta D, Nishikawa T, Yamagami J, Hashimoto T: Unilateral bullous pemphigoid without erythema and eosinophil infiltration in a hemiplegic patient. J Dermatol. 2012; in press.

*Correspondence:*

Dr. Daisuke Tsuruta, PhD
Department of Dermatology, Osaka City University Graduate School of Medicine, 1-4-3 Asahimachi, Abeno-ku, Osaka 545-8585 Japan
Tel. +81 6 6645 3826
Fax +81 6 6645 3828

*E-mai: dtsuruta@med.osaka-cu.ac.jp*

DOI: 10.7241/ourd.20122.20

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# A COMPARATIVE STUDY OF CARRIER STATE OF CANDIDA AND ITS SPECIATION IN ORAL FLORA – AMONG HEALTHY INDIVIDUALS, PERSONS WITH DM AND HIV SERO POSITIVE INDIVIDUALS

BADANIE PORÓWNAWCZE NOSICIELI CANDIDA – OSÓB ZDROWYCH, CUKRZYKÓW ORAZ HIV-POZYTYWNYCH POD KĄTEM DALSZEGO ROZWOJU ICH FLORY JAMY USTNEJ

M. Bharathi[1], Anaparthy Usha Rani[2], Cautha Sandhya[3]

*[1]Department of Microbiology, Andhra Medical College, Visakhapatnam, India*
*[2]Department of Microbiology, Siddartha Medical College, Vijayawada, India*
*[3]MBBS, 5th semester, Andhra Medical College, Visakhapatnam, India*

**Corresponding author:** Prof. Anaparthy Usha Rani usharani.anapathy@gmail.com

Our Dermatol Online. 2012; 3(2): 102-106
Date of submission: 08.01.2012 / acceptance: 07.02.2012
Conflicts of interest: None

**Abstract**
The aim was to determine colonization rate of candida in oral cavity of healthy individuals, diabetics and HIV seropositive individuals.
**Material and methods:** Samples were collected from oral cavity of 50 HIV sero positive individuals, 50 diabetics and 50 healthy individuals by swabbing palatal mucosa, dorsum of tongue and buccal mucosa with a sterile swab. Samples were processed by inoculating on Hi Chrome Agar and speciation was done by growth on Hi Chrome agar, germ tube test, chlamydospore formation on CMA, pellicle formation in SDA broth and growth at 45ºc.
**Results:** 27 HIV sero positive individuals (54%) carried candida in their oral cavities (single strain in 44% and combination of strains in 10%). Whereas it was 44% in diabetics (single species in 38% and a combination of species in 6%) and 24% in healthy individuals (only single species). Candida albicans accounts for 41.66% in healthy individuals, 68% in diabetics and 42.42% in HIV seropositive persons. other species isolated were Candida tropicalis, Candida parapsilosis, Candida glabrata in all 3 groups in addition to Candida dubliniensis in healthy and HIV seropositive individuals and C.krusei in HIV seropositive persons only. P value- less than 0.05 between healthy persons & diabetics and between healthy persons & HIV seropositives (significant).
**Conclusion:** candidal carriage was higher in diabetics and HIV seropositive individuals. Candida albicans was the commonest species in all three groups. Candida krusei was seen only in HIV positive persons.

**Streszczenie**
Celem badania było określenie stopnia kolonizacji grzybem Candida jamy ustnej u osób zdrowych, cukrzyków oraz HIV- pozytywnych.
**Materiały i metody:** Próbki z jamy ustnej pobrano za pomocą sterylnej wymazówki z błony śluzowej: podniebienia, grzbietu języka oraz policzka u 50 HIV- seropozytywnych osób, 50 – cukrzyków oraz 50 zdrowych osób. Próbki były hodowane na agarze Hi Chrome i dalsza specjacja odbywała się na tymże agarze, w teście filamentacji oraz za pomocą kształtowania się chlamydosporów na CMA, tworzenia się błony w obrębie bulionu i wzrostu w temperaturze 45ºc.
**Wyniki:** 27 HIV- pozytywnych osobników (54%) nosiło w sobie Candida (44% pojedynczy szczep, a kombinację kilku 10%). Podczas gdy w populacji cukrzyków odsetki wynosiły odpowiednio 44% (38% pojedynczy szczep i 6% kombinację kilku) a u zdrowych osób 24% (tylko pojedyncze odmiany). Candida albicans jest odpowiedzialna za 41,66% kolonizacji u zdrowych osób, 68% u osób chorych na cukrzycę i 42,42% u HIV-pozytywnych. Innymi wyizolowanymi szczepami były Candida tropicalis, Candida parapsilosis, Candida glabrata obecne we wszystkich 3 badanych grupach, a dodatkowo w grupach zdrowych i HIV-pozytywnych Candida dubliniensis podczas gdy Candida krusei tylko w grupie osób HIV-pozytywnych. Współczynnik $P < 0,05$ pomiędzy grupą osób zdrowych a cukrzyków oraz osób zdrowych i HIV-pozytywnych wskazuje na istotność korelacji.
**Wnioski:** Nosicielstwo Candida było wyższe u cukrzyków i osób HIV-pozytywnych. Candida albicans była najpowszechniej występującą odmianą we wszystkich przebadanych grupach. Candida krusei występowała jedynie u osób HIV-pozytywnych.

**Key words:** Candida albicans; colonization; opportunistic infections; Type 2 DM; HIV infection
**Słowa klucze:** Candida albicans; kolonizacja; infekcja oportunistyczna; Typ 2 DM; infekcja HIV

## Introduction

*Candida species* and *Candida albicans* in particular are ubiquitous dimorphic fungal organisms that are part of normal microflora of healthy individuals [1]. They are commonly found on the skin, throughout GIT and female genital tract [2]. However, they are also opportunistic pathogens that can quickly transform from harmless mucosal commensals to a highly pathogenic organism of the same tissue with significant mortality and morbidity under appropriate conditions [1]. Variations regarding the presence of *Candida spp*. in healthy individuals may be a function of various factors such as climate, age and diet of surveyed population [1]. The factors predispose people to candidiasis include AIDS, burns, pregnancy, high fruit diet, steroids, antibiotic treatment, immunosuppressants, cancer treatment, heart surgery, diabetes mellitus and use of catheter [2]. The frequent occurrence of candida infections in patients with DM has been recognized for many years and oral candidiasis in particular is thought to be more prevalent among these individuals [3-11]. With introduction of antifungal agents, the cause of candida infection shifted from *Candida albicans* to *Candida glabrata* and other non albicans species, as *Candida glabrata* and *Candida krusei* develop resistance to fluconazole [1,5]. As normal flora is the source of many opportunistic infections and candida species are important causes of severe invasive disease in immunocompromised persons [12]. We made an attempt to know the carriage rate of candida in healthy individuals, diabetics and HIV seropositive persons in our area.

## Materials and Methods

Persons who were attended to diabetic clinic, ICTC and medical OP were included in the study. The study was done between January 2011 and March 2011.

**Exclusion criteria:**

1. Individuals wearing dentures.
2. Individuals with oropharyngeal candidiasis.
3.Those on antibiotic treatment, steroid treatment and antifungal treatment and those using antiseptic mouth wash.

**Inclusion criteria:**

1. Type 2 diabetics who are on oral anti diabetic drugs.
2. HIV positive individuals on ART.

HIV status was determined by doing three tests using three different antigen kits as per NACO (National AIDS Control Organization) guidelines. CD4 counts of the HIV seropositive individuals were done by FACS counter. Blood sugar level was determined by using glucose oxidase- peroxidase method. Samples were collected from 50 HIV seropositive individuals (non diabetics), 50 diabetics (HIV seronegative) and 50 healthy individuals (males between 20-40 years age group in all three categories) after obtaining written consent. Sample was collected by swabbing palatal mucosa, dorsum of tongue and buccal mucosa. Swabs were inoculated on HiChrome agar Candida medium immediately and incubated at 22-26$^0$c in BOD. Inoculated media were examined daily for seven days. Gram's staining was done to all the isolates with mucoid and yeast like growth and observed for gram positive oval budding yeast cells 4-6 microns. Germ tube test: All candida isolates were tested for germ tube formation. A colony was inoculated in human serum and incubated at 37$^0$c. After 2-4 hrs. wet mount was prepared and observed for germ tubes. Chlamydospore formation: All candida isolates were tested for production of chlamydospores on corn meal agar. After inoculation and incubation at 25$^0$c the plates were examined under low power objective of microscope for the presence of chlamydospores (Fig.1).

`Growth was identified by Gram's staining and speciation was done by observing the colour of the growth on HiChrome agar and confirmed by germ tube test, chlamydospore formation on CMA, pellicle on SDA broth and growth at 45$^0$c as shown below.

Table II showing properties of candida species [13].

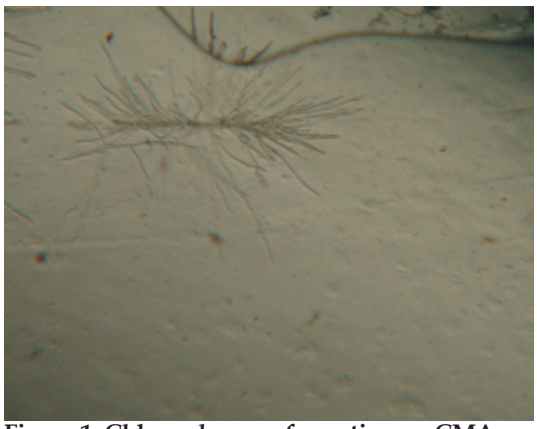


**Figure 1. Chlamydospore formation on CMA**

## Results

Among 50 healthy group, 12 persons carried candida in their oral cavity with *Candida albicans* (Fig.2) as the most common (41.66%) followed by
*Candida tropicalis* (Fig.3,5), *Candida glabrata* (Fig.4), *Candida parapsilosis* (each one in 16.66%) and *Candida dubliniensis* (8.33%) (Fig.5).

In diabetics out of 50, 22 persons carried candida in their oral cavity (44%). 19 persons with single species and 3 persons with combination of two species (6%). Most common species was Candida albicans in 68% followed by *Candida glabrata* in 16%, *Candida parapsilosis* and *Candida tropicalis* in 8% cases.

Out of 50 HIV seropositive individuals, 27 carried candida. Single species was found in 22 persons and combination of two or more species in 5 persons (10%). *Candida albicans* in 42.42%, *Candida tropicalis* and *Candida parapsilosis* in 21.21%, *Candida dubliniensis* in 9.09%, *Candida glabrata* and *Candida krusei* in 3.03% cases (Tabl. II).

P value between healthy persons and HIV seropositives is less than 0.05% (significant). P value between healthy and diabetics is less than 0.05% (significant).

| Study group | No. tested | No. + ve | Singles + combination | Species |
|---|---|---|---|---|
| Healthy | 50 | 12 (24%) | Only single species | *C.albicans(41.66%)*<br>*C.tropicalis(16.66%)*<br>*C.glabrata(16.66%)*<br>*C.parapsilosis(16.66%)*<br>*C.dubliniensis(8.33%)* |
| Diabetics | 50 | 22(44%) | 19(38%) +3(6%) | *C.albicans(68%)*<br>*C.tropicalis(8%)*<br>*C.glabrata(16%)*<br>*C.parapsilosis(8%)* |
| HIV seropositive | 50 | 27(54%) | 22(44%)+5(10%) | *C.albicans (42.42%)*<br>*C.tropicalis(21.21%)*<br>*C.glabrata(3.03%)*<br>*C.parapsilosis(21.21%)*<br>*C.dubliniensis (9.09%)*<br>*C.krusei(3.03%)* |

**Table I. Percentage & species of Candida in study group**

| Species | Color on HiChrome agar | Germ tube test | Chlamydo spores on CMA | Pellicle in SDA broth | Growth at 450°C |
|---|---|---|---|---|---|
| *C.albicans* | Light green | + | + | no | + |
| *C.tropicalis* | Purple halo in agar, dark blue color | - | - | small | |
| *C.parapsilosis* | Pale color | - | Pineforest appearence | NA | - |
| *C.glabrata* | Dark pink | - | - | NA | - |
| *C.dubliniensis* | Dark green | ++ | ++ | NA | - |
| *C.krusei* | Pale pink centre with white edge, rough, spreading colony | - | - | Thick pellicle | - |

**Table II. Properties of Candida species [12]**

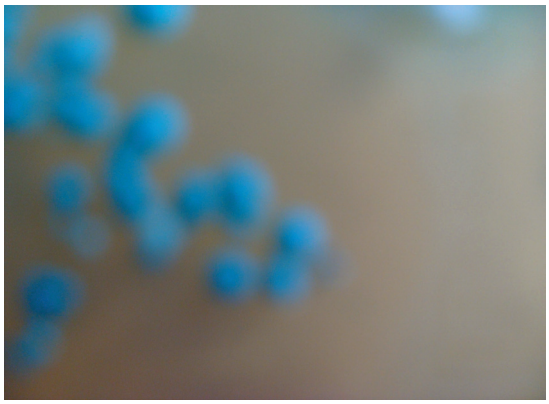


**Figure 2. Colonies of Candida albicans on HiChrome agar**

**Figure 3. Colonies of Candida tropicslis on HiChrome agar**

**Figure 4. Colonies of Candida glabrata on HiChrome agar**

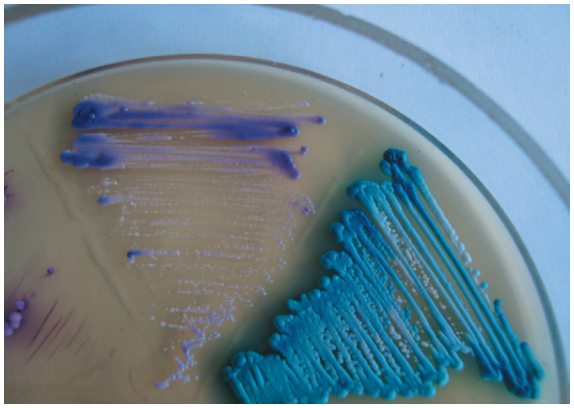


**Figure 5. Colonies of Candida dubliniensis and Candida tropicalis on HiChrome agar**

## Discussion

*Candida species* colonize mucosal surfaces of human beings during or soon after birth and risk of endogenous infection is ever present [13-22]. Patients with compromised host defenses are susceptible to ubiquitous fungi to which healthy people are exposed but usually resistant. As members of normal microbial flora candida and related yeasts are endogenous opportunistic organisms [22]. The carriage rate of candida in oral cavity was different in various studies. This could be due to different methods of sampling. The carriage rate of Candida in oral cavity of diabetic subjects is claimed to be higher. Candidial density also be reported higher in diabetics than in non diabetics [3]. Candida is one of the most common opportunistic fungi in HIV/AIDS cases [9]. Infections with *Candida albicans* appear when CD4 is below 500-200/cumm and may be the first indication of immunodeffieciency [5-7]. Today's concern about candiasisis is emergence of fluconazole resistant *Candida albicans* in AIDS patients with recurrent attacks of oral thrush and less susceptibility of *Candida krusei* and *Candida glabrata* to fluconazole [13-15].

As diabetics and HIV seropositive individuals are vulnerable to develop opportunistic infections because of high glucose levels in tissues in diabetics and decreased immunity in HIV seropositives, it is necessary to know carriage rates of candida in oral cavities. Moreover reviews have shown that candidal esophagitis may occur frequently without thrush [22]. So by studying the prevalence of colonization of oropharynx among HIV individuals, we can assess the risk of esophageal candiadiasis.

Comparative studies in oral carriage rate of Candida between healthy and diabetics and between healthy individuals and HIV seropositive persons are available. But comparative studies between healthy individuals, diabetics and HIV seropositive individuals are rare. To the best of our knowledge our study is the first of that kind from our geographical area. In the present study age matched males of healthy, diabetics and HIV seropositives – all 50 in number, were taken. 42% of healthy persons, 44% of diabetics and 54% HIV seropositives were shown to carry Candida in their oral cavities. *Candida albicans* was the most common species in all groups. *Candida dubliniensis* was seen among healthy and HIV sero positives, but not present in diabetics. Only single species were isolated in healthy persons whereas more than one candida species were found in diabetics (6%) and in HIV seropositive persons (10%). *Candida krusei* was present only in HIV seropositive persons.

Jianping XU and Thomas G Mitchell tried to compare rate of commensalism of candida in oral cavity of Asians (Chinese) and North Americans from Canada and USA. 66.94% of Chinese and 39.5% of North Americans carried candida in their oral mucosa. *Candida albicans* was the predominant species in North Americans and *Candida parapsilosis* and *Candida guillermondii* were the commonest in Chinese [23]. Eun Seop Shin et al found that oral carriage was 45% in healthy individuals [19]. Zeng X et al found 20.31% carriage rate in healthy individuals from China [24].

Margerida Martins et al from Portugal isolated candida from 54.6% from a dental clinic [6]. Present study findings correlated with Zeng X et al in the oral carriage rate of candida in healthy individuals with 24%. Whereas carriage was more in other studies.

Carriage rate of 68.52% in type 2 diabetics, 83.67% in type 1 diabetics and 27% in healthy individuals was found in a study by Kumar BV et al from North India [3]. Fisher BM et al reported single candida species in 51% and more than one species in 6% of diabetics and *Candida albicans* as the commonest (89%) [20]. It was 36% in type 2 diabetics (Chinese) and 23.80% in healthy persons according to Tsang CSP et al [18].

Safia A. AL-Attas and Soliman O. Amro from Jeddah, Saudi Arabia observed 33.3% carriage rate in diabetics with Candida albicans in 68.9% and 14.3% in healthy individuals with *Candida albicans* in 40% [10].

Carriage rate in diabetics in our study (44%) was a little higher than in some studies [3-10,18-23]. Combination of *Candida species* in our study was 6% as in other studies [18-20].

*Candida albicans* was commonest in the present study (68%) like other studies [3-10,20-23]. Our results, in oral carriage rate of candida in healthy individuals were in agreement with other studies [3,18-23].

In a study from India by Gugnani HC et al the oropharyngeal carriage of *Candida species* in HIV infected patients was 65.3% for *Candida albicans* and 2.7% for other species including one case of *Candida dubliniensis* [21], which was also isolated in the present study. Arati Mane et al from India found 58.7% carriage rate in HIV positive persons and 22.4% in healthy individuals [14]. Pavithra A Jain from Karnataka, India found 68% of HIV positive persons and 40% of healthy persons carried candida in their oral cavities in one study [8]. 53.7% and 33.07% in another study [9]. All three studies were from India.

Carriage rate in HIV positive and healthy persons 75% and 68% in a study from South Africa by Catherine Hester Johanna with *Candida albicans* in 56% [17] and 28.6% and 18% in another study from China by Liu X et al [4]. Rodrigues Costa et al found 62.6% of HIV positives carried candida in their oral cavities with *Candida albicans* in 50% in a study from Brazil [16]. Where it was 57% in HIV seropositives with *Candida albicans* in 44.4% and 24% in healthy persons with *Candida albicans* in 41.66% in the present study. Carriage rate of candida in HIV seopositives in the present study correlates with Arati Mane study where as it was a little higher in other studies. But *Candida albicans* was the commonest species in all studies.

## Conclusions

1. Carriage rate was high in HIV seropositive individuals (54%) when compared to other two groups, but in comparision with healthy persons, it was found high in diabetics.
2. *Candida albicans* was the predominate species in all three groups, but more so in diabetics, needs further study.
3. Other common species isolated were *Candida tropicalis, Candida glabrata, Candida tropicalis.*
4. *Candida dubliniensis* was recovered from healthy pesrsons and HIV seropositive individuals and *Candida krusei* was from HIV seropositive individuals only.
5. Combination of species was found in diabetics (6%) and in HIV seropositive individuals but not.
6. We did not find a significant correlation between oral carriage of *Candida species* and CD4 counts above 200, as well as blood glucose levels.

Though oral carriage rates in different studies, were highly variable, but higher carriage were observed in diabetics and HIV seropositive individuals consistently in all studies. By that preventive measures like improvement in general health and oral hygiene discriminate use of antibiotics can be taken to reduce morbidity.

## REFERENCES


1. Topley & Wilson's: Microbiology and Microbial infections: Medical Mycology, 10th edition, published by Hodder Arnold 2005, ch. 15, pp 255.
2. Text book of Medical Mycology, Jagdish Chander, 3rd Ed, Mehta publishers, 2009, ch. 20, pp 269.
3. Kumar BV, Padshetty NS, Bai KY, Rao MS: Prevalence of candida in oral cavity of diabetic subjects. J Assoc Physicians India. 2005; 53: 599-602.
4. Liu X, Liu H, Guo Z, Luan W: Association of asymptamatic oral candidal carriage, oral candidiasis and CD4+ lymphocyte count in HIV positive patients in China. Oral Dis. 2006; 12: 41-44.
5. Bharathi M, Usharani A; Pathogenic fungal isolates in sputum of HIV positive patients. JAHR. 2011; 3: 107-113.
6. Martins M, Henriques M, Ribeiro AP, Fernandes R, Gonçalves V, Seabra A, et al: Oral candida carriage of patients attending a dental clinic in Braga, Portugal. Rev Iberoam Micol. 2010; 27: 119-124.
7. NACO Specialist's Training and Reference Module. Ministry of Health and Family Welfare, 2000. Govt. of India. Pp. 114-116.
8. Jain PA, Veerabhadrudu K, Kulkarni RD, Ajantha GS, Shubhada C, Amruthkishan U: Comparative study of adherence of oral candida albicans isolates from HIV seropositive individuals and HIV seronegative individuals to human buccal epithelial cells. Indian J Pathol Microbiol. 2010; 53: 513-517.
9. Jain PA, Kulkarni RD, Ajantha GS, Shubhada C: A comparative evaluation of oral candida carriage in HIV infected individuals and HIV seronegative healthy individuals in north Karnataka JBST. 2011; 2: 232-237.
10. Al-Attas SA, Amro SO: Candidal colonization, strain diversity and anti fungal susceptibility among adult diabetic patients. Ann Saudi Med. 2010; 30: 101-108.
11. Samaranayake LP: Host factors and oral candidosis In:oral candidosis. Samaranayake LP. Mac Farlane TW eds. Butterworth & Co. Ltd. 1990: 75.
12. Anantanarayan & Panikar's text book of Microbiology, 8th Ed. Published by Universities press, 2009, ch. 69: pp 635.
13. Usharani A, Bharathi M, Sandhya C: Isolation and characterization of Candida species from oropharyngeal secretions of HIV positive individuals. N.Dermotol Online. 2011; 3: 119-124.
14. Mane A, Panchavalli S, Bembalkar S, Risbud A: Species distribution & antifungal susceptibility of oral candida colonizing or infecting HIV infected individuals. Indian J Med Res. 2010; 131: 836-838.
15. Kauffmann CA: Fungal infections in immunocompromised Hosts: Focus on epidemiologic aspects of Infection. National Foundation for Infectious diseases. Michigan. 1998: 1:4.
16. Costa CR, Cohen AJ, Fernandes OF, Miranda KC, Passos XS, Souza LK, et al: Asymptamatic oral carriage of candida spp in HIV infected patients in the highly active antiretroviral therapy era. Rev Inst Med Trop Sao Paulo. 2006; 48: 257-261.
17. Hauman CH, Thompson IO, Theunissen F, Wolfaardt P: Oral carriage of candida in healthy and HIV seropositive persons. Oral Surg Oral Med Oral Pathol. 1993; 76: 570-572.
18. Tsang CS, Chu FC, Leung WK, Jin LJ, Samaranayake LP, Siu SC: Phospholipase, proteinase and haemolytic activities of candida albicans isolated from oral cavities of patients with type 2 diabetis mellitus. J Med Microbiol. 2007; 56: 1393- 1398.
19. Shin ES, Chung SC, Kim YK, Lee SW, Kho HS: The relationship between oral candida carriage & secretor status of bloood group antigens in saliva. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2003; 96: 48-53.
20. Fisher BM, Lamey PJ, Samaranayake LP, MacFarlane TW, Frier BM: Carriage of candida species in the oralcavity of the diabetic patient: Relationship to glycemic control. J Oral Pathol. 1987; 16: 282-284.
21. Gugnani HC, Becker K, Fegeler W, Basu S, Chattopadhya D, Baveja U, et al: Oropharyngeal carriage of candida species in HIV infected patients in India. Mycoses. 2003; 46: 299-306.
22. Jawetz, Melnick and Adelberg's Medical Microbiology, 25th ed. 2010, Published by Mc Graw Hill; ch. 45: pp 645-646.
23. Xu J, Mitchell TG: Geographical differences in human oral yeast flora. Clin Infect Dis. 2003; 36: 221-224.
24. Zeng X, Hou X, Wang Z, Jiang L, Xiong C, Zhou, et al: Carriage rate & virulence attributes of oral candida albicans isolates from patients with oral lichen planus: A study in an ethnic Chinese cohort. Mycoses. 2009; 52: 161-165.

*DOI: 10.7241/ourd.20122.20.1*

# A COMPARATIVE STUDY OF CARRIER STATE OF CANDIDA AND ITS SPECIATION IN ORAL FLORA – AMONG HEALTHY INDIVIDUALS, PERSONS WITH DM AND HIV SERO POSITIVE INDIVIDUALS

by M. Bharathi, Anaparthy Usha Rani, Cautha Sandhya

comment:

Giulio Fortuna DMD, PhD, Annamaria Pollio DMD

Our Dermatol Online. 2012; 3(2): 107-108

Date of submission: 20.02.2012 / acceptance: 20.02.2012

Conflicts of interest: None

Fungi are important agents of human disease. The genus Candida gathers the most important fungal pathogens. They can cause a wide range of human diseases from superficial mucosal infections to life-threatening invasive infections. Normally, fungi are saprophitic residents of oral mucosa and the 40-60% of healthy adults harbour commensal Candida in their mouth without signs and symptoms of candidiasis [1]. The most common cause of oropharyngeal candidiasis is the polymorphic species *Candida albicans*. *Candida dubliensis* was identified in the Irish HIV infected and AIDS population in the early 1990s [2]. There are many phenotypic similarities between *Candida albicans* and *Candida dubliensis* that pose the problems in their identification and previously led to misidentification of these two species. Epidemiological studies have shown that *Candida dubliensis* is prevalent throughout the world and it is associated with oropharyngeal infections in patients with human immunodeficiency virus (HIV) virus [3].

Data acquired from its isolation in healthy and immunocompromised patients are variable and there is no still consensus on the epidemiological relevance of this species. It has been reported that non controlled glycemia predisposes to oral candidiasis in diabetic patients and the density of Candida growth is increased in patients with diabetes mellitus. The mechanism by which the diabetes predisposes to high oral concentration of Candida has not yet been established [1]. The Bharathi et al.'s [4] study is an interesting investigation which underlines the higher percentage of asymptomatic oral carriage of Candida in HIV-positive patients (54%) versus diabetic patients (44%) and healthy individuals (24%). These results confirm those ones from previous investigations [5-6], but interestingly the percentage of HIV-positive patients seems to be higher only in those individuals with a very low blood cell CD4+ count [7-8]. However, there's an increasing need of further long-term longitudinal epidemiological studies worldwide in order to better establish the real incidence and prevalence of asymptomatic oral carriage of Candida in these three categories of patients, and ascertain whether or not race, sex, and age, other than immunocompentent status, might have any influence on carrier state. With these epidemiological data, we may try to prove conclusively whether or not there is any tight relationship between diabetes, HIV-positive status and oral carriage of Candida, who really runs a higher risk of developing such infections, how many of them develop candidiasis and why, and, last but not less important, whether or not any preventive treatment might be of some benefit.

## REFERENCES

1. Soysa NS, Samaranayake LP, Ellepola NB: Diabetes mellitus as a contributory factor in oral candidosis. Diabet Med. 2006; 23: 455-459.
2. Loreto ES, Scheid LA, Nogueira CW, Zeni G, Santurio JM, Alves SH: Candida Dubliensis : Epidemiology and phenotipic methods for identification. Mycopathologia. 2010; 169: 431-433.
3. Sullivan DJ, Moran GP, Pinjon E, Al-Mosaid A, Stokes C, Vaughan C, et al: Comparison of the epidemiology, drug resistence mechanisms, and virulence of Candida Dublinensis and Candida Albicans. FEMS Yeast Research. 2004; 4: 369-376.
4. Bharathi M, Usha Rani A, Sandhya C: A comparative study of carrier state of candida and its speciation in oral flora – among healthy individuals, persons with DM and HIV sero positive individuals. Our Dermatol Online. 2012; 3: 102-106.
5. Campisi G, Pizzo G, Milici ME, Mancuso S, Margiotta V: Candidal carriage in the oral cavity of human immunodeficiency virus-infected subjects. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2002; 93: 281-286.
6. Al-Attas SA, Amro SO: Candidal colonization, strain diversity, and antifungal susceptibility among adult diabetic patients. Ann Saudi Med. 2010; 30: 101-108.-

7. Liu X, Liu H, Guo Z, Luan W: Association of asymptomatic oral candidal carriage, oral candidiasis and CD4 lymphocyte count in HIV-positive patients in China. Oral Dis. 2006; 12: 41-44.
8. Fong IW, Laurel M, Burford-Mason A: Asymptomatic oral carriage of Candida albicans in patients with HIV infection. Clin Invest Med. 1997; 20: 85-93.

*Correspondence:*

Giulio Fortuna, DMD, PhD
Oral Medicine Unit
Department of Head and Neck Surgery
Ascalesi Hospital
Via Egiziaca a Forcella, 31 80139 Naples (Italy)
Phone: (+39) 81 254.2134
Fax:(+39) 81 254.2191

*E-mai: giulio.fortuna@gmail.com*

DOI: 10.7241/ourd.20122.21

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# PLASMA CELL BALANITIS (ZOON`S BALANITIS): A CLINICOPATHOLOGICAL STUDY OF 8 CASES

## PLAZMAKOMÓRKOWE ZAPALENIE ŻOŁĘDZI (ZAPALENIE ŻOŁĘDZI ZOONA): KLINICZNO-PATOLOGICZNE BADANIE 8 PRZYPADKÓW

P. V. Krishna Rao[1], Hari Kishan Kumar Yadalla[2]

[1] *Andhra Medical College, Visakhapatnam, Andhra Pradesh, India*
[2] *M.V.J. Medical College & Research Hospital, Hoskote, Bangalore, India*

**Corresponding author:** Dr. P.V. Krishna Rao drkrishna1986@yahoo.co.in

Our Dermatol Online. 2012; 3(2): 109-111
Date of submission: 11.01.2012 / acceptance: 17.02.2012
Conflicts of interest: None

**Abstract**
A disorder first described by Zoon in 1952, Zoon`s balanitis or Plasma cell balanitis (PCB), is an uncommon clinical disorder seen in middle-aged uncircumcised men. It is characterized by one or more indolent well demarcated, glazed, reddish brown patches on the glans penis or prepuce. The etiology of this disease is unknown. This balanitis does not respond to routine topical antifungals, steroid creams and systemic antifungals. Diagnosis is confirmed by biopsy. Herein we report 8 cases of PCB, presenting with a characteristic clinical picture of the disease. In all cases circumcision was done and histopathology confirmed the diagnosis of PCB. All patients were followed up for a period of 6 months and no recurrences were observed. Development of malignancy is not seen. In conclusion. We believe that for all cases of balanitis, not responding to routine topical antifungals, steroid creams and systemic antifungals, the diagnosis of Zoon`s balanitis should be considered.

**Streszczenie**
Choroba po raz pierwszy została opisana przez Zoon`a w 1952 roku. Zapalenie żołędzi typu Zoona lub też plazmacytowe zapalenie żołędzi (PCB) jest rzadkim, klinicznym zaburzeniem obserwowanym u nieobrzezanych mężczyzn w średnim wieku. Charakteryzuje się ono jedną lub większą ilością łagodnych, dobrze odgraniczonych, połyskujących, czerwonawych plamek na żołędzi penisa lub napletku. Etiologia zmian pozostaje nieznana. Ten rodzaj zapalenia żołędzi nie odpowiada na typowe leczenie przeciwgrzybicze: miejscowe czy systemowe oraz na maści sterydowe. Diagnoza jest potwierdzana biopsją. W tym artykule opisujemy 8 przypadków PCB oraz ich obraz kliniczny. We wszystkich przypadkach został wykonany zabieg obrzezania a badanie histopatologiczne potwierdziło diagnozę. Wszyscy pacjenci byli obserwowani przez okres 6 miesięcy, nie zanotowano nawrotu choroby. Nie zanotowano transformacji nowotworowej. Wszystkie przypadki zapalenia żołędzi nie odpowiadające na leczenie przeciwgrzybicze miejscowe lub systemowe oraz na maści sterydowe powinny zostać ponownie rozpatrzone pod kątem diagnozy PCB.

**Key words:** plasma cell balanitis; Zoon`s balanitis; circumcision
**Słowa klucze:** zapalenie plazmakomórkowe żołędzi; zapalenie żołędzi Zoona; obrzezanie

## Introduction

In 1952, J.J. Zoon first recognized balanitis circumscripta plasmacellularis or plasma cell balanitis (PCB), which is now recognized as an idiopathic, rare, benign penile dermatosis. It is important to distinguish this benign condition from the clinically similar neoplastic Erythroplasia of Queyrat. PCB affects males, but analogous lesions sharing both clinical and histologic features of PCB have been reported in women as vulvitis circumscripta plasmacellularis. PCB is most common in middle-aged to older men, with cases reported in patients aged 20-88 years. The patient, a male of middle age or older, usually presents with a characteristic plaque on the glans penis or prepuce, present for an average of 1-2 years before diagnosis. Symptoms are minimal, but patients may complain of mild pruritus or tenderness. Some patients present for evaluation because of cosmetic concerns or anxiety [1-5].

Here, we report 8 such cases since very few studies are available on Zoon`s balanitis. This work has been initiated, to study the presenting characteristic clinical and histopathological features of PCB, the importance of histology in differentiating from similarly presenting malignant lesion Erythroplasia of Querat (Squamous cell carcinoma in-situ) and to evaluate the treatment response and follow-up for any recurrences.

## Case reports

8 cases of chronic recurrent balanitis in uncircumcised men aged 25, 28, 31, 41, 45, 49, 52 & 60 years were studied. 5 were married and 3 were unmarried. The mean duration of balanitis in these 8 cases was 7 months shown in (Tab. I).

There was no history of exposure to sexually transmitted infections, diabetes or urethral symptoms. The first patient gave a history of application of soframycin cream. Examination of these patients showed erythematous plaque over glans penis in six of them and in two, lesions extended onto prepuce (Fig. 1,2).

These cases were treated with topical and systemic antifungals and also with mild corticosteroid cream for 3 months with no response. In one case topical tacrolimus 0.03% application cleared the lesions but recurrence was seen within 3 months.

In all cases, circumcision was performed and a biopsy was sent for histopathological examination. Results indiucated that the features of these were consistent with Plasma cell balanitis (Fig. 3,3a,4). These cases were followed-up for 6 months and no relapses were observed.opthamologist. Assessment of diabetic neuropathy was done on the basis of the criteria detailed by Foster [7]. Relevant microbiological and histopathological investigations were carried out to confirm the clinical diagnosis.

| Case | Age | Duration | Clinical feartures | Treatment |
|---|---|---|---|---|
| 1 | 25yrs | 3 months | Asymptomatic erythematous plaque - penis | Circumcision |
| 2 | 28yrs | 5 months | Asymptomatic erythematous plaque - penis | Circumcision |
| 3 | 31yrs | 6 months | Itchy erythematous plaque – penis extending onto prepuce | Circumcision |
| 4 | 41yrs | 8 months | Asymptomatic erythematous plaque - penis | Circumcision |
| 5 | 45yrs | 10 months | Asymptomatic erythematous plaque - penis | Circumcision |
| 6 | 49yrs | 4 months | Asymptomatic erythematous plaque – penis extending onto prepuce | Circumcision |
| 7 | 52yrs | 8 months | Asymptomatic erythematous plaque - penis | Circumcision |
| 8 | 60yrs | 12 months | Erythematous plaque – penis with burning | Circumcision |

**Table I. Cases of plasma cell balanitis**

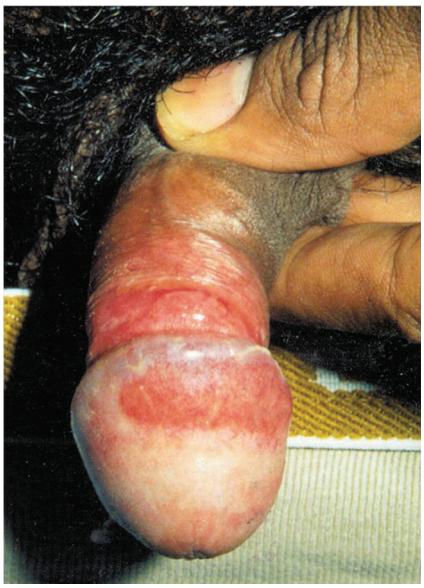


**Figure 1. Erythematous plaque over penis extending onto prepuce**

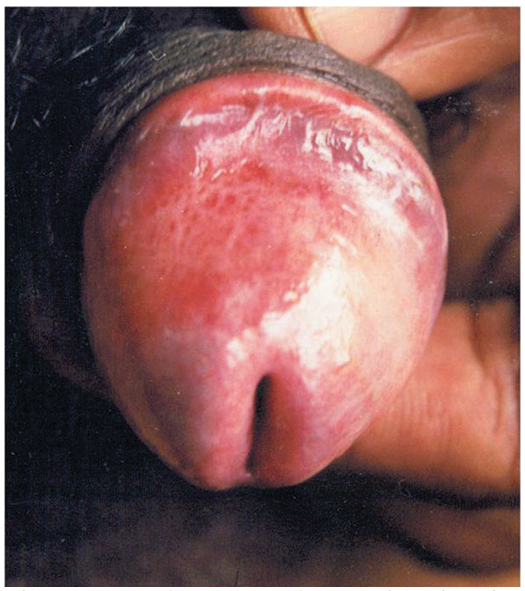


**Figure 2. Erythematous plaque with pinpoint purpuric (cayenne pepper) spotting over penis**

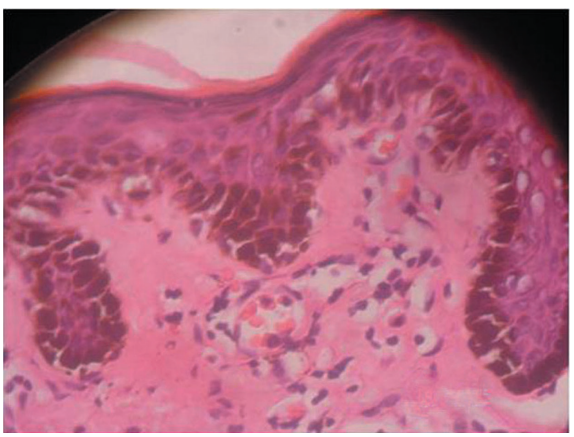


**Figure 3. Attenuated epidermis containing lozenge shaped keratinocytes with dense dermal infiltrate rich in plasma cells (H&E x 40)**

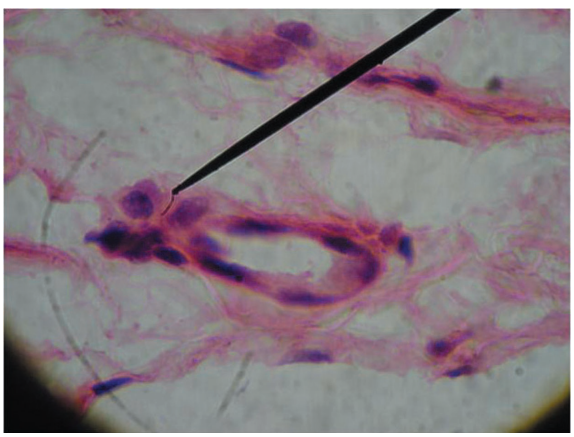


**Figure 3a. Photomicrograph showing plasma cell infiltrate, dilated capillary and extravasated RBCs in upper dermis (H&E x 100)**

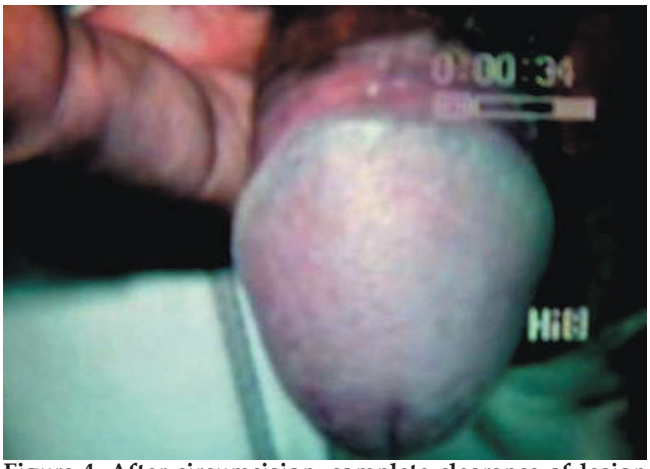


**Figure 4. After circumcision, complete clearance of lesion**

## Discussion

Plasma Cell balanitis (PCB) or "balanitis circumscripta plasma cellularis" is a benign, idiopathic condition first recognized by Zoon in 1952. Zoon described eight cases of chronic balanitis with unique benign appearing histologic findings previously diagnosed as Erythroplasia of Queyrat [1-3].

Plasma cell balanitis typically presents as a solitary, smooth, shiny, red-orange plaque on the glans and or the prepuce of an uncircumcised, middle-aged to older man. The lesion often exhibits pinpoint purpuric cayenne pepper surface spotting with a yellow hue. Vegetative, erosive variants and multiple lesions have been reported [4]. PCB tends to be chronic and is often present for months to years before the patient reports for consultation. Symptoms are minimal, but may include mild tenderness or pruritus. Diagnosis is confirmed by the distinctive histologic findings. Epidermal atrophy with complete effacement of the rete ridges is present. Ulceration may occur. Suprabasal keratinocytes are diamond shaped which are also called "lozenge keratinocytes" are common with uniform intercellular spaces termed "watery spongiosis". A dense lichenoid subepidermal infiltrate composed largely of plasma cells is characteristic. Erythrocyte extravasation and hemosiderin deposition are often noted [5-9].

The cause of PCB is unclear. All confirmed cases have involved uncircumcised men. Heat, friction, poor hygiene, chronic infection with Mycobacterium smegmatis, trauma, response to an unknown exogenous agent, immediate hypersensitivity response to IgE class antibodies and hypospadiasis have been implicated as predisposing factors. A viral cause of PCB has been rejected after both PCR and electron microscopy failed to show evidence of viral particles in PCB lesions. Kossard et al postulated a causal relation between certain PCB variants and lichen aureus, in the light of similar vascular fragility and histologic abnormalities [4].

The treatment of choice for PCB is circumcision [4,5,10,11]. Successful ablation of PCB has been achieved with carbondioxide laser and Erbium:YAG laser [12,13]. Successful treatment of vulvar anologue of PCB with intralesional interferon α has also been reported. Treatment with topical agents including corticosteroids and antifungals cause mild improvement, but the lesion usually recurs following discontinuation of treatment and are generally not curative [3,4,16]. Petersen et al found topical fusidic acid 2% cream to be beneficial [14]. Chander etal used topical tacrolimus 0.03% with success [15]. Griseofulvin has been tried without success.

This case series is being reported to make the treating clinicians aware of the clinical and histopathological features of this uncommon balanitis, and to emphasize the importance of histopathology in distinguishing this benign condition from similar looking malignant conditions and the treatment response.

## REFERENCES


1. Edwards S: Balanitis and balanoposthitis: a review. Genitourin Med 1996: 72: 155-159.
2. English JC 3rd, Laws RA, Keough GC, Wilde JL, Foley JP, Elston DM: Dermatoses of glans penis and prepuce. J Am Acad Dermatol 1997; 37: 1-24.
3. Mikhail GR: Cancers, precancers and pseudocancers on the male genitalia: A review of clinical appearances, histopathology, and management. J Dermatol Surg Oncol 1980; 6: 1027.
4. Jolly BB, Krishnamurty S, Vaidyanathan S: Zoon`s balanitis. Urol Int 1993; 50: 182-184.
5. Kumar B, Sharma R, Ragagopalan M, Radotra BD: Plasma cell balanitis: clinical and histological features- response to circumcision. Genitourin Med 1995; 71: 32-34.
6. Arumainayagam JT, Sumathipala AHT: Value of performing biopsies in genitourinary clinics. Genitourinary Medicine 1990; 66: 407.
7. Pastar Z, Rados J, Lipozencić J, Skerlev M, Loncarić D: Zoon plasma cell balanitis: an overview and role of histopathology. Acta Dermatovenerol Croat. 2004; 12: 268-273.
8. Weyers W, Ende Y, Schalla W, Diaz-Cascajo C: Balanitis of Zoon: A clinicopathologic study of 45 cases. Am J Dermatopathol 2002; 24: 459-467.
9. Balato N, Scalvenzi M, La Bella S, Di Costanzo L: Zoon's Balanitis: Benign or Premalignant Lesion? Case Rep Dermatol. 2009; 1: 7–10.
10. Fernandiz C, Ribera M: Zoon`s balanitis treated by circumcision. J Dermatol Surg Oncol 1984; 10: 622-625.
11. Mallon E, Hawkins D, Dinneen M, Francics N, Fearfield L, Newson R, et al: Circumcision and genital dermatoses. Arch Dermatol 2000; 136: 350-354.
12. Baldwin HE, Geronemus RG: The treatment of Zoon's balanitis with the carbon dioxide laser. J Dermatol Surg Oncol 1989; 15: 491-494.
13. Albertini JG, Holck DE, Farley MF; Zoon's balanitis treated with Erbium:YAG laser ablation. Lasers Surg Med 2002; 30: 123-126.
14. Petersen CS, Thomsen K; Fusidic acid cream in the treatment of plasma cell balanitis. J Am Acad Dermatol 1992; 27: 633-634.
15. Chander R, Garg T, Kakkar S, Mittal S: Treatment of balanitis of Zoon's with tacrolimus 0.03% ointment. Indian J Sex Transm Dis 2009; 30: 56-57.
16. Hota D, Basu R, Senapati R: Zoon's balanitis - diagnosis and follow-up. Indian J Urol 2002; 18: 173-175.

DOI: 10.7241/ourd.20122.22

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# SPOROTRICHOID ATOPIC PRURIGO. A COMMON CONDITION WITH AN UNUSUAL CLINICAL PRESENTATION

SPOROTRICHOID ATOPIC PRURIGO. CZĘSTE SCHORZENIE O NIEZWYKŁEJ PREZENTACJI KLINICZNEJ

Beatriz Di Martino Ortiz, Liz Lezcano, Mirtha Rodríguez Masi, Oilda Knopfelmacher, Lourdes Bolla de Lezcano

*Clinicas Hospital. Faculty of Medical Sciences. National University. Asunción-Paraguay*

**Corresponding author:** Dr. Beatriz Di Martino Ortiz beatrizdimartino@gmail.com

Our Dermatol Online. 2012; 3(2): 112-114

Date of submission: 09.01.2012 / acceptance: 13.01.2012

Conflicts of interest: None

**Abstract**

Prurigo is a chronic pruritic papular dermatitis. It is a benign condition, acute or chronic. It is more frequent in spring and summer, affecting patients with a low socio-economic status.

**Streszczenie**

Świerzbiączka jest przewlekłą swędzącą grudkową dematozą. Może mieć łagodny, ostry lub przewlekły przebieg. Występuje częściej w okresie wiosenno-letnim, głównie wśród osób o niskim statusie socjoekonomicznym.

**Key words:** prurigo; insect bites; itching

**Słowa klucze:** świerzbiączka; ugryzienie owada; świąd

## Introduction

Prurigo is a syndrome characterized by papular lesions and itching, with an acute or chronic evolution, relatively easy to diagnose by clinical history. Its pathogenesis is due to multiple causes such as insect bites, foci of infection, parasites, etc. It is simple to diagnose and treat but it may have atypical clinical presentation.

## Case Report

67-year-old white male, gardener, with a history of asthma. He presented an injury of two weeks of evolution in the left armpit, not related to trauma or insect bites, painful and itchy, crusty and with purulent discharge.

*Physical examination:* erithemato-violaceous nodules, 2 to 5 cm. in diameter with central erosion covered with blackish crust and purulent discharge, which follow a linear path in the left axillary region (Fig. 1). No regional lymphadenopathy.

*Histopathology:* epidermal acanthosis, foci of parakeratosis, hypergranulosis and mild spongiosis. Superficial and deep inflammatory infiltrate of mononuclear cells and numerous eosinophils (Fig. 2, 3). The infiltrate reaches the hypodermis.

The *direct mycological examination and culture* of discharge and scaling of lesions was negative for fungi.

*Routine laboratory normal.*

With the diagnosis of atopic prurigo the patient was treated with topical betamethasone dipropionate 0.064 gr. + 0.1 g gentamicin, and cephalexin 500 mg. VO, for 10 days.

The therapeutic response was favorable with complete remission of lesions a month after starting the specific treatment (Fig. 4).

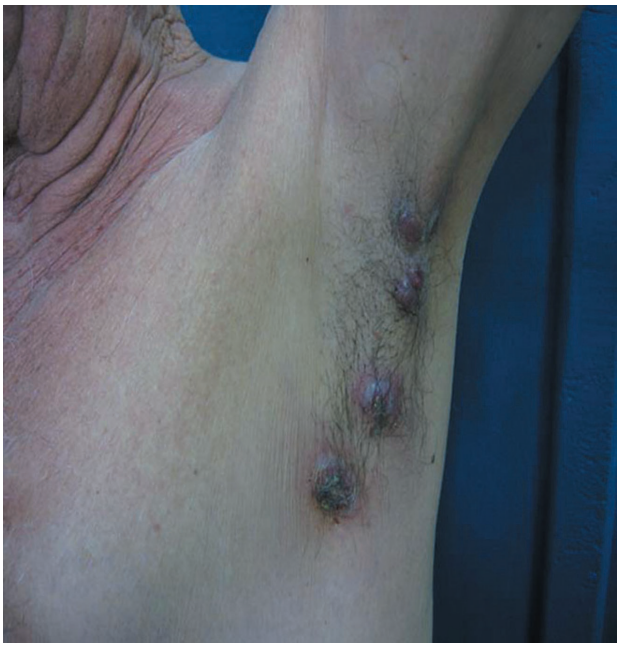


**Figure 1. Clinic. Rounded nodules with central erosion covered with blackish crust and purulent discharge, which follow a linear path in left axillary region**

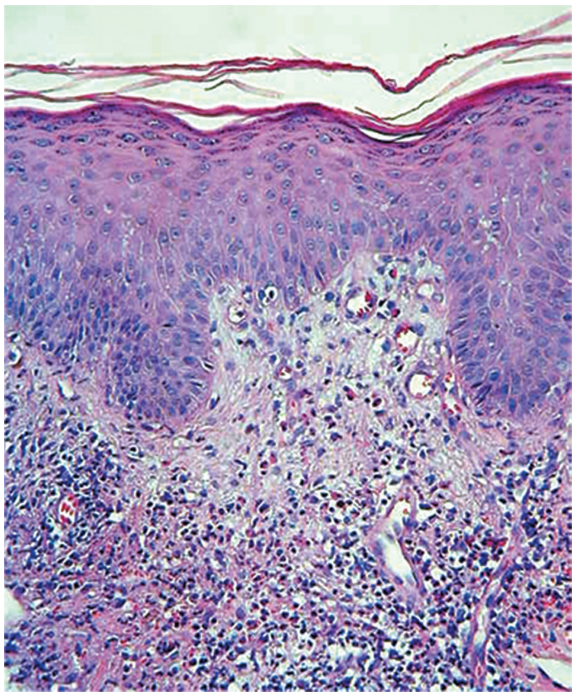


**Figure 2. Histopathology. Epidermis with acanthosis, hypergranulosis and focal parakeratosis. Mild spongiosis**

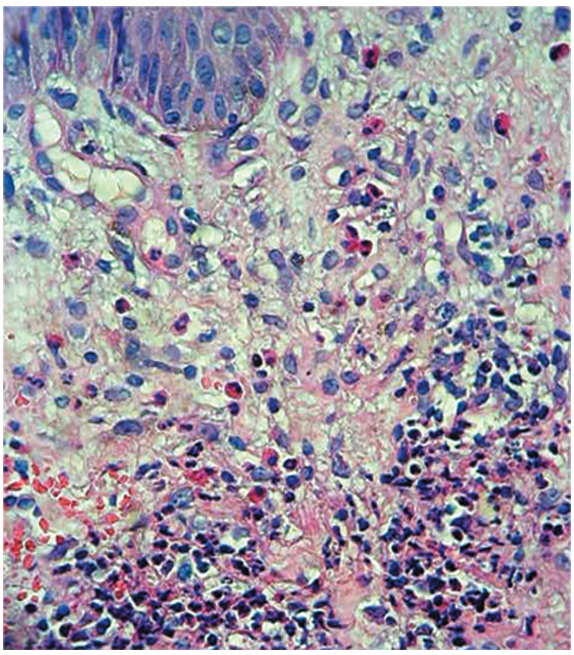


**Figure 3. Histopathology. Papillary dermis with mononuclear inflammatory infiltrate and numerous eosinophils**

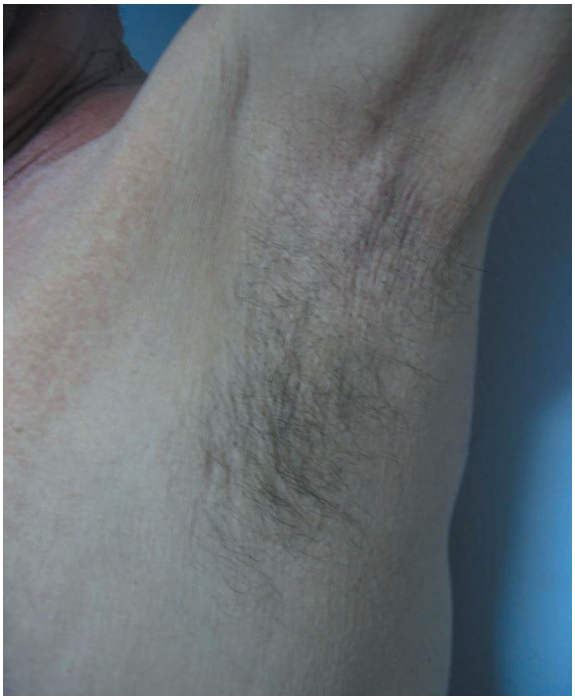


**Figure 4. Clinical evolution. Complete remission of lesions after a month of treatment**

## Discussion

Prurigo is a disease whose elemental lesion is the papule and the primary symptom is itching [1,2]. It is a reaction that usually affects male (3:1) children aged 1 to 7 years, without racial preference. Predominates in tropical countries, like ours, during the warmer months and is seen mainly in lower socioeconomic status [3]. The lesions are caused by insect bites. The most frequently involved are: Cemex lectularius (bedbug) and Pulex Irritians (fleas). Other ectoparasites involved may be flies, trombidias, tung and ticks [3,4]. Early lesions of prurigo by insect are due to a type I hypersensitivity response caused by the release of IgE that is clinically manifested by rash, later involving in a type 4 hypersensitivity mechanism, dependent on T lymphocytes, which causes late lesions causing papules [5].

Three phases are described in terms of response mounted to the sting of an insect: at first the person is unresponsive to the bite for lack of awareness, and after a history of previous bites and response there has started an awareness, and finally, in adulthood desensitization is established after many bites.

In some ways this may explain why children under one year have not been exposed, hardly react to insect bites, one case presented hemorrhagic macula showing the location of the lesion and is clearly secondary to trauma and almost always

asymptomatic, whereas in the period between 2 and 7 years desensitization occurs following the bites being more common so the insect prurigo at this age, much less common in adults [3].

Classification [4]:
- Scrofula or Prurigo of Children: Common between the first and second year of life, caused by a hypersensitivity reaction to insect bites toxins. It is manifested by sudden onset of hives in the middle and papules over tiny vesicles accompanied by itching.
- Prurigo Simple: common in adolescents and adults, also produced by a hypersensitivity reaction to various causes such as insect bites, light, hormonal disorders, pregnancy, oral contraceptives, and so on. Clinically it is similar to Scrofula.
- Prurigo Eczema: in adults, may be in the form of atopic eczema, manifesting as lichenified plaques quickly, accompanied by intense and persistent itching.
- Nodular Prurigo (Hyde): chronic condition of unknown etiology but different states may induce their appearance, for example, internal diseases, kidney failure or psychiatric disorders, AIDS, Hepatitis C, mycobacteria, Helicobacter pylori, Strongyloides stercoralis [2,7,8]. It is characterized by papulo-nodular lesions 0.5 to 3 cm. in diameter, with abrasions on the surface, with intense itching with chronic and no tendency to regression.

The initial lesion is a wheal acute prurigo, often crowned by a central dark spot or a blister. After several hours papules form firm, glossy, 3 to 10 millimeters in diameter, grouped, symmetrical distribution and very itchy. They may be excoriated, lichenified, or overinfected with crusting on the surface. The lesions recur in outbreaks of between 10 and 20 injuries, and are in various stages of evolution. Most of the lesions persist between 2 and 10 days with red or redness persists or postinflammatory pigmentation after resolution. Eventually, scar tissue can develop. The acute prurigo is not associated with systemic symptoms or lymphadenopathy or lymph neighbors [5].

Lesions that are covered parts suggest bedbugs or fleas, which are not covered in parts, flying insects such as mosquitoes or flies. The usual complications are contact dermatitis and impetigo [3].

Sensitized patients may have a generalized rash to be bitten again to reactivate the previously affected areas. The evolution of disease outbreaks is irregular intervals with changes in environment [5].

The differential diagnosis of scabies should be made, acropapulosis of childhood chickenpox and atopic dermatitis [1].

For diagnosis, biopsy is not required. In the epidermis there is spongiosis or intercellular edema, epidermal necrosis can be found, sometimes there are real blisters. The dermis is infiltrated by lymphocytes, histiocytes, and many eosinophils. Many times the small nerves are thickened [3].

*Treatment of prurigo is based on* [6]*:*
*General measures:*
- Explain to patients the natural history of disease, atopic predisposition, age of onset, chronicity and evolution is fundamental.
- Recommend use of pajamas with long sleeves and pants, close windows and placing mosquito netting when sleeping, and avoid animals or plants within the sleeping quarters.
- Use of insecticides regularly with preventive measures.

*Topical measures:*
- Steroids for three or four days in early stages of the disease to reduce the itching and blistering.
- Pasta and creams inherent drying.
- Solutions with menthol, phenol or camphor.
- If infection were administered aggregate an antiseptic or antibiotic ointment.

*Systemic actions:*
- Antihistamines such as hydroxyzine (1mg/kg/day), chlorpheniramine or other non-sedating.
- Thiamine excretion VO which prevents the skin from insect bites (200 and 600mg/day).
- Intravenous immunoglobulins for atopic prurigo nodularis [9].
- Narrowband UVB phototherapy [10].

## Conclusion

We present the case for the unusual clinical presentation in an adult patient (bulky lesions showed a rare anatomical site), having to resort to auxiliary diagnostic methods, and the satisfactory therapeutic response.

## REFERENCES


1. Calderon Rivera JS, Rosas Vargas MA, Mejia SA, Alcon Moncada AM, Navarro River BE, Monge Sienrra GG: Uncommon Manifestations of atopic dermatitis. Alereg Rev Mex. 2007; 54: 96-103.
2. Lee MR, Schumacker S: Prurigo nodularis: a review. Austral J Dermatol. 2005; 46: 211-218.
3. Gómez A, Umana A, Trespalacios AA: Immune responses to isolated human skin antigens in actinic prurigo. Med Sci Monit. 2006; 12: 106-113.
4. Sampaio SAP; Prurigo. In: Sampaio-Rivitti (Eds). Dermatology. 2nd edition, San Paulo: Medical Arts Ltd., 2000.
5. Sakurai Y, Matsui H, Izaki S, Kitamura K: Grouping prurigo: report of cases. J Dermatol. 2001; 28: 75-80.
6. Wong SS, Goh CL; Double-blind, right / left comparison of calcipotriol ointment and betamethasone ointment in the Treatment of Prurigo nodularis. Arch Dermatol. June 2000; 136: 807-808.
7. Savoia F, Casadio C, Tabanelli M, Gaddoni G, Savoia F, Patrizi A, et al: Prurigo nodularis as the first manifestation of a chronic autoimmune cholestatic hepatitis. Int J Dermatol 2011; 50: 1588-1589.
8. Weisshaar E, Ständer S: Prurigo nodularis in hepatitis C infection: Result of an occupational disease? Acta Derm Venereol. 2011. doi: 10.2340/00015555-1209. [Epub ahead of print].
9. Feldmeyer L, Werner S, Kamarashev J, French LE, Hofbauer GF: Atopic prurigo nodularis responds to intravenous immunoglobulins. Br J Dermatol 2012; 166: 461-462.
10. Jang MS, Baek JW, Kang DY, Kang JS, Kim ST, Suh KS; Successful treatment with narrowband UVB phototherapy in prurigo pigmentosa associated with pregnancy Eur J Dermatol 2011; 21: 634-635.

*DOI: 10.7241/ourd.20122.22.1*

# SPOROTRICHOID ATOPIC PRURIGO. A COMMON CONDITION WITH AN UNUSUAL CLINICAL PRESENTATION

by Beatriz Di Martino Ortiz, Liz Lezcano, Mirtha Rodríguez Masi, Oilda Knopfelmacher, Lourdes Bolla de Lezcano

comment:

Dr. Soe Win Oo

Our Dermatol Online. 2012; 3(2): 115

Date of submission: 07.03.2012 / acceptance: 10.03.2012

Conflicts of interest: None

Prurigo is a very common dermatosis with no racial nor sex preference. It is frequently encountered in patients with atopic phenomenon. The causes of prurigo are mainly hypersensitivity reaction, inflammation and infection. Prurigo can also be classified simply as acute or chronic prurigo. The latter is more common type and one of its variant is actinic prurigo. Actinic prurigo is quite common in temperate regions. There are chronic recurrent prurigo nodules on sun-exposed areas of the body such as nape and sides of the neck, backs of the hands, extensor forearms and upper chest, and is usually resistant to treatment. Sporotrichoid atopic prurigo is a rare variant where itchy prurigo nodules are seen along the lymphatic or vascular drainage area, and usually seen in lower limbs. Sporotrichoid atopic prurigo is commonly seen in atopic patients who do hard works and are prone to minor trauma. This includes military persons, people who work in paddy fields and manual labor. The case presented by Beatriz Di Martino Ortiz et al is an unusual type of sporotrichoid atopic prurigo affecting the left axilla. Its cause seems to be inflammation caused by infection. So it is rapidly resolved by systemic antibiotics.

*Correspondence:*

Dr. Soe Win Oo
MBBS, MMedSc(Dermatology)
Consultant Dermatologist
Yangon General Hospital
Yangon, Myanmar
*E-mai: soewinoo@gmail.com*

DOI: 10.7241/ourd.20122.23

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# HAILEY HAILEY DISEASE: A CASE REPORT

CHOROBA HAILEY HAILEY: OPIS PRZYPADKU

Iffat Hassan, Abid Keen

*Department of Dermatology, STD & Leprosy Govt. Medical College & Associated SMHS Hospital, Srinagar-Kashmir, India*

**Corresponding author:** Dr. Iffat Hassan hassaniffat@gmail.com

Our Dermatol Online. 2012; 3(2): 116-118

Date of submission: 24.11.2011 / acceptance: 28.12.2011

Conflicts of interest: None

**Abstract**

Hailey Hailey disease or Familial chronic benign pemphigus is a rare autosomal dominant acantholytic disease, clinically characterized by flaccid bullae and erosions in the intertriginous areas, mainly the axillary and inguinal region. We herein report a case of a forty year old female belonging to ethnic Kashmiri population with clinical and histopathological features suggestive of Hailey Hailey disease.

**Streszczenie**

Choroba Hailey Hailey lub przewlekła rodzinna łagodna pęcherzyca jest rzadką autosomalnie dominującą akantholityczną chorobą, klinicznie charakteryzującą się wiotkimi pęcherzami i nadżerkami w obszarach wyprzeniowych, głównie pach i pachwin. W niniejszym raporcie opisujemy przypadek czterdziestoletniej kobiety należącej do etnicznej ludności Kaszmiru z klinicznymi i histopatologicznymi cechami wskazującymi na chorobę Hailey Hailey.

**Key words:** pemphigus; acantholysis; Hailey Hailey disease
**Słowa klucze:** pęcherzyca; akantoliza; choroba Hailey Hailey

## Introduction

Hailey Hailey disease is a rare autosomal dominant intraepidermal blistering disorder that is characterized by mutations in the gene that encodes for the golgi-associated Ca2+ ATP ase (ATP 2C1) leading to abnormal intracellular Ca2+ signaling, resulting in acantholysis in stratum spinosum. The condition is clinically characterized by the presence of flaccid vesiculopustules, crusted erosions or expanding circinate plaques in the areas of friction such as neck, axilla, groins and perineum. Flaccid lesions may be hypertrophic and malodorous with soft, flat and moist fissures. Various treatment modalities have been tried for this clinically resistant condition. These include topical agents like corticosteroids, antimicrobials, tacrolimus, calcipotriol and botulinum toxin. Systemic therapy with antimicrobials, retinoids and other immunosuppressive drugs has been tried, but the result with these treatments is not long lasting.

## Case Report

A 40-year old female reported to the out-patient department of Dermatology, STD&Leprosy of SMHS Hospital (Associated teaching hospital of Govt. Medical College, Srinagar) with a ten year history of flexural blistering eruption (Fig. 1). The disease started at the age of thirty years with recurrent erythema, vesicles and erosions in the intertriginousareas including axillary, submammary and inguinal regions.These lesions were pruritic and were associated with stinging and burning sensation. These lesions were also malodorous which was a cause of distress for the patient. Recurrent periods of exacerbations of the diseaes were reported especially throughout the summer months. The patient also reported that the eruption would flare around the time of her menstrual periods.

The patient had been treated in the past with both topical and systemic antifungal agents as well as antibiotics but her lesions had been refractory to all kinds of treatment. There was no history of similar complaints in any other family member.

General physical examination of the patient revealed erythematous, macerated plaques with multiple fissures, peripheral vesicles and crusts in the axillary, submammary folds, inguinal and perineal areas. There was no involvement of neck folds and antecubital fossae. There was no involvement of mucous membranes and nails.

All the routine haematological and biochemical investigations were normal.

KOH smear for fungus was negative. Tzanck smear showed a few acantholytic cells. A 4 mm punch biopsy specimen was taken from the affected axillary tissue. It demonstrated intraepidermal acantholysis giving dilapidated brick wall appearance (Fig. 2). Direct immunofluorescense was negative.

With all these clinicopathological findings, a diagnosis of Hailey Hailey disease was entertained in this patient. The patient was put on oral Erythromycin 1 gm daily and topical tacrolimus (0.03%) twice a day to which the patient responded well.

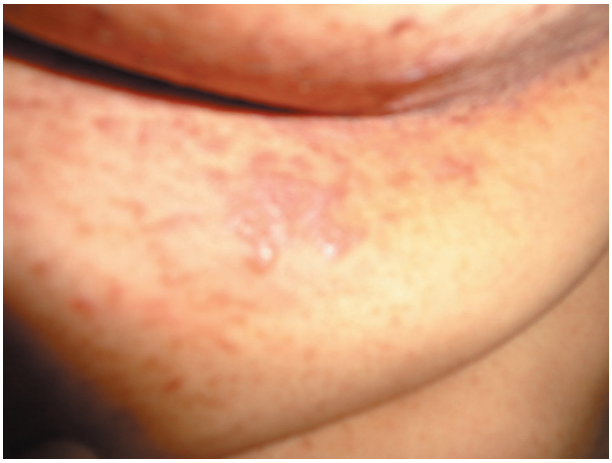


**Figure 1. Erythematous macerated plaques with fissures and crusts in the inframammary folds**

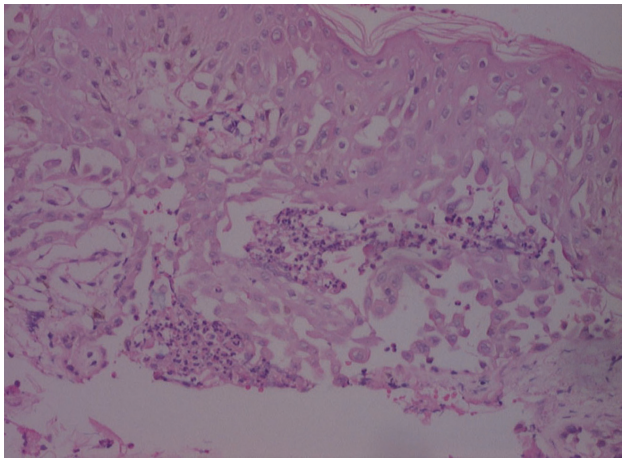


**Figure 2. Histopathology showing incomplete suprabasal acantholysis**

## Discussion

Hailey Hailey disease, also known as familial benign chronic pemphigus was first described in 1939 by the Hailey brothers [1]. It is an autosomal dominant inherited genodermatosis with incomplete penetrance. Family history is obtained in about two-thirds of the patients. The characteristic clinical features are recurrent, fragile, vesicles and erosions in the intertriginous areas (axillary folds, groins, submammary folds and neck folds). Skin lesions mostly present between second to fourth decade of life and can be pruritic, painful and malodorous [2]. Malodorous discharge greatly affects social activity and patient's lifestyle. Recurrent lesions may sometimes lead to restricted mobility. The condition is often debilitating and, both physically and psychologically. Healing occurs without scarring. Longitudinal white bands in the fingernails may sometimes facilitate diagnosis in patients with limited or atypical disease presentations.

Hailey Hailey disease has a variable, usually chronic course, with periods of remissions and exacerbations. The disease can be exacerbated by friction, heat, sweating, physical trauma, infection and stress. Some female patients may experience a premenstrual worsening of their disease, suggesting a role of sex hormones [3].

There are no extracutaneous manifestations and the general health is not impaired. Mucosal involvement is rare, but oral, oesophageal, vulvar and conjuctival involvement has been reported [4].

Hailey Hailey disease is thought to be caused by heterozygous mutations in the ATP 2C1 gene on chromosome 3q 21-q24 which encodes ATPase 1. In affected individuals, reduced activity of this enzyme might cause an instability of the desmosomes, resulting in loss of cohesion between keratinocytes (acantholysis), and development of vesicles. The mechanism by which mutant ATP2C1 causes acantholysis is unknown [5].

Differential diagnosis includes intertrigo, eczema, Darier's disease and pemphigus vegetans. Histopathological examination reveals widespread suprabasal cantholysis with loss of intercellular bridges, which result in 'dilapidated brick wall' appearance. Direct immunofluorescence tests are negative. The treatment of Hailey Hailey disease is very challenging. Patients with Hailey Hailey disease should avoid potential aggravating factors, such as friction and sweating. To help minimize friction, weight should be maintained at appropriate levels and comfortable loose clothing should be worn. Medical line of therapy includes topical corticosteroids, topical antimicrobials, tacrolimus, calcipotriol, tacalcitol and, more recently, botulinum toxin [2,6,7].

Systemic therapy with antimicrobials, retinoids, and immunosuppresants like methotrexate and cyclosporine and dapsone have been tried, but the result with these treatments is not long lasting.

For recalcitrant lesions, wide excision of the involved area with replacement by split graft is widely accepted [8]. Erbium-YAG and CO2 laser ablation have also been reported to be effective [9,10]. Radiotherapy has also been used in local disease control but it does not seem to influence the natural course of the disease [11].

## REFERENCES


1. Hailey H, Hailey H: Familial benign chronic pemphigus. Arch Dermatol 1939; 39: 679-685.
2. Burge SM: Hailey - Hailey disease: the clinical features, response to treatment and prognosis. Br J Dermatol 1992; 126: 275.
3. Szigeti R, Chao SC, Szász O, Tészás A, Kosztolányi G, Kellermayer R: Premenstrual exacerbation in calcium ATPase disorders of the skin. J Eur Acad Dermatol Venereal 2007; 21: 412.
4. Botvinick I: Familial benign pemphigus with oral mucous membrane lesions. Cutis 1973; 12: 371-373.

5. Dhitavat J, Fairclough RJ, Hovnanian A, Burge SM: Calcium pumps and keratinocytes: Lessons from Darrier's disease and Hailey Hailey disease. Br J Dermatol 2004; 150: 821-828.
6. Bianchi L, Chimenti MS, Giunta A: Treatment of Hailey Hailey disease with topical calcitriol. J Am Acad Dermatol 2004; 51: 1475.
7. Rabeni EJ, Cunningham NM: Effective treatment of Hailey Hailey disease with topical tacrolimus. J Am Acad Dermatol 2002; 47: 497.
8. Thorne FL, Hall JH, Mladick RA: Surgical treatment of familial chronicus pemphigus. Arch Dermatol 1968; 98: 522-24.
9. Beier C, Kaufmann R: Efficacy of erbium-YAG laser ablation have also been reported to be effective. Arch Dermatol. 1999; 135: 423-427.
10. Kartana M, Reitamo S: Familial benign chronicus pemphigus (Hailey Hailey disease): treatment with carbon dioxide laser vapourization. Arch Dermattol 1992; 128: 646.
11. Narbutt J, Lesiak A, Arkuszewska C, Rychter A, Fijuth J, Sysa-Jedrzejowska A: Effective treatment of recalcitrant Hailey Hailey disease with electron beam radiotherapy. J Eur Acad Dermatol Venereol 2007; 21: 567.

DOI: 10.7241/ourd.20122.24

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# PITYRIASIS ROSEA IN 12-MONTHS-OLD INFANT

## PITYRIASIS ROSEA U 12-MIESIĘCZNEGO NIEMOWLĘCIA

Piotr Brzezinski[1] Ahmad Thabit Sinjab[2]

[1]*Dermatological Clinic, 6th Military Support Unit, Ustka, Poland*
[2]*District Hospital in Wyrzysk a Limited Liability Company, Polnad*

**Corresponding author:** Dr Piotr Brzezinski *brzezoo77@yahoo.com*

Our Dermatol Online. 2012; 3(2): 119-122 Date of submission: 23.12.2011 / acceptance: 23.03.2012
Conflicts of interest: None

**Abstract**
Pityriasis Rosea (PR) is a self-limiting papulo-squamous disorder characterized in its typical form by sudden onset of a larger scaly plaque (herald plaque), followed by multiple, bilateral smaller scaly lesions of oval or round shape which follow Langer's lines of cleavage on the trunk and proximal parts of extremities.
Currently accepted hypothesis that the cause of this disease are human herpesvirus: HHV-6 and HHV-7.
Presented case of 12-months-old infant with the image of a pityriasis rosea.
PR is a common skin condition seen in children and adults. PR is rarely diagnosed in infants. It is important to distinguish it from other childhood exanthems.

**Streszczenie**
Łupież różowy (ŁR) jest ostrą, samoistnie ustępującą, grudkowo-złuszczającą chorobą, charakteryzującą się w typowej formie nagłym pojawieniem się najpierw dużej zmiany skórnej (blaszka macierzysta), a następnie wielu, mniejszych łuszczących się, owalnych lub okrągłych zmian skórnych, które występują wzdłuż linii cięcia Langera na tułowiu i proksymalnych częściach kończyn.
Obecnie przyjmuje się hipotezę, że przyczyną tego schorzenia są ludzkie wirusy opryszczki: HHV-6 i HHV-7.
Przedstawiono przypadek 12-miesięcznego niemowlęcia z obrazem łupieżu różowego.
ŁR jest częstym schorzeniem skóry u dzieci i dorosłych. ŁR u niemowląt jest rozpoznawany rzadko. Ważne jest, aby odróżnić go od innych wysypek wieku dziecięcego.

**Key words:** pityriasis roasea; infant; skin diseases
**Słowa klucze:** łupież różowy; niemowlę; choroby skóry

## Introduction

Pityriasis Rosea (PR) described by Gibert in 1860 [1], but recognized as early as in 1798 by Willan [2].
PR may occur at any age, but most commonly between ages 10-35 years [3,4]. Pityriasis rosea can occur throughout the year, but more commonly is observed during the winter, spring and autumn months.
Female to male ratio is approximately equal [5] whereas in another study, it has been found to be 1.5:1 [6].
PR is a self-limiting papulo-squamous disorder characterized in its typical form by sudden onset of a larger scaly plaque (herald plaque), followed by multiple, bilateral smaller scaly lesions of oval or round shape which follow Langer's lines of cleavage on the trunk and proximal parts of extremities [3,7]. „Herald patch is oval, with rose, slighty elevated finely scaling borders whereas the center is paler and slighty depressed [7]. In about 50% the patch occurs on the limbs [7,8]. The appearance of other lesions (about 2 weeks later) is characterized by patches that are similar to the initial one, but are smaller and symmetrically oriented with their long axes along the cleavage lines („christmas tree" sign) [9].
Skin lesions usually lasts about 6 weeks [3,7,8].
PR in infants is hardly recognized, while in young children is the rarely seen and more often than in adults may be atypical, the location and morphology eruptions.

The aim of the work is to present the case of 12-month old infant with pityriasis rosea.

## Case reports

Boy (I pregnancy, childbirth I), was born vaginally, according to Apgar score assessed at 10 points. The parents are young, unrelated. None of the parents are not burdened allergic diseases. Mother suffers from hypothyroidism. The boy to 6 months of age were fed naturally. Skin lesions occurred for the first time about 2 weeks for a visit to Clinic Dermatology.

Initially it was a oval erythematous-squamous lesions, gradually taking the shape of a slightly irregular, located on the trunk around the left axilla (Fig. 1). After about 7 days after the appearance of the first amendment, on the trunk began to occur oval patches with a diameter of 0.5 to 1.5 cm with peripheral scaling zone and a single small papules, also in part covered with scales (Fig. 2). This lesion gradually observed on the trunk, neck, upper limbs. A single lesions occupied thigh, but did not exceed the 1/3. Besides, the child was vital, fun (in good general condition). Histopathological study was not performed because the clinical picture lesions and the emergence of a few days earlier herald patches, which suggested the diagnosis of PR.

In the treatment applied emolients, local antihistamine and weakest glucocorticoids.

After about 6 weeks of outpatient treatment of skin lesions disappeared. A further three-year observation of the child showed no recurrence of skin lesions.

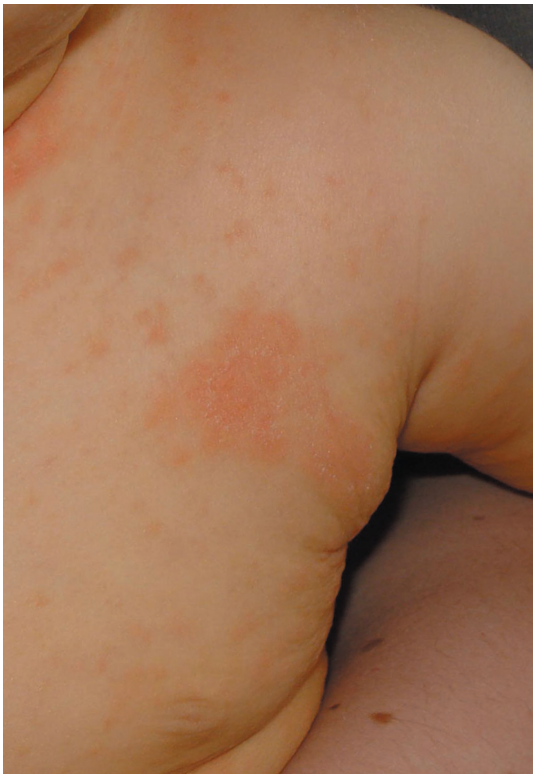


**Figure 1. Pityriasis rosea – herald patche in the second week disease**

## Discussion

PR rarely been described in infants and young children. The nature of the changes, the location, the incidence of skin reactions (diseases) with allergic [10,11] and seborrheic dermatitis [12,13] in children mean that PR is almost not recognized and not included in the differentiation of skin eruptions in infants and young the children.

Traore et al. conducted a cross section study involving children from secondary school in Ouagadougou, Burkina Faso [14]. Thirty-six cases of PR were observed.

Pruritus was often observed with an inaugural lesion predominantly on the upper limbs and the trunk.

By Giam YC within 1 year in Middle Road Hospital in Singapur observed 0.1% (51) children with PR [15].

Several less common clinical presentations have been reported.

Have been identified atypical variance (localized variants limited to a small area, unilateral) in terms of morphology of lesions (vesicular, purpuric (haemorrhagic) urticarial, papular, erythema multiforme-like, ichenoid, pityriasis circinata et marginata of Vidal), size of lesions (gigantea of Darier) and site of lesions (flexural areas, face, mucosae, palms and soles, axilla, breast, eyelids, penis) [6,16-23].

A simple classification for atypic pityriasis rosea has been proposed by Chuh, et al [21].

Papular pityriasis rosea is more often seen in children. Numerous small papules 1-2 mm in diameter may be seen together with classical pityriasis rosea patches [21]. As in the present case.

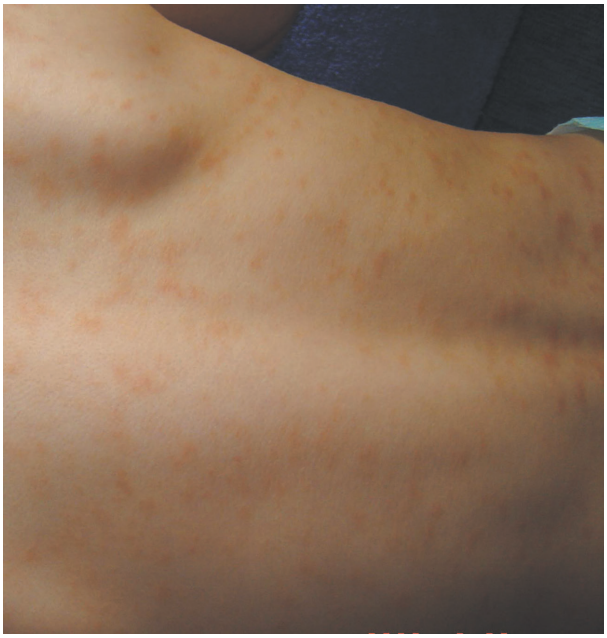


**Figure 2. Pityriasis rosea –skin lesions in the second week disease; papules and erythematous-squamous lesions**

Atypical cases of PR are fairly common and less readily recognized than typical eruptions, and may pose a diagnostic challenge.

Vano-Galvan S et al. reported the case of a 12-year-old black child that developed an intense pruritic papular eruption with intense facial involvement that was diagnosed of PR [24].

Amer et al. compare your findings (results for pityriasis rosea in black) with those of the American, European, and African literature on pityriasis rosea [25]. Patients had more frequent facial involvement (30%) and more scalp lesions (8%) than usually described in white populations. One third had papular lesions. The disease resolved in nearly one half of patients within 2 weeks. Residual hyperpigmentation was seen in 48% of patients. Hypopigmentation developed in 29% of patients with purely papular or papulovesicular lesions.

Herald patches is typical feature of the PR of its appearance a few days before seeding of other skin lesions suggests the diagnosis [18,26].

Herald patches is often mistakenly diagnosed as a fungal lesions. In order to exclude fungal infection should be performed microscopic examination of squama taken from the Herald patches after the addition of potassium hydroxide.

In the differential diagnosis also the following should be taken into consideration: secondary syphilis, seborrheic dermatitis, nummular eczema or pityriasis lichenoides chronica [27,28].

Other lessions occur 5-10 days after Herald patches [4,26]. Typical lesions are oval or round, less than 1 cm in diameter, slightly raised, and pink to brown. The developed lesion is covered by a fine scale that gives the skin a crinkly appearance; some lesions clear centrallyproducing a collarette of scale that is attached only at periphery. The long axis of each lesion is usually aligned with the cutaneous cleavage lines, a feature that creates the so called Christmas tree pattern on the back.

The disease is frequently asymptomatic, although pruritus may be present in few patients.

Current evidence indicates that PR is a type of viral exanthema and the etiology may be possibly linked to human herpes viruses HHV6 and HHV7 [3].

Ayanlowo et al. found that, the most accepted aetiologic factor for (PR) is viral infection and the evidences for this include the seasonal variation of the disease; intolerance to ampicillin; rarity of second attack; occasional household clustering of cases; and response to acyclovir in the early stage of the eruption [29].

In one woman of the series, who developed PR at 10 weeks' gestation and aborted 2 weeks later, plasma, peripheral blood mononulcear cells (PBMC), maternal skin, and placental and embryonic tissue were studied by calibrated quantitative (CQ) real-time (RT) polymerase chain reaction (PCR) for human herpesvirus 6 and 7 (HHV 6 I 7). HHV 6 DNA was detected in plasma, PBMC, skin, placenta, and embryonic tissue HHV 7 DNA was absent [5].

In PR, HHV 6 might infect, via placenta, the fetus, inducing premature delivery with neonatal hypotonia and even fetal demise especially if the cutaneous lesions develop within 15 weeks' gestation.

Are also reported cases of normal pregnancies and births in spite of the PR before 15 weeks' gestation [30].

There is not yet established rules PR treatment, because it seems that this disease does not require treatment and resolve spontaneously after 4-8 weeks [31,32].

Drago i wsp. described a full recovery within two weeks most patients treated for 1 week oral acyclovir compared with placebo [33]. Sharma i wsp. presented an alternative plan of treatment. Most of the patients in their study, who underwent two weeks of oral erythromycin treatment, fully recovered during the two weeks [6].

For comparison, Amer, et al giving for 5 days oral azithromycin or placebo, did not observe differences in the clinical course of disease [34].

## Conclusion

Rarity, as well as the unusual location of the changes, as well as their nature cause that PR is almost unrecognizable in infants and young children. The presence of herald plaques suggests to us the diagnosis.

It is important to distinguish PR from other childhood exanthems.

## REFERENCES


1. Gibert M: Traite' pratique des maladies de peau et de la syphilis. 3rd ed. Paris: Plon; 1860. p. 402.
2. Precival GH: Pityriasis rosea. Br J Dermatol 1932; 44: 241-53.
3. Bitencourt Miranda SM, DelmaestroII D, Bittencourt de MirandaIII P, Filgueira AL, Faria de Souza Pontes L: Pitiríase rósea. An. Bras. Dermatol, 2008; 83: 461-469.
4. Browning JC: An update on pityriasis rosea and other similar childhood exanthems. Curr Opin Pediatr. 2009; 21: 481-485.
5. Drago F, Broccolo F, Zaccaria E, Malnati M, Cocuzza C, Lusso P, et al: Pregnancy outcome in patients with pityriasis rosea. J Am Acad Dermatol. 2008; 58 (Suppl 1): 78-83.
6. Sharma PK, Yadav TP, Gautam RK, Taneja N, Satyanaryana L: Erythromycin in pityriasis rosea: A double blind, placebo controlled clinical trial. J Am Acad Dermatol 2000; 42: 241-244.
7. Zawar V, Jerajani H, Pol R: Current trends in pityriasis rosea. Expert Review of Dermatology, 2010; 5: 325-333.
8. Polat M, Gür G, Tamer E, Üstün H, Allý N: Veziküler Pitriyazis Rosea: Oral Eritromisine Yanýt Veren Bir Olgu - Editöre Mektuplar. Türk Dermatoloji Dergisi 2008; 2: 133-4.
9. Brzeziński P, Passarini B, Nogueira A, Sokołowska-Wojdyło M: Dermatology eponyms – phenomen / sign –Dictionary (C). N Dermatol Online. 2011; 2: 81-100.
10. Watson W, Kapur S: Atopic dermatitis. Allergy Asthma Clin Immunol. 2011; 10: S4.
11. Heller AJ: Allergic skin disease. Facial Plast Surg Clin North Am. 2012; 20: 31-42.
12. Nwabudike LC: Seborrheic dermatitis and homeopathy. Our Dermatol Online. 2011; 2: 208-210.
13. Poindexter GB, Burkhart CN, Morrell DS: Therapies for pediatric seborrheic dermatitis. Pediatr Ann. 2009; 38: 333-338.
14. Traore A, Korsaga-Some N, Niamba P, Barro F, Sanou I, Drabo YJ: Pityriasis rosea in secondary schools in Ouagadougou, Burkina Faso. Ann Dermatol Venereol. 2001; 128: 605-609.
15. Giam YC: Skin diseases in children in Singapore. Ann Acad Med Singapore 1988; 17: 569-5.
16. Brar BK, Pall A, Gupta RR: Pityriasis rosea unilateralis. Indian J Dermatol Venerol Leprol. 2003; 69: 42-43.
17. Zawar V: Giant pityriasis rosea. Ind J Dermatol. 2010; 2: 192-194.
18. Ang CC, Tay YK: Blaschkoid pityriasis rosea. J Am Acad Dermatol. 2009; 61: 906-908.
19. Ahmed I,Charles-Holmes R: Localized pityriasis rosea. Clin Exp Dermatol. 2000; 25: 624-626.
20. Gibney MD, Leonardi CL: Acute papulo-squamous eruption of the extremities
demonstrating an isomorphic response. Arch Dermatol. 1997; 133: 649-654.
21.Chuh A, Zawar V, Lee A: Atypical presentations of pityriasis rosea: case presentations. J Eur Acad Dermatol Venerol. 2005; 19: 120-126.
22. Kay MH, Rapini RP, Fritz KA: Oral lesions in pityriasis rosea. Arch Dermatol 1985; 121: 1449-1451.
23. Friedman SJ: Pityriasis rosea with erythema multiforme-like lesions. J Am Acad Dermatol 1987; 17: 135-136.
24. Vano-Galvan S, Ma D-L, Lopez-Neyra A, Perez B, Muñoz-Zato E, Jaén P: Atypical Pityriasis rosea in a black child: a case report. Cases J 2009; 2: 6796.
25. Amer A, Fischer H, Li X: The natural history of pityriasis rosea in black American children: how correct is the „classic" description? Arch Pediatr Adolesc Med. 2007; 161: 503-506.

26. Turchin I, Adams SP, Enta T: Dermacase. Pityriasis rosea. Canad Fam Phys. 2004;50: 41.
27. Gündüz O, Ersoy-Evans S, Karaduman A: Childhood pityriasis rosea. Pediatr Dermatol 2009; 26: 750-751.
28. Glick Z, Khachemoune A: A teenage girl with rash. Pityriasis rosea. Pediatr Ann. 2008; 37: 664- 667.
29. Ayanlowo O, Akinkugbe A, Olumide Y: The pityriasis rosea calendar: a 7 year review of seasonal variation, age and sex distribution. Nig Q J Hosp Med. 2010; 20: 29-31.
30. Chuh A, Zawar V: Case reports and studies on pityriasis rosea – from number of patients to meta-analyses and diagnostic criteria. Our Dermatol Online. 2012; 3: 141-142.
31. Egwin AS, Martis J, Bhat RM, Kamath GH, Nanda KB: A clinical study on pityriasis rosea. Indian J Dermatol. 2005; 50: 136-138.
32. Sharma L, Srivastava K: Clinicoepidemiological study of pityriasis rosea. Indian J Dermatol Venerol Leprol. 2008; 74: 647-649.
33. Drago F, Vecchio F, Rebora A: Use of highdose acyclovir in pityriasis rosea. J. Am. Acad. Dermatol., 2006; 54: 82-85.
34. Amer A, Fischer H: Azithromycin does not cure pityriasis rosea. Pediatrics, 2006; 117: 1703-1705.

DOI: 10.7241/ourd.20122.25

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# DERMOSCOPY OF HEAD MELANOMA-CASE STUDIES AND REVIEW OF REFERENCES

## DERMOSKOPIA CZERNIAKA SKÓRY GŁOWY-BADANIE PRZYPADKU I PRZEGLĄD PIŚMIENNICTWA

Irdina Drljevic[1], Kenan Drljevic[2]

[1]*Clinic of Dermatology and Venereology ,Clinical Centre of the University of Sarajevo, Bolnička 25, 71000 Sarajevo, Bosnia and Herzegovina*
[2]*Obstetrics and Gynecology Department, General Hospital "Prim. Dr. Abdulah Nakaš", Kranjčevićeva 12, 71000 Sarajevo, Bosnia and Herzegovina*

**Corresponding author:** Irdina Drljevic, MD PhD idrljevic@hs-hkb.ba

Our Dermatol Online. 2012; 3(2): 123-125
Date of submission: 02.01.2011 / acceptance: 03.02.2012
Conflicts of interest: None

**Abstract**
Dermoscopy is valid, noninvasive technique for the visualization of different morphological structures within pigmented melanocytic skin lesion. In clinical practice, positive personal history is considered to be as an indication of increased melanoma risk. The thickness of melanoma (Breslow Index) is the most important independent predicting factor of survival for stage I patients. We aimed to present a two cases of head-melanoma and discuss prominent clinical and dermoscopic features across the spectrum of "hidden-melanoma" and differential diagnosis.

**Streszczenie**
Dermoskopia to aktualnie, nieinwazyjna metoda wizualizacji różnych struktur morfologicznych w obrębie melanocytowych zmian skórnych. W praktyce klinicznej, dodatni wynik badania jest uznawany z wskaźnik podwyższonego wystąpienia czerniaka. Grubość czerniaka (Indeks Breslow) jest najważniejszym niezależnym czynnikiem prognostycznym dla długości przeżycia u pacjentów w I stopniu zaawansowania choroby. Postaraliśmy się przedstawić dwa przypadki czerniaka okolicy skóry głowy i przedyskutować ważne kliniczne i dermoskopowe cechy pod kątem „ukrytych czerniaków" oraz diagnostyki różnicowej.

**Key words:** skin; head; melanoma; dermoscopy; differential diagnosis
**Słowa klucze:** skóra; głowa; czerniak; dermoskopia; diagnostyka różnicowa

## Introduction

Melanoma is a malignant tumor of melanocytes, whose incidence has been increasing all over the world. Most authors believe that there is still no specific diagnostic criterion enabling an unambiguous clinical diagnosis of melanoma [1]. Most often it is found on skin, which should direct doctors and patients to early recognition and detection of the disease [2].

Scalp melanoma is included in the group of head and neck melanomas, which make approximately 10-20% of all primary skin melanomas [3]. It is defined as a tumor usually located in the area of the head covered with hair (hair-bearing area melanoma), and it is also called „hidden" melanoma or „invisible killer" [4]. Lentigo malign melanoma is the most frequent histological subtype of melanoma in elderly women, whereas superficially spreading and nodular melanomas are found in the scalp area in men, mostly older than 50 [5].

## Case study I

A 45-year-old patient presented to a dermatologist for occasional bleeding of a mole in the right retroauricular region (Fig. 1). He had noticed first changes of color and size of the mole a year before. His mother's brother had had a similar tumor operated a few years ago. Before the age of 20 he had had several sunburns.

At the moment of the examination a slightly elevated macula measuring 16x14 mm could be seen, it was dark brown and black, with irregular contours and wet. Dermatoscopic examination was done with the digital dermatoscope MoleMax II, and under twenty times magnification the following dermatoscopic structures were noticed: atypical pigment network, irregular streaks, homogeneous area, irregular dots and globules, blue-white veil (Fig. 2). An operative treatment and extirpation of the first sentinel lymph node were recommended.

*Histological testing* by standard hematoxylin-eosin (HE) technique showed that it was a superficial spreading melanoma with a phase of vertical growth and multifocally present ulcerations of epidermis.
The tumor reached papillary and reticular dermis, and dense lymphoplasmocytic inflammatory response was found in the infiltrative edge.
Subepidermal individual atypical melanocytes in lymph nodes were noted in the sample, and SNL. i.e. extirpation of the first sentinel lymph node was recommended.

*Conclusion:* Superficial spreading melanoma Clark 4, level pT3b, Breslow 2,6 mm, with invasion of lymph nodes present.

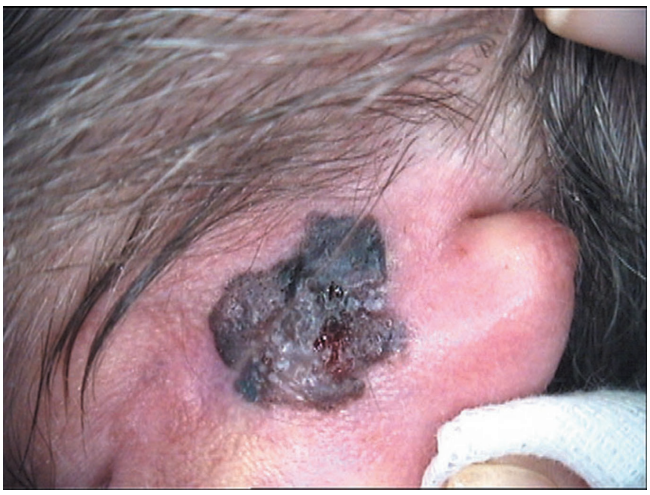


**Figure 1. Superficial spreading melanoma**

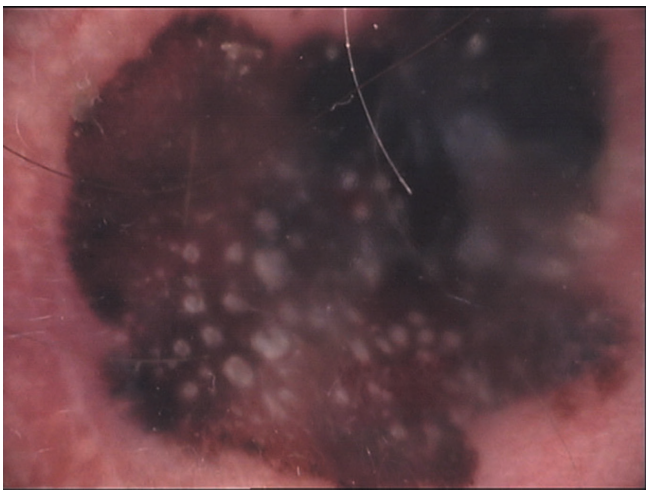


**Figure 2. Dermoscopy of SSM**

## Case study II

A 74-year-old patient asked for dermatological examination because of injury of a mole in the hairy part of his head and occasional bleeding. Anamnesis on the duration of the disease is unreliable. Photo-type 1. Before the age of 20 he had had several sunburns. At the moment of the examination a 10-mm tumor nodule of gray-pink color was noticed in the right parietal region with a slightly elevated dark macula of irregular contours (Fig. 3). The tumor nodule easily bled on palpation.
Dermatoscopic examination showed the following structures: homogeneous area, irregular dots/globules, irregular vessels vs. „poppy field" sign (Fig. 4).

*Conclusion:* Nodular melanoma from pre-existing epidermal-dermal nevus, Clark 4, level pT4b, Breslow 10 mm.

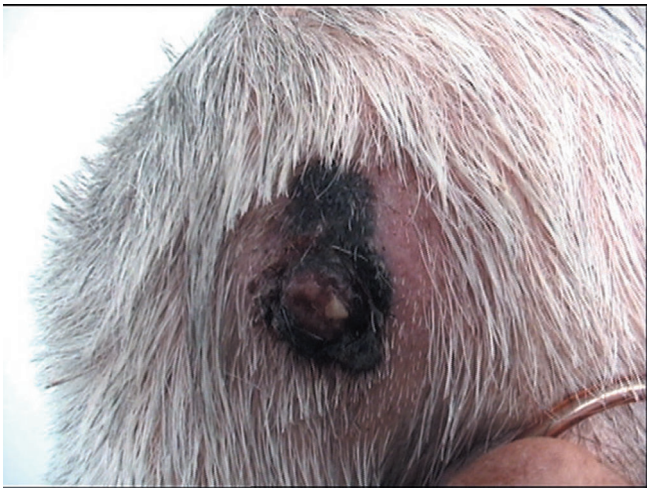


**Figure 3. Nodular melanoma (NM)**

**Figure 4. Dermoscopy of nodular melanoma**

## Discussion

Numerous risk factors for appearance of melanoma have been identified up to date, but exposure to the sun UV-radiation is the most significant. Recent studies have shown that head and neck melanoma occurs more frequently in persons who were chronically exposed to sunlight during their life, whereas melanoma of lower legs and upper back and chest are linked to intermittent exposure to UV-rays, most often as a result of visiting „sunny countries" or recreational exposure [6]. Persons with red or blond hair, light eyes, a higher number of so called common nevi or one and/or more dysplastic nevi including a positive personal and/or family history of melanoma, have a higher risk for occurrence of melanoma. Studies have shown that patients with surgically treated melanoma develop another primary skin melanoma in 5-10% of cases [7].

Dermatoscopy (epilumenescence microscopy, dermoscopy) is in vivo noninvasive and painless diagnostic method used to show skin structure which cannot be seen by naked eyes: epidermis, dermoepidermal junction and papillary dermis[8]. Its basic use includes diagnostics of pigmented skin tumors, primarily melanocytic, but also non-melanocytic ones. Differentiation between these two types is the first step in dermatoscopy, whereas the second step is to recognize lesions as malign or benign based on different dermatoscopic algorithms [8]. In clinical practice experienced dermatologists performing dermatoscopy mostly apply the first-step melanocytic algorithms (pattern analysis), i.e. they use the analysis of various dermatoscopic structures and colors. In general, clinical reliability of melanoma diagnostics by "naked eye" is assessed to be around 65%, whereas dermatoscopy significantly improves reliability to around 5-30% [9].

Nowadays there is a real need to advance early detection of scalp melanoma because of its significantly worse prognosis as compared with melanoma of other anatomic locations [10]. So far there have been very few descriptions of dermatoscopic structures of melanoma on the scalp, and the first case was demonstrated and published by Zalaudek et al. in 2004 [11]. That case describes scalp melanoma with multi-component global structure i.e. atypical pigment network, irregular streaks and regression structures. Dermatoscopic structures in the case had morphologically almost identical characteristics of melanoma located on trunk, as opposed to face melanoma, which shows completely different dermatoscopic structures: asymmetric follicular openings, annular-granular pattern, rhomboidal structures, homogeneous areas and slate-grey aggregated dots [12].

In the differential diagnosis of scalp melanoma blue nevus is on the first place (common or classic blue nevus), whereas a variant of cellular blue nevus is usually found in the area of gluteus [13]. The differential diagnosis may also include tumors classified as non-melanocytic, primarily pigmented basal cell skin cancer, acanthotic type of seborrheic keratosis, and pigmented type of actinic kratosis. There is a dermatoscopic tracing of the so called clue to direct the dermatologist performing dermatoscopy to the right diagnosis, and to the recommendation for further choice of treatment or just further dermatoscopic follow-up [14]. In the scalp region metastases of melanoma of some other anatomic locations of skin may be found, including cutaneous metastases of other cancers such as breast cancer [15], which clinically imitate malign melanoma of the scalp. Melanoma is a common tumor in human pathology. Generally, incidence and mortality vary in the world depending on risk factors primarily. Scalp melanoma is classified as hidden melanoma, and due to delayed diagnostics it is considered to be an "invisible killer". As it has a worse prognosis as compared with melanoma on other anatomic locations, the examination of the scalp should be a mandatory part of the clinical-dermatoscopic skin examination (TBSE-total body skin examination).

## REFERENCES


1. Pavlović MD, Karadaglić Đ, Kandolf L: Melanom kože i sluzokoža. U: Karadaglić Đ. i sur. ur., Dermatologija. Beograd: Vojnoizdavački zavod i Versal press, 2000: 927-961.
2. Barnhill RL, Mihm MC Jr, Fitzpatrick TB, Sober AJ, Kenet RO, Koh HK: Neoplasms: malignant melanoma. In: Fitzpatrick TB, Eisen AZ, Wolff K, Freedberg IM, Austen KF, eds. Dermatology in general medicine. New York: MacGraw-Hill, 1993: 1078-1117.
3. Herr MW, Holtel M, Hall DJ; Skin cancer: Melanoma. Emedicine Otorinolaryngology and Facial Plastic Surgery 2008, http://emedicine.medscape.com/article/846566-overview.
4. Benmeir P, Baruchin A, Lusthaus S, Weinberg A, Ad-El D, Nahlieli O, et al: Melanoma of the scalp: the invisible killer. Plast Reconstr Surg 1995; 95: 496-500.
5. Cox NH, Aitchison TC, Sirel JM, MacKie RM; Comparison between lentigo maligna melanoma and other histogenetic types of malignant melanoma of the head and neck Scottish Melanoma Group. Br J Cancer; 73: 940-944.
6. Zalaudek I, Giacomel SJ, Leinweber B: Scalp Melanoma. In: Color Atlas of Melanocytic Lesions of the Skin. Soyer HP, Argenziano G, Hofmann-Wellenhof R, Johr R, eds. Berlin: Springer-Verlag, 2007: 265-269.
7. Markovic NS. Erickson AL, Rao DR, Weenig RH, Pockaj BA, Bardia A, et al. Malignant Melanoma in the 21st Cntury, Part1: Epidemiology, Risk Factors, Screening, Prevention, and Diagnosis. Mayo Clin Proc 2007; 82: 364-380.
8. Braun PR, Robinovitz SH, Oliviero M, Kopf WA, Saurat H-J, Thomas L: Dermoscopic Examination. In: Color Atlas of Melanocytic Lesions of the Skin. Soyer HP, Argenziano G, Hofmann-Wellenhof R, Johr R, eds. Berlin: Springer-Verlag, 2007: 7-22.
9. Kittler H, Pehamberger H, Wolff K, Binder M; Diagnostic accuracy of dermoscopy. Lancet Oncol 2002; 3: 159-165.
10. Shumate CR, Carlson GW, Giacco GG, Guinee VF, Byers RM; The prognostic implication of location for scalp melanoma. Am J Surg 1991; 162: 315-319.
11. Zalaudek I, Leinweber B, Soyer HP, Petrillo G, Brongo S, Argenziano G: Dermoscopic features melanoma on the scalp. J Am Acad Dermatol 2004; 51: S88-S90.
12. Stolz W, Braun-Falco O, Bilek P, Burgdorf WHC, Landthaler M: Colour Atlas of dermatoscopy, 2nd edn. Blackwell, London, 2002.
13. Busam KJ: Metastatic melanoma to the skin simulating blue nevus. Am J Surg Pathol 1999; 23: 276-282.
14. Drljević I, Alendar F: Risk of a second cutaneous primary melanoma and basal cell carcinoma in patients with a previous primary diagnosis of melanoma: true impact of dermoscopy follow-up in the indetification of high-risk persons. Serbian Journal of Dermatology and Venereology 2010; 2: 144-148.
15. Marti N, Molina I, Monteagudo C, Lopez V, Garcia L, Jorda E: Cutaneous metastasis of breast carcinoma mimicking malignant melanoma in scalp. Dermatology Online Journal 2008, http://dermatology.cdlib.org/1411/case-presentation/breast-metastasis/marti.html.

DOI: 10.7241/ourd.20122.26

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# CUTANEOUS LARVA MIGRANS: REPORT OF THREE CASES WITH EXCELLENT RESPONSE TO ALBENDAZOLE

## CUTANEOUS LARVA MIGRANS: RAPORRT TRZECH PRZYPADKÓW Z DOSKONAŁĄ ODPOWIEDZIĄ NA ALBENDAZOL

Anca Chiriac[1], Cristina Birsan[1], Anca E. Chiriac[2], Alina Murgu[3], Caius Solovan[4]

*[1]CMI Dermatology, Iasi-Romania*
*[2]University of Medicine Gr T Popa Iasi-Romania*
*[3]University Hospital of Pediatrics Sf Maria, Iasi, Romania*
*[4]University of Medicine V Babes, Dept of Dermatology, Timişoara-Romania*

**Corresponding author:** Anca Chiriac, MD PhD ancachiriac@yahoo.com

Our Dermatol Online. 2012; 3(2): 126-127
Date of submission: 02.01.2011 / acceptance: 03.02.2012
Conflicts of interest: None

**Abstract**
Cutaneous larva migrans is a common tropically-acquired cutaneous eruption, but it can be rarely observed in other areas, in Estearn Europe, like Romania. It presents as an erythematous, serpiginous, pruritic, cutaneous eruption associated with percutaneous penetration and subsequent migration of larvae of various nematode parasites. We report three cases with excellent respond to treatment.

**Streszczenie**
Skórna postać larwy wędrującej jest częstyą tropikalną-nabyte skórną zmianą, ale może być rzadko obserwowana w innych obszarach, we wschodniej Europie, na przykład w Rumunii. Prezentuje się jako rumieniowa, pełzająca, swędząca, erupcja skórna związana z penetracją przezskórną, a następnie migracją larw nicienia różnych pasożytów. Przedstawiamy trzy przypadki z doskonałą odpowiedzią na leczenie.

**Key words:** cutaneous larva migrans; albendazole; skin disease
**Słowa klucze:** skórna postać larwy wędrującej; albendazol; choroby skóry

## Introduction

Cutaneous larva migrans is a common tropically-acquired cutaneous eruption, but it can be rarely observed in other areas, in Estearn Europe, like Romania. It presents as an erythematous, serpiginous, pruritic, cutaneous eruption associated with percutaneous penetration and subsequent migration of larvae of various nematode parasites.
We report three cases with excellent respond to treatment.

## Case study I

A 45-year-old woman presented with complaints of an itchy eruption on the lateral side of her right arm, of several weeks duration. She was an inside worker, with cats and dogs at her house, with no previous trips in tropical areas, the lesion appeared during winter time. She gave no history of fever, cough, dyspnea, or bowel and bladder problem. She was treated with antibiotics and antihistamines with no relief and with the enlargement of the lesion (Fig. 1).
The laboratory parameters were within normal limits. Biopsy was not accepted by the patient and taking into account of its little value for this condition (the larvae advance ahead of the clinical tract) it was not done.
Based on clinical findings, a diagnosis of cutaneous larva migrans was made.
Treatment with Albendazole 400 mg per day was administered; there was complete remission after 10 days.

## Case study II

A 52-year-old female patient presented in our department, seeking advice for a lesion appeared many months ago on the dorsal aspect of the trunck, during summer time while she was working in a farm, with no symptoms, no laboratory modifications. She was diagnosed with cutaneous larva migrans and the lesion completly dissapeared after 10 days of oral Albendazole 400mg per day (Fig. 2).

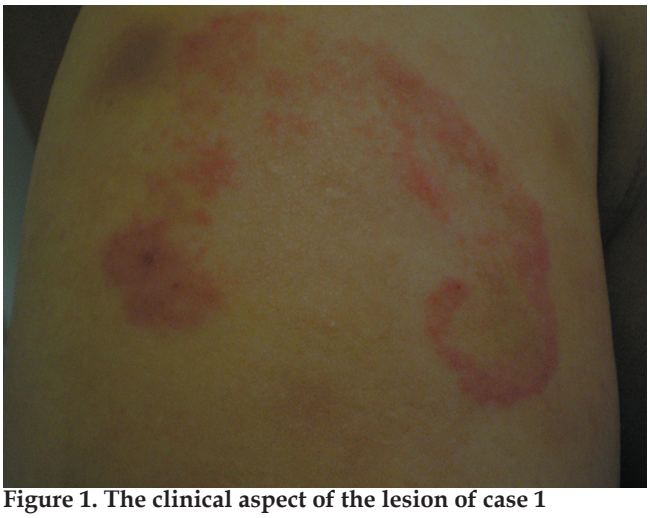


**Figure 1. The clinical aspect of the lesion of case 1**

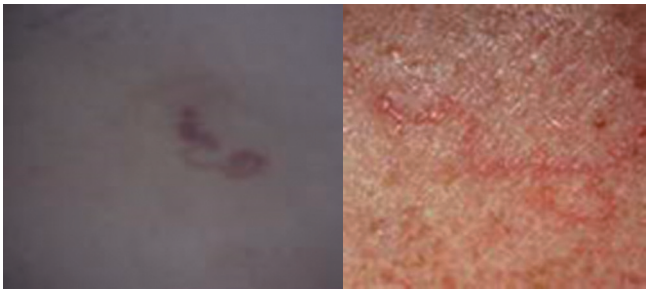


**Figure 2. Clinical picture of case 2**

### Case study III

A 47-year-old man came to us very frightened by the appearance of an intense pruritic, serpiginous lesion, seen on the thorax, 72 hours before the admision to the hospital. The patient was diabetic non insulin-dependent; he was diagnosed by the general practicioner with herpes zoster and he was put on medication: Aciclovir orally, with no improvement. The diagnosis was cutaneous larva migrans and the lesion disapeared, with no scar, after two weeks of Albendazole systemic therapy (Fig. 3).

### Discussion

Cutaneous larva migrans is also known as sand worms, creeping verminous dermatitis, creeping eruption, plumber's itch, and duck hunter's itch. Numerous organisms are associated with larva migrans: *Ankylostoma caninum* (from dog, the most frequent), *Ankylostoma ceylonicum*, and *Ankylostoma braziliense*, *Uncinaria stenocephala*, *Bubostomum phlebotomum*, *Gnathostoma spp.*, *Dirofilaria conjunctivae*, *Capillaria spp.*, *Anatrichostoma cutaneum*, *Strongyloides stercoralis*, *Dirofilaria repens*, *Spirometra spp.*, *Gastrophilus spp.*, *Hypoderma spp.*

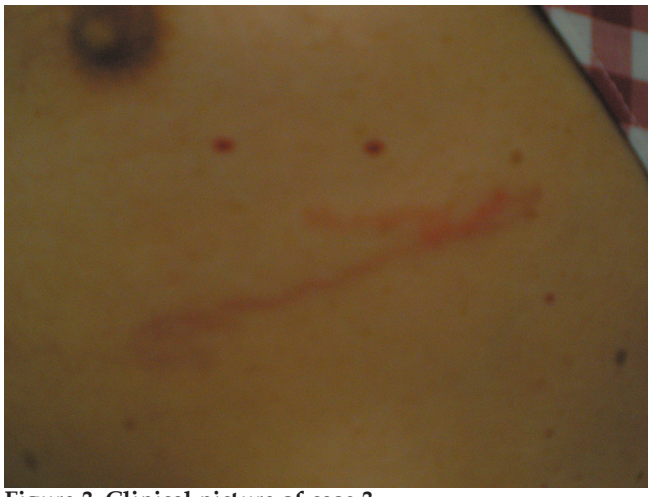


**Figure 3. Clinical picture of case 3**

These penetrate intact skin and then migrate through the epidermis. The most common locations are: the foot, buttocks, back, and thighs although there were reports on the penis, abdominal wall, even oral mucosa.

The larvae usually die in 2-8 weeks, with an incubation of 1-7 days, with a self-limited evolution.

Complications were reported: survival of the larvae up to 2 years, secondary bacterial infection and eczematization, extensive lesions with wheezing, dry cough, and urticaria, eosinophilic enteritis (after the migration of the Ankylostoma caninum larvae to the small intestine) and transient eosinophilia.

**Different methods of treatment are available:**

- freezing the lesion, but knowing that the larva is up to 2 cm ahead from the visible burrow;
- Ivermectin (a single dose of 200 µg/kg body weight;
- Albendazole (400 mg a day by mouth for 3 days);
- 10 percent topical thiabendazole suspension 4 times a day for at least 2 days after the last sign of burrow activity;
- oral Thiobendazole.

**The particularities of our cases:**

- young, healthy persons, from non-tropical areas;
- sudden appeareance of typical lesions of larva migrans, possible after contact with dogs;
- complete resolution after oral Albendazole with prolonged administration (10 days), with no recurrence and no complications.

### REFERENCES


1. Malhotra SK, Raj RT, Pal M, Goyal V, Sethi S: Cutaneous larva migrans in an unusual site Dermatology Online J 2006; 12: 11.
2. Veraldi S, Bottini S, Rizzitelli G, Persico MC: One-week therapy with oral albendazole in hookworm-related cutaneous larva migrans: A retrospective study on 78 patients. J Dermatolog Treat. 2011 Feb 6
3. Blackwell V, Vega-Lopez F: Cutaneous larva migrans: clinical features and management of 44 cases presenting in the returning traveller Br J Dermatol 2001; 145: 434-437.

DOI: 10.7241/ourd.20122.27

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# RECENT CHANGES IN PEER-REVIEWED DERMATOLOGY JOURNALS

## OSTATNIO WPROWADZONE ZMIANY W CZASOPISMACH DERMATOLOGICZNYCH TYPU PEER-REVIEWED

Ahmad Al Aboud[1] Khalid Al Aboud[2]

[1]*Dermatology Department, King Abdullah Medical City, Makkah, Saudi Arabia*
[2]*Pathology Department, Wake Forest University, Winston-Salem, NC, USA*

**Corresponding author:** Dr Khalid Al Aboud *amoa65@hotmail.com*

Our Dermatol Online. 2012; 3(2): 128-130
Date of submission: 06.12.2011 / acceptance: 20.01.2012
Conflicts of interest: None

**Abstract**
Peer-reviewed dermatology journals are essential media for dermatologists and are undergoing many changes to satisfy readers and authors. The number of dermatology journals and new journals that are devoted to dermatology subspecialties that are being published is increasing. This report highlights recent changes in peer-reviewed dermatology journals.

**Streszczenie**
Czasopisma dermatologiczne typu peer-reviewed są niezbędnym medium dla dermatologów i przechodzą wiele zmian w celu zaspokojenia czytelników i autorów. Liczba czasopism dermatologicznych i nowych czasopism, które są poświęcone dermatologii i które publikują artykuły wzrasta. Sprawozdanie to zwraca uwagę na ostatnie zmiany w czasopismach dermatologicznych typu peer-reviewed.

**Key words:** dermatology; journals; publication
**Słowa klucze:** dermatologia; czasopism; publikacje

Peer-reviewed periodicals are important vehicles for conveying new information [1]. Dermatology journals have existed since the mid-eighteenth century. Giornale Italiano di Dermatologia e Venereologia (in Italian), which began in 1866, is the oldest dermatology journal that is still published [2]. Since then, many dermatology journals have appeared worldwide (Tabl. I) [3-10]. These journals are published primarily as the official publication of emerging dermatology societies and organizations.

Over 100 dermatology-related journals exist, differing with regard to many aspects (Box I).

Dermatology journals have undergone many changes. Many titles have been added, and many titles have ceased publication (Tabl. II and III, respectively). Some journals have gained accessed to Index Medicus, and others have lost this privilege. Few journals have changed their titles and sponsor organizations.

The internet has dramatically changed medical journalism, including dermatology,

Simplifying the submission of manuscripts becomes and allowing authors to track their submissions online. The time from submission to publication has declined significantly.

Many medical journals are now created in response to NIH-USA, Welcome Trust-UK and other open access supporting organizations.

In addition, new features have emerged in medical publication .Like video abstracts and post-publication peer-review.

Readers may wish to read about post-publication peer-review by visiting one of the scientific website publishing such reviews.

http://f1000.com/

Many dermatology journals launched their pages in the social media websites like facebook, making the readers aware of their articles and allowing the online peer dialogue of their contents.

Some journals have become solely online publications due to economic issues [8,9]. Medical journals continue to evolve with the advent of digital paperless publishing, but it seems unlikely that hard copy journals will become extinct soon [8].

The size of journals has fallen in recent years, due to rising print and postage costs, declining advertising revenue, and the easy availability of content on the internet [9].

In addition, many new concepts in medical publication have appeared, such as open access publishing. Open access publishing is a relatively new model for scholarly journal publishing that provides immediate, worldwide, barrier-free access to the full text of all published articles.

In this model, the publication costs of an article are paid in the form of article processing charges. These fees replace subscription charges and allow publishers to make the full text of every published article freely available to all interested readers.

Dermatology publications have the potential to improve- by changing the curricula of training programs. Research methodologies; ethics of publication; and skills of scientific writing, editing, and reviewing should be important components of every dermatology training program.

Nevertheless, the key issue remains the quality of the content of these journals.

Dermatologists might be driven to read a certain journal more than others, influenced by such factors as the type of society with which he is affiliated and the accessibility of a given journal on the internet. It is likely that the dynamic changes in dermatology journals will influence the titles of the journals favored and read by each dermatologist. However, dermatologists with limited free time should devote more time to journals with high-quality content.

-The sponsoring society or organization.
-The submission and the processing system of the manuscripts.
-The frequency of publications.
-Accessibility of the full text online.
-The language of publication.
-The impact factor
-The impact factor
-The publication medium (online versus print or both).
-Indexing in MEDLINE or other databases.

**Box I. Different features of a medical journal**

| The year | The Name of the Journal and previous titles if any |
|---|---|
| 1866 | Giornale Italiano di Dermatologia e VenereologiaIt is oldest journal still published.In its previous title "Giornale Italiano delle malattie veneree e malattie della pelle", venereal diseases range before skin diseases. |
| 1882 | Archive of Dermatology [3].This current title started in 1937. It was published as " Journal of Cutaneous and Venereal diseases", from 1882-1891, and as "Journal of Cutaneous and Genito-Urinary Diseases", from 1891-1909, and as "The Journal of Cutaneous Diseases including Syphilis", from 1903-1919, and as "Archives of Dermatology and Syphiology", from 1920-1936. |
| 1888 | British Journal of Dermatology |
| 1893 | Dermatology.This current title started in 1993. It was published as "Dermatologische Zeitschrift", from1893-1938, and as "Dermatologica", from 1939-1993. |
| 1912 | Clinical and Experimental DermatologyThis current title started in 1976. It was published as "Transactions of the London Dermatological Society", from 1912–1926, and as "Transactions of the St John's Hospital Dermatological Society", from 1927-1975 (Not published between 1939 and 1952, except a brief issue spanning 1947–1949.The issues between 1927 and 1962 included the Annual Report [4]. |
| 1920 | Acta Dermato-Venereologica |
| 1938 | Journal of Investigative Dermatology |
| 1951 | Australasian journal of Dermatology.This current title started in 1967. It was published as "Australian Journal of Dermatology [3]", from1951-1966. |
| 1955 | Indian Journal of Dermatology |
| 1962 | Annales de Dermatologie et de Venereologie |
| 1962 | International Journal of Dermatology [5] |
| 1965 | Cutis |
| 1974 | Journal of Cutaneous Pathology |
| 1975 | Journal Of Dermatologic Surgery |
| 1979 | American Journal of Dermatopathology |
| 1979 | Journal of American Academy of Dermatology [6,7] |

*Listed according to the year of the first issue

**Table I. The year of the first publication of selected peer-reviewed dermatology journals***

| Journal title | The end year | Remarks |
|---|---|---|
| Dermatology Nursing | Dec 2010 | It was published by the Dermatology Nursing Institute |
| Dermatology + Psychosomatics | Dec 2004 | It was the official journal of the European Society for Dermatology and Psychiatry |
| The International Journal of Leprosy and Other Mycobacterial Diseases | Dec 2005 | It was published by International Leprosy Association |

**Table II. Selected few dermatology periodicals that recently ceased publication**

| Journal title | The start year | Current Editor and his or her (country) | Remarks and the electronic link of the journal |
|---|---|---|---|
| Case Reports in Dermatology | 2009 | Gregor B.E. Jemec (Denmark) | It is an open-access, peer-reviewed online-only journal. Available online at; www.karger.com/CDE |
| Clinical Medicine Insights: Dermatology | 2010 | Robert Pearl(United Kingdom) | It is an open-access, peer-reviewed journal, published by, Libertas Academica Ltd.Available online at; http://www.la-press.com/clinical-medicine-insights-dermatology-journal-j69Prior to 1/1/2010 this journal was titled Clinical Medicine: Dermatology |
| Clinical, Cosmetic and Investigational Dermatology | 2008 | Jeffrey M. Weinberg (USA) | It is an international, peer-reviewed, Open Access journal. Published by Dove Medical Press Ltd.Available online at; http://www.dovepress.com/clinical-cosmetic-and-investigational-dermatology-journal |
| Dermatology Reports | 2010 | Robert Gniadecki (Denmark) | It is a new open access, peer-reviewed journal published by PAGEPress, Pavia, Italy. Available online at; http://www.pagepress.org/journals/index.php/dr |
| Journal of Cosmetics, Dermatological Sciences and Applications | 2011 | Bouzid Menaa (USA) | Published by Scientific Research Publishing Inc. Available online at; http://www.scirp.org/journal/jcdsa/ |
| Journal of Dermatological Case Reports | 2007 | Lidia Rudnicka (Poland) | Published by Specjalisci Dermatolodzy. Available online at; http://www.jdcr.eu/index.php?journal=jdcr |
| Our Dermatology Online | 2010 | Piotr Brzezinski (Poland) | Published quarterly. The journal is among the few not related to dermatological associations or belonging to respective a society which guarantees complete independence. Available online at; http://www.odermatol.com/ |
| The International Journal of Trichology | 2009 | Patrick Yesudian (India) | It is the official peer-reviewed journal of the Hair Research Society of India. Available online at;http://www.ijtrichology.com/ |

**Table III. Selected few, newly added dermatology journals**


## Acknowledgments

The authors express their sincere thanks to the editorial offices for submitting information on their journals.


## REFERENCES


1. Al Aboud Kh, Al Aboud A, Al Hawsawi Kh, Ramesh V: Editors of dermatological journals. Acta Dermatovenerol Alp Panonica Adriat. 2005; 14:167-170.
2. Holubar K, Tuneu A: The oldest dermatological journals. Ann Dermatol Venereol. 2004; 131: 999.
3. Robinson JK: The sweep of time for the archives of Dermatology. Arch Dermatol 2004; 140: 114-115
4. Al Aboud K, Khachemoune A: A short history of Clinical and Experimental Dermatology. Clin Exp Dermatol. 2006; 31: 129.
5. Parish LC: The dermatology journal: on Editor's reflections and a farewell.Int J Dermatol 2000; 39: 892-894.
6. Dobson RL: The Blue journal. J Am Acad Dermatol 1998; 39: 129.
7. Bernhard JD: My Grandfather's Axe. J Am Acad Dermatol 1998; 39: 246-247.
8. Lee RV: Medical journals: old, not senescent. A tribute to Revista Médica de Chile on its 135th anniversary. Rev Med Chil. 2007; 135: 823-828.
9. Hill MJ: Dermatology Nursing Expands in a New Direction. Dermaology Nursing 2010; 22: 1.

DOI: 10.7241/ourd.20122.28

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# TOPHUS

TOPHUS

Patricia Chang

*Dermatologist Hospital General de Enfermedades IGSS y Hospital Ángeles Guatemala*

**Corresponding author:** Patricia Chang, MD PhD *pchang2622@gmail.com*

Our Dermatol Online. 2012; 3(2): 131-133

Date of submission: 07.03.2011 / acceptance: 19.12.2011

Conflicts of interest: None

Tophus is a Latin word means „stone", in plural is called tophi is a deposit of monosodium urate crystals in people with longstanding high levels of uric acid in the blood. Tophi are most commonly seen in conjunction with the disease of gout, and most people with tophi have already developed gouty symptoms previously [1].

Even though tophi are most commonly found as hard nodules around the fingers, at the tips of the elbows, and around the big toe, tophi nodules can appear anywhere in the body. They have been reported in unexpected areas such as in the ears, vocal cords, or around the spinal cord [2].

The pathognomonic lesion of gout, which appears grossly when preserved in alcohol or other non-aqueous solution as a nodular mass of white chalky, pasty material composed of crystalline and amorphous urates–eg, monosodium urate monohydrates, surrounded by mononuclear cells, fibroblasts and a foreign body-type giant cell reaction with epithelioid histiocytes [3].

Tophi may appear in the articular cartilage of joints and also in the periarticular ligaments, tendons and soft tissues including the olecranon and patellar bursae, Achilles tendons, and ear lobes. Less frequently they may appear in the kidneys, nasal cartilages, skin of the fingertips, palms and sole. Superficial tophi can lead to large ulcerations of the overlying skin [4].

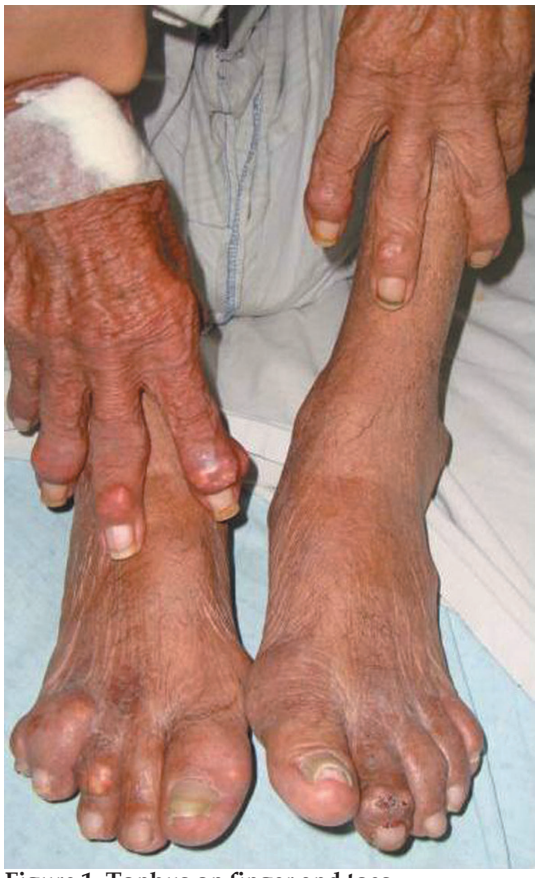


**Figure 1. Tophus on finger and toes**

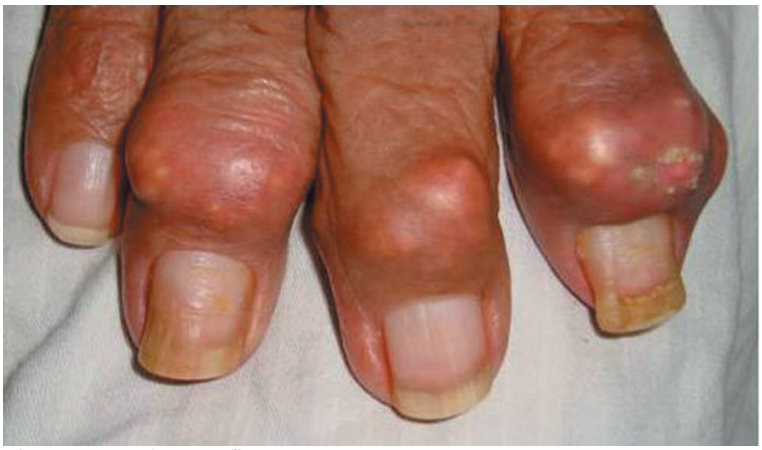


**Figure 2. Tophus on fingers**

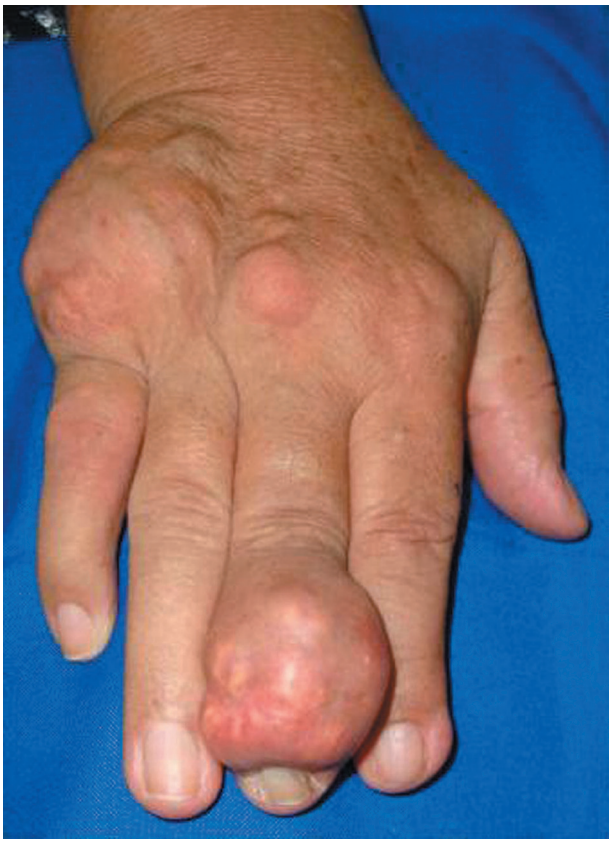


Figure 3. Tophus in the proximal nail folds of finger

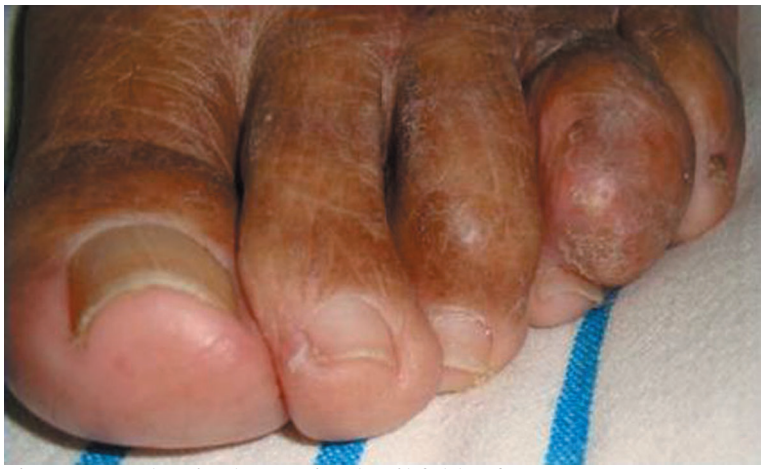


Figure 4. Tophus in the proximal nail folds of toes

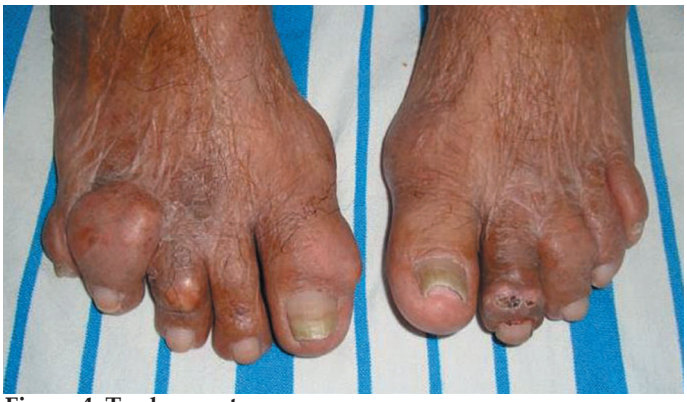


Figure 4. Tophus on toes

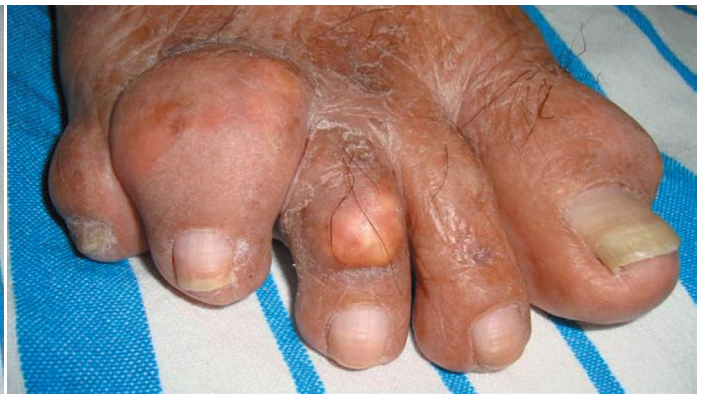
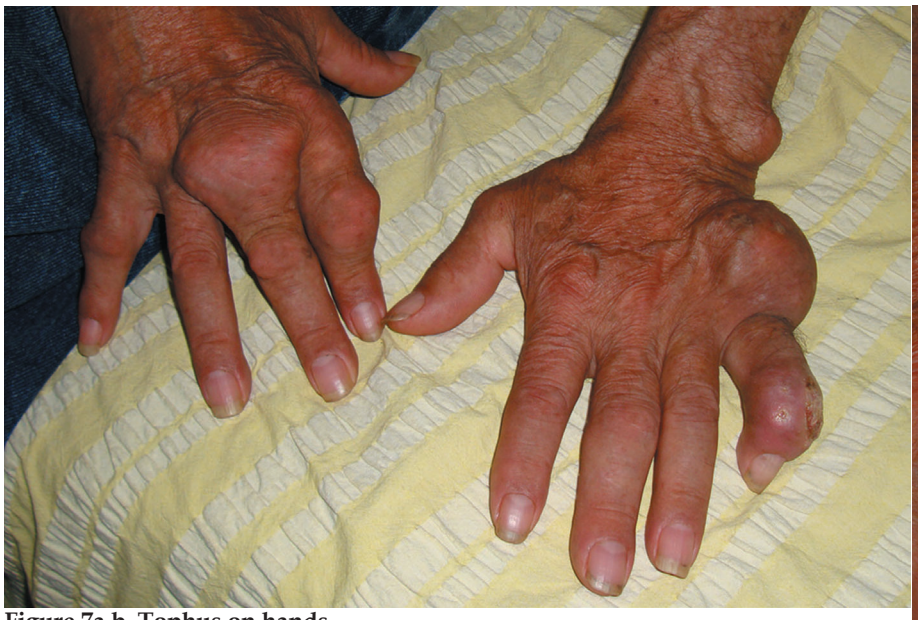


Figure 5. Close up Tophus



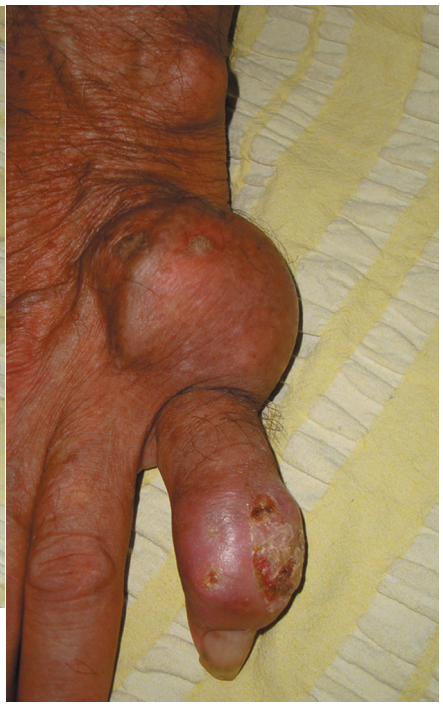


Figure 7a,b. Tophus on hands

**REFERENCES**

1. http://en.wikipedia.org/wiki/Tophus
2. http://medterms.com/script/main/art.asp?articlekey=5821
3. http://medical-dictionary.thefreedictionary.com/tophus
4. http://histopathology-india.net/GoTo.htm

DOI: 10.7241/ourd.20122.29

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# SUBUNGUAL GLOMUS TUMOUR

SUBUNGUAL GLOMUS TUMOUR

Rohini Mathias[1], Sharad Ramdas[2], Renu G. Varghese[3]

[1]*Department of Dermatology, Venereology and Leprology, Pondicherry Institute of Medical Sciences, Pondicherry, India*
[2]*Department of Plastic Surgery, Pondicherry Institute of Medical Sciences, Pondicherry, India*
[3]*Department of Pathology, Pondicherry Institute of Medical Sciences, Pondicherry, India*

**Corresponding author:** Dr. Rohini Mathias dr.rohinimathias@gmail.com

Our Dermatol Online. 2012; 3(2): 134-135
Date of submission: 29.12.2011 / acceptance: 25.01.2012
Conflicts of interest: None

A 35year old housewife presented with a two year history of paroxysmal excruciating pain over the distal end of left ring finger with aggravation of pain on minimal pressure and exposure to cold. There was no history of preceding trauma. Analgesics, antibiotics and anti-ischemic drugs had not provided any relief. Cutaneous examination revealed a mild swelling of the proximal nail fold with a subtle blue discoloration over the proximal nail bed (Fig. 1, 2).

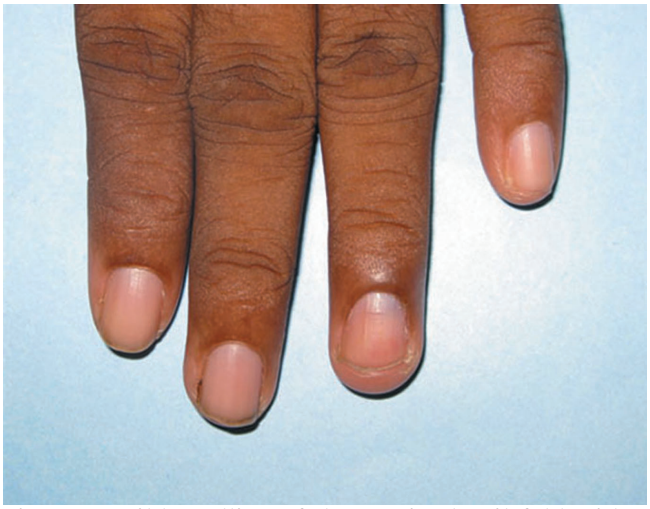


**Figure 1. Mild swelling of the proximal nail fold with a subtle blue discoloration over the proximal nail bed**

Hildreth sign and Love test were positive. Routine investigations and an X-Ray of the finger revealed no abnormalities. Histopathological examination of the excised lesion revealed a well circumscribed neoplasm consisting of sheets of round cells with punched out nuclei and pale eosinophilic cytoplasm (glomus cells) surrounding endothelium lined vascular spaces, features which confirmed the diagnosis of a subungual glomus tumor (Fig. 3, 4).

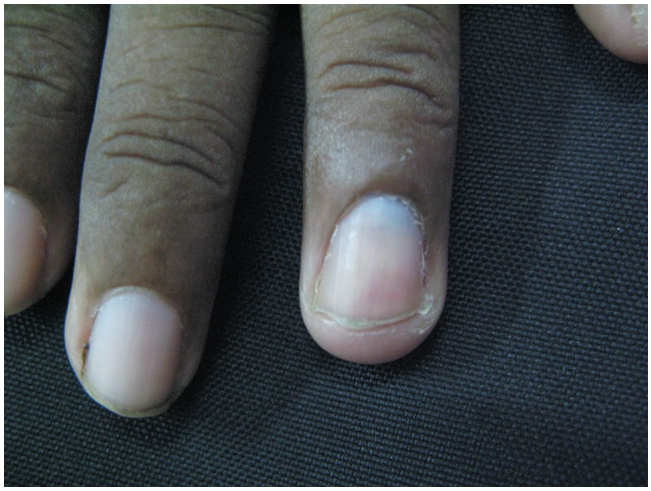


**Figure 2. Mild swelling of the proximal nail fold with a subtle blue discoloration over the proximal nail bed**

Glomus (Latin- ball of thread) tumors, are uncommon, painful hamartomas composed of perivascular cells resembling modified smooth muscle cells of the normal glomus body. Glomus bodies are intradermal arteriovenous shunts with a thermoregulatory function concentrated in the finger and toe tips especially in the subungual region. Glomus tumors may be single or multiple, the former being more common. The most common site of occurrence is the hand which accounts for 75% of all cases, subungual lesions predominating. A classic triad of paroxysmal pain, cold sensitivity and point tenderness has been described. Love's test consists of eliciting point tenderness with a fine instrument such as the tip of a pencil or pinhead.
Hildreth's sign is the disappearance of pain after a tourniquet is applied on the extremity, proximal to the lesion. Dermoscopy has been used pre- and intra-operatively to delineate the tumor.

Depending on the predominant cell type, which may be glomus cells, vascular structures or smooth muscle cells, glomus tumors are classified as solid glomus tumor, glomangioma and glomangiomyoma respectively.

Imaging techniques include ultrasonography and high resolution MRI. Doppler studies have been used to assess tumor vascularity. X-Rays are less helpful. Complete surgical excision (subungual, lateral or volar approach) is the treatment of choice. Multiple tumors may be managed with sclerotherapy or laser ablation (CO2, argon and pulsed dye lasers).

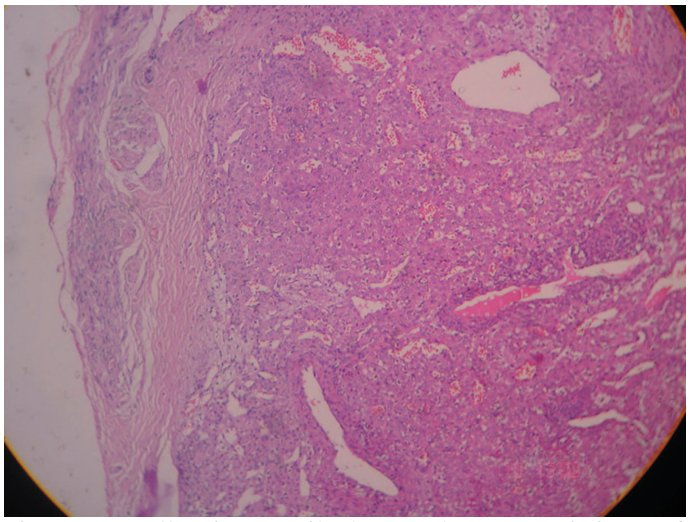


**Figure 3. Well circumscribed neoplasm consisting of sheets of round cells with punched out nuclei and paleeosinophilic cytoplasm (glomus cells) surrounding endothelium lined vascular spaces**

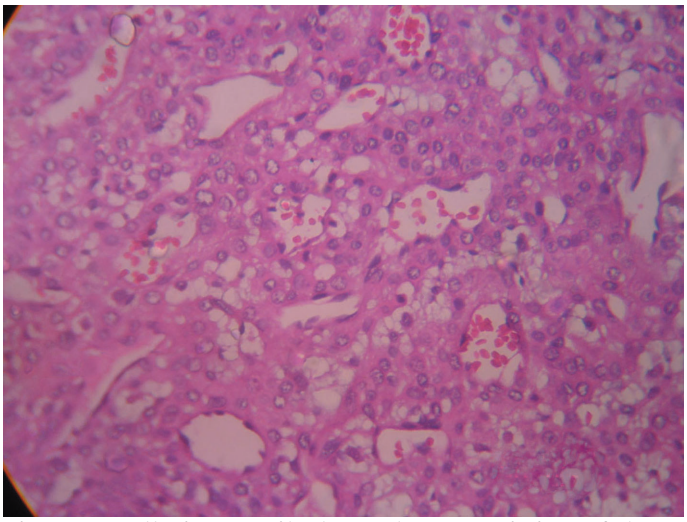


**Figure 4. Well circumscribed neoplasm consisting of sheets of round cells with punched out nuclei and paleeosinophilic cytoplasm (glomus cells) surroundin gendothelium lined vascular spaces**

DOI: 10.7241/ourd.20122.30

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# BLACK HAIRY TONGUE: A RARE SIDE EFFECT OF LINEZOLID

BLACK HAIRY TONGUE: RZADKIE DZIAŁANIE NIEPOŻĄDANE LINEZOLIDU

Ilkay Bozkurt[1], Efsan Yontar[2], Mehmet Doganay[1]

[1]*Department of Infectious Diseases and Clinical Microbiology, Erciyes University, Kayseri, Turkey*
[2]*Department of Dermatology, Erciyes University, Kayseri, Turkey*

**Corresponding author:** Dr. Ilkay Bozkurt *drilkaybozkurt@gmail.com*

Our Dermatol Online. 2012; 3(2): 136-137
Date of submission: 01.12.2011 / acceptance: 27.12.2011
Conflicts of interest: None

Sir,

A rare side effect of linezolid in a patient was presented in this letter. A 40-year-old woman was admitted to the hospital 1 month ago because of the lesions on her face, around the right ear. On examination, she had multiple pre-auricular and post-auricular nodular lesions and the largest one was 1,5 cm in diameter. In the patients' previous medical history, she had a disease of systemic lupus erythematosus, diagnosed 20 years earlier that had been controlled with steroid for the previous 19 years. At the time of admission, she was receiving a combination of steroid and azathioprine for last 6 months. She was examined by magnetic resonance imaging (MRI) of the brain and multiple abscess formation was reported. Initially, trimethoprim-sulfamethoxazole (15 mg/kg) and ceftriaxone (1gr bid) was administered as empirical treatment. Initial antibiotic regimen was continued according to culture results from lesions. Nocardia species was isolated from the culture and found susceptible to ceftriaxone, trimethoprim-sulfamethoxazole and linezolid. At the second week of the antibiotic therapy, the lesions showed progression and pneumonic infiltration was developed. For this reason, trimethoprim-sulfamethoxazole regimen was switched to linezolid (600 mg bid). A black hairy discoloration on her tongue, especially right side appeared 10 days after initiating linezolid therapy (Fig. 1a). The patient denied any use of tobacco or alcohol. Despite this side affect, she well tolerated the therapy with linezolid. Nearly one week later, patients' tongue completely resolved with just brushing and applied a good oral hygiene (Fig. 1b). Black discoloration of tongue is a reaction pattern that can be related to some conditions such as medications, physiologic, metabolic and toxic disorders and exogenous substances like tobacco, alcohol, and crack cocaine [1].

It can be caused by drugs such as corticosteroids, lansoprazole, methyldopa and some antibiotics (cephalosporins, claritromycin, penicillins, sulfonamids and tetracyclines) [2,3].

Linezolid is associated with some adverse events, mainly nausea, vomiting, diarrhea, and headaches. Thrombocytopenia and anemia also occur frequently in patients taking linezolid [4,5]. Black hairy tongue has been described before and the rate was reported as 0.2% in a large and controlled clinical study including 1498 patients received linezolid [5]. Although the exact pathogenesis is unclear, antibiotics such as linezolid associated black hairy tongue might change the normal flora of the mouth. The discoloration usually appeared after a few days treatment like this case [1-3].

Amir et al [6] have reported a 65-year-old kidney transplant recipient with tongue discoloration after receiving a 14 day course of linezolid. The discoloration resolved 6 months after the discontinuation of linezolid. Ma JS [7] has also reported a case of 8-year-old girl with the diagnose of bacteremia and polyarthritis presented with discoloration of the both incisors and tongue, 1 and 2 weeks after initiating linezolid therapy.

Black hairy tongue is a benign, reversible and very rare side effect due to linezolid. It can be omitted by the physicians, for this reason, this case was presented in here.

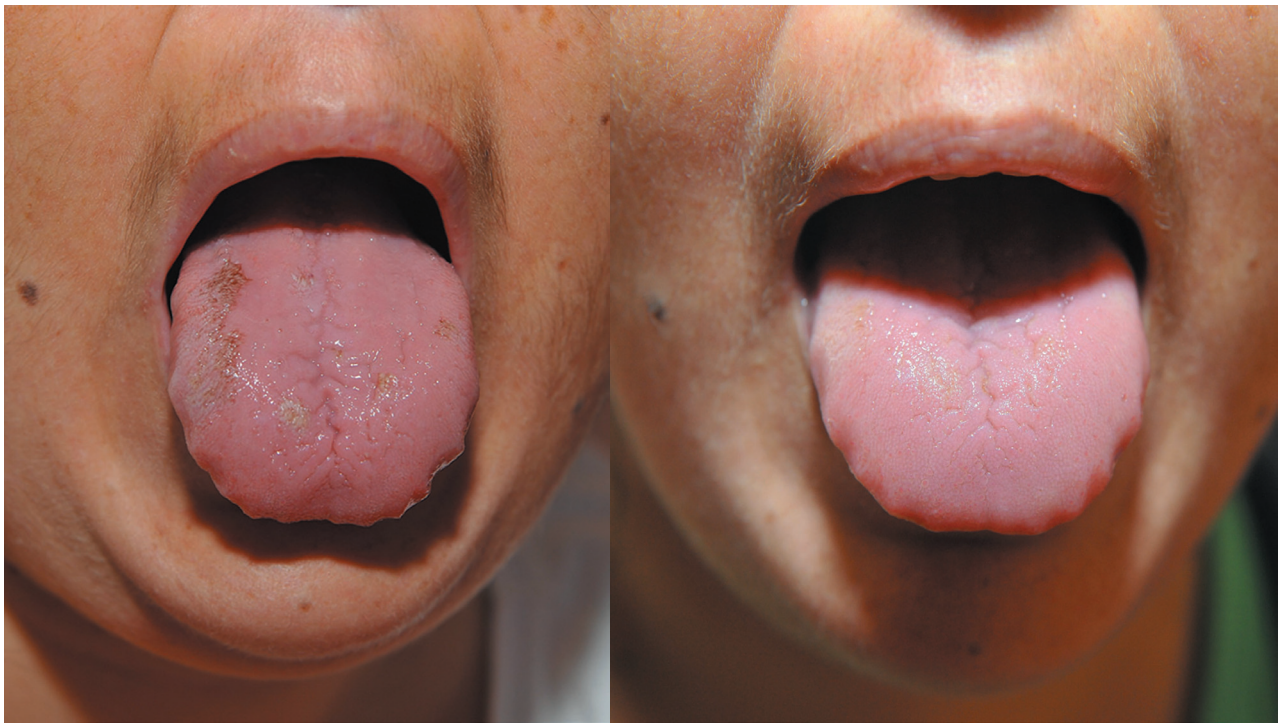


**Figure 1.a.** The appearance of black hairy tongue on the patients′ tongue after 10 days receiving linezolid.
**b.** Disappearance of the lesions

## REFERENCES


1. Ioffreda MD, Gordon CA, Adams DR, Naides SJ, Miller JJ: Black tongue. Arch Dermatol 2001; 137: 967.
2. Greco S, Mazzaglia G, Caputi AP, Pagliaro L: Glossitis, stomatitis, and black tongue with lansoprazole plus clarithromycin and other antibiotics [letter]. Ann Pharmacother 1997; 31: 1548.
3. Jover-Diaz F, Cuadrado-Pastor JM, Talents-Bolos A, Martin-Gonzalez C: Black tongue associated with linezolid. Am J Ther 2010; 17: 115-117.
4. Gould FK: Linezolid: safety and efficacy in special populations. J Antimicrob Chemother 2011;66 (l4):3-6.
5. Hau T: Efficacy and safety of linezolid in the treatment of skin and soft tissue infections. Eur J Clin Microbiol Infect Dis 2002; 21: 491–498.
6. Amir KA, Bobba RK, Clarke B, Nagy-Agren S, Arsura EL, Balogun SA, et al: Tongue discoloration in an elderly kidney transplant recipient: treatmentr elated adverse event. Am J Geriatr Pharmacother 2006; 4: 260–263.
7. Ma JS: Teeth and tongue discoloration during linezolid therapy. The Pediatr Infect Dis J 2009; 28: 345-346.

DOI: 10.7241/ourd.20122.31

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# GIANT CONGENITAL MELANOCYTIC NEVUS ON THE BACK

## OLBRZYMIE WRODZONE ZNAMIĘ MELANOCYTOWE NA PLECACH

Husein Husein El Ahmed, Jose Carlos Ruiz Carrascosa

*Department of Dermatology, San Cecilio University Hospital, Granada, Spain*

**Corresponding author:** Dr. Husein Husein El Ahmed *huseinelahmed@hotmail.com*

Our Dermatol Online. 2012; 3(2): 138-139

Date of submission: 05.01.2012 / acceptance: 25.01.2012

Conflicts of interest: None

Sir,

Congenital melanocytic nevi (CMN) are pigmented lesions appearing in the birth or after few days of birth. CMN are clasified as giant when the surface diameter is ≥ 20 cm [1]. Giant CMN are less frequent than small nevi, but show a significant higher risk of developing melanoma and neurocutaneous melanocytosis [2,3]. We present an outstanding case of giant CMN in woman located on the back.

A 47-year-old woman presented with a pigmented plaque on her back, which was present since birth and had gradually increased to the present size. This condition had a psychological and social impact in our patient during her childhood, since she tended to avoid situations in which she had to undress, such as swimming and sports. However parents declined excisions. At age of 47, she was referred to our department of dermatology for assessment. The growth of the nevus discontinued at age of 20 and since then no other changes in shape, color or thickening were observed. Clinical examination revealed a huge (43X38 cm), hairy, brown-black congenital melanocytic nevus involving the neck and the upper back (Fig. 1). Magnetic resonance imaging of the brain was negative for melanosis and thickening of leptomeninges. Findings on the dermatoscopy revealed areas with globular and homogeneous pattern, brown and black dots and globules, small milia-like cysts and terminal hairs. After considering the benign clinical and dermatoscopic outcomes and the risk of inaesthetic result with the surgical remove of this large lesion, a conservative approach was decided.

Giant CNM occur in approximately 1 of 20000 newborns in Caucasion population [4]. The etiology of CNM is caused by a morphogenic error in the neuroectoderm leading to a dysregulated growth of melanoblasts during the 5th and 24th weeks of gestation [5]. The importance of CNM lies in the fact that these lesions may be precursors of malignant melanoma, particulary those large lesions (≥ 20 cm) which shows a lifetime risk of melanoma between 4.5% and 10% [6]. Early evaluation and surgical removals of large CNM are indicated not only because of the high potential of degeneration to a melanoma, but also due to the aesthetic impact of these conditions. However, the management should be individualized in each patient considering the location and size of the nevus, the psychosocial impact, the risk of surgery and the cosmetic issues related to the surgical scar. In our patient, although the psychosocial impact of giant nevi was considerable, the lack of dermatoscopic malignant signs as well as the cosmetic issues related of the huge size of the lesion resulted in a conservative management.

When removal of giant atypical CNM is decided, it should be performed in early stages to avoid large and excessive scar: the surgical challenge is the functional and aesthetic reconstruction. A staged excision and use of tissue-expander or an intermeadiate-thickness skin graft are usually required in giant CNM.

In our patient, serial examination with dermatoscopy are performed periodically with no signs of malignant transformation during the follow-up.

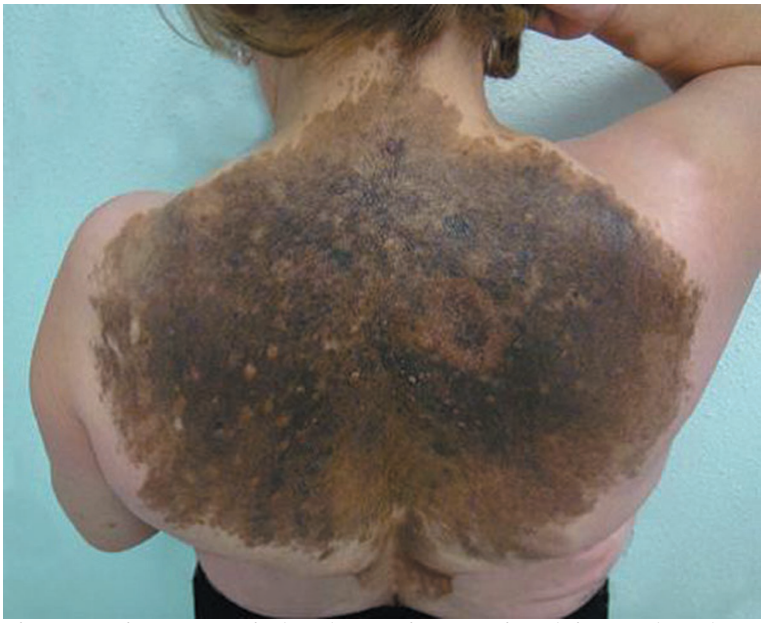


**Figure 1. Giant congenital melanocytic nevus involving neck and upper back**

## REFERENCES


1. Kopf AW, Bart RS, Hennessey P: Congenital melanocytic nevi and malignant melanomas. J Am Acad Dermatol 1979; 1: 123−130.
2. Bittencourt FV, Marghoob AA, Kopf AW, Koenig KL, Bart RS: Large congenital melanocytic nevi and the risk for development of malignant melanoma and neurocutaneous melanocytosis. Pediatrics 2000; 106: 736−741.
3. Marghoob AA: Congenital melanocytic nevi: evaluation and management. Dermatol Clin 2002; 20: 607−616.
4. Castilla EE, Dutra MD, Orioli-Parreiras IM: Epidemiology of congenial pigmented nevi: incidence rates and relative frequencies. Br J Dermatol 1981; 104: 307−135.
5. Takayama H, Nagashima Y, Hara M, Takagi H, Mori M, Merlino G, et al: Immunohistochemical detection of the c-met proto-oncogene product in the congenital melanocytic nevus of an infant with neurocutaneous melanosis. J Am Acad Dermatol 2001; 44: 538−540.
6. Kinsler VA, Birley J, Atherton DJ: Great Ormond Street Hospital for Children Registry for Congenital Melanocytic Naevi: prospective study 1988−2007. Part 2—evaluation of treatments. Br J Dermatol 2009; 160: 143−150.

DOI: 10.7241/ourd.20122.32

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# ANTIPARASITOGENIC THERAPY INFLUENCE ON IMMUNOLOGICAL STATUS OF PATIENTS WITH URTICARIA AND ACNE ROSACEA WITH ASSOCIATED GIARDIASIS

WPŁYW TERAPII ANTY PARAZYTOLOGICZNEJ NA STAN IMMUNOLOGICZNY PACJENTÓW Z POKRZYWKĄ I TRĄDZIKIEM RÓŻOWATYM WE WSPÓŁISTNIENIU Z LAMBLIOZĄ

Mykhailo Andreychyn, Maryana Kovalchuk, Mariia Shkilna, Natalia Vasylieva

*Department of Infectious Diseases, Epidemiology and Dermatovenerology, I. Ya. Horbachevsky Ternopil State Medical University, Ternopil, 46001, Ukraine*

**Corresponding author:** Mariia Shkilna, MD, PhD nadiya20743@gmail.com

Our Dermatol Online. 2012; 3(2): 140
Date of submission: 04.02.2012 / acceptance: 12.02.2012
Conflicts of interest: None

Sir,

We present results of antiparasitogenic therapy of patients with urticaria and acne rosacea, associated with giardiasis.

**Objectives**

160 patients with urticaria and acne rosacea were observed. 129 patients (the basic group) were diagnosed with associated giardiasis; 31 patients made up the comparison group. The control group included 23 patients with giardiasis as the main pathology.

**Methods**

Diagnosis of giardiasis was confirmed by stool ova and parasite (O&P) examination. Indices of cell-mediated immunity were tested in blood serum by indirect immunofluorescence with monoclonal antibodies.

Ornidasole was administered in the patient complex therapy with the dosage 0,25gr in the morning and 0,75gr at night taking into account the dominant clinical urticaria signs (appearance of new rashes and increasing of itching) at night, estimated by our study, and the parasites chronobiorhythm (R.C. Hermida, 1990).

**Results**

The method led to clinical recovery of 88,6 % patient comparing to 18,9 % of patients without such therapy ($p<0,001$). Catamnesis after 5-10 months showed that clinical remission remained in 71,8 % patients of the basic group comparing to 35,7 % in the comparison group ($p<0,05$).

The significant decrease ($p<0,01$) of indices CD3 and CD8 and tendency to decreasing of the indices CD4 and CD16 is observed in all the patients with giardiasis before the treatment in comparison with the donors. The same changes are observed in patients of the control group. These changes are less prominent in the comparison group ($p<0,001$) due to the significant negative influence of giardia toxins on the patient immunity cells. The state of the immunity cells is improved after the treatment of the patients of the basic group – the significant increase of the index CD3 and normalization of the indices CD4, CD8, CD16 comparing to the initial data ($p<0,01$), as patients of the control group ($p<0,01$). These indices remain low in the patients of the comparison group.

**Conclusion**

According to the gained results, ornidasole is said to influence the immunity cells of the patients with urticaria and acne rosacea with associated giardiasis due to the influence decrease of the giardia toxins on the immunity cells. The positive antiparasitogenic therapy results exclude supplementary implementation of the specialized immunocorrection methods in patients with urticaria and acne rosacea with associated giardiasis.

DOI: 10.7241/ourd.20122.33

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# CASE REPORTS AND STUDIES ON PITYRIASIS ROSEA – FROM NUMBER OF PATIENTS TO META-ANALYSES AND DIAGNOSTIC CRITERIA

OPISY PRZYPADKÓW I BADANIA NAD PITYRIASIS ROSEA - OD LICZBY PACJENTÓW DO META-ANALIZ I KRYTERIÓW DIAGNOSTYCZNYCH

Antonio Chuh[1], Vijay Zawar[2]

[1]*School of Public Health, The Chinese University of Hong Kong*
[2]*Godavari Foundation Medical College, India*

**Corresponding author:** Prof. Antonio Chuh *antonio.chuh@yahoo.com.hk*
Prof. Vijay Zawar *vijayzawar@yahoo.com*

Our Dermatol Online. 2012; 3(2): 141-142
Date of submission: 20.03.2012 / acceptance: 21.03.2012
Conflicts of interest: None

Sir,

We read with admiration the case report by Brzezinski and Sinjab on pityriasis rosea (PR) in a 12-month-old infant [1]. Despite more than a century of research, the underlying viral aetiologies, immunopathogenesis, diagnostic methods, specific diagnostic investigations, and optimal evidence-based management of PR are not yet within reach. There exist many case reports which, like the present report, are outstanding in supplementing individual clinical data to original studies on PR.

However, original studies in PR [2-4] were typically performed on a relatively small number of patients, say below 100 patients. Owing to these small numbers, the powers of individual studies are low. Theoretically, these studies can be meta-analysed to achieve high statistical powers and high clinical significance. However, a Cochrane review [5] has pointed out that such meta-analyses cannot be validly performed as the diagnosis of PR is clinical and various investigators adopt different inclusion and exclusion criteria in their studies. The high heterogeneity between study populations limits not only meta-analyses but also systematic reviews. We have previously reported a study on 1379 patients with PR [6]. However, we admit that as our data was from three geographical locations with differing diagnostic criteria, the heterogeneity of these patients was high.

Based on our previous experience on validating a diagnostic criteria for another paraviral exanthem, namely Gianotti-Crosti syndrome [7, 8], we have proposed a diagnostic criteria for typical and atypical PR [9, 10] (Tab. I). Despite this case report [1] not being a formal research study, we believe that the application of a diagnostic criteria is useful. If it is stated in many future case reports that the exanthems of the patients (be they being infants, children or an adults) fulfil or do not fulfil the diagnostic criteria, the data of case reports adopting the same diagnostic criteria will be of low heterogeneity, and therefore can be meta-analysed and systematically reviewed with regard to aetiology, immunopathogenesis, and management strategies.

For this infant in concern [1], we believe that the rash fulfils all the three essential clinical features (discrete annular lesions, scaling, peripheral collarette scaling with central clearance on at least two lesions), all three optional clinical features (relative truncal distribution, orientation along skin cleavage lines, herald patch), and none of the exclusional clinical features. This case thus fulfils the set of diagnostic criteria as a whole [9, 10].

We advocate future authors PR to try and apply this criteria for case reports and original studies on PR. We are working on validation studies for the diagnostic criteria of PR. We would welcome comments, suggestions and expressions of interest in validation studies by prospective authors working on this disease.

| |
|---|
| A patient is diagnosed as having pityriasis rosea if:<br>1. On at least one occasion or clinical encounter, he / she has all the **essential clinical features** and at least one of the **optional clinical features**, and<br>2. On all occasions or clinical encounters related to the rash, he / she does not have any of the **exclusional clinical features**. |
| The **essential clinical features** are:<br>1. Discrete circular or oval lesions,<br>2. Scaling on most lesions, and<br>3. Peripheral collarette scaling with central clearance on at least two lesions. |
| The **optional clinical features** are:<br>1. Truncal and proximal limb distribution, with less than 10% of lesions distal to mid-upper-arm and mid-thigh,<br>2. Orientation of most lesions along skin cleavage lines, and<br>3. A herald patch (not necessarily the largest) appearing at least two days before eruption of other lesions, from history of the patient or from clinical observation. |
| The **exclusional clinical features** are:<br>1. Multiple small vesicles at the centre of two or more lesions,<br>2. Two or more lesions on palmar or plantar skin surfaces, and<br>3. Clinical or serological evidence of secondary syphilis. |

**Table I. Proposed diagnostic criteria for pityriasis rosea [9, 10]**

## REFERENCES


1. Brzezinski P, Sinjab AT: Pityriasis Rosea in 12-months-old infant. Our Dermatol Online 2012; 3: 119-122.
2. Lallas A, Kyrgidis A, Tzellos TG, Apalla Z, Karakyriou E, Karatolias A, et al: Accuracy of dermoscopic criteria for the diagnosis of psoriasis, dermatitis, lichen planus and pityriasis rosea. Br J Dermatol 2012; doi: 10.1111/j.1365-2133.2012.10868.x. [Epub ahead of print]
3. Ehsani A, Esmaily N, Noormohammadpour P, Toosi S, Hosseinpour A, Hosseini M, et al: The comparison between the efficacy of high dose acyclovir and erythromycin on the period and signs of pitiriasis rosea. Indian J Dermatol 2010; 55: 246-248.
4. Lim SH, Kim SM, Oh BH, Ko JH, Lee YW, Choe YB, et al: Low-dose Ultraviolet A1 Phototherapy for Treating Pityriasis Rosea. Ann Dermatol 2009; 21: 230-236.
5. Chuh A, Dofitas B, Comisel G, Reveiz L, Sharma V, Chu V: Interventions for pityriasis rosea. Cochrane Database Syst Rev 2007; 2: CD005068.
6. Chuh A, Molinari N, Sciallis G, Harman M, Akdeniz S, Nanda A: Temporal case clustering in pityriasis rosea – a regression analysis on 1379 patients in Minnesota, Kuwait and Diyarbakýr, Turkey. Arch Dermatol 2005; 141: 767-771.
7. Chuh AAT: Diagnostic criteria for Gianotti-Crosti syndrome – a prospective case control study for validity assessment. Cutis 2001; 68: 207-213.
8. Chuh A, Lee A, Zawar V: The diagnostic criteria of Gianotti-Crosti syndrome – are they applicable to children in India? Pediatr Dermatol 2004; 21: 542-547.
9. Chuh AAT: Diagnostic criteria for pityriasis rosea – a prospective case control study for assessment of validity. J Eur Acad Dermatol Venereol 2003; 17: 101-103.
10. Chuh AAT, Zawar V: Pityriasis rosea. In: Harper's Textbook of Pediatric Dermatology (third edition). Edited by Irvine AD, Hoeger PH, and Yan AC. Wiley-Blackwell, Oxford, a John Wiley & Sons Ltd Publication, 2011 (ISBN: 978-1-4051-7695-8). Chapter 84: 84.1-84.5.

DOI: 10.7241/ourd.20122.34

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# RUDOLF HAPPLE AND THE DERMATOLOGY EPONYMS LINKED TO HIS NAME

RUDOLF HAPPLE I DERMATOLOGICZNE EPONIMY ZWIĄZANE Z JEGO IMIENIEM

Khalid Al Aboud

*Pathology Department, Wake Forest University, Winston-Salem, NC, USA*

**Corresponding author:** Dr. Khalid Al Aboud amoa65@hotmail.com

Our Dermatol Online. 2012; 3(2): 143-144
Date of submission: 17.12.2011 / acceptance: 19.01.2012
Conflicts of interest: None

**Abstract**
Rudolf Happle is a well-known pediatric dermatologist. He reported and described several medical conditions and syndromes. Some of these are linked eponymously to his name.
This concise letter sheds light on eponymic designations which bear his name.

**Streszczenie**
Rudolf Happle jest znanym dermatologiem dziecięcym. Przedstawił i opisał kilka stanów medycznych i zespołów chorobowych. Niektóre z nich są związane z jego imieniem.
Ten zwięzły list rzuca światło na nazwy jednostek chorobowych noszących jego imię.

**Key words:** dermatology; eponym; syndrome
**Słowa klucze:** dermatologia; eponim; zespół chorobowy

Professor Rudolf Happle (Fig.1), is a world-renowned dermatologist, with great contributions to dermatology in general and pediatric dermatology in particular. Professor Happle was born in 1938 in Freiburg; Germany [1]. He is currently, a Professor Emeritus of Dermatology in the Department of Dermatology at the University of Marburg in Germany and a Professor Emeritus at the Department of Dermatology, Philipp University. After his retirement, he is working as a Guest Professor in the Department of Dermatology at the University of Freiburg, Germany.

Dr Happle reported and described several dermatological conditions and syndromes. Some of these are linked eponymously to his name. The following paragraphs highlight some eponyms linked to his name.

## Conradi-Hünermann-Happle syndrome (CHHS)

CHHS is (MIM#302960) is a X-chromosomal dominant disorder that usually affects only females and is lethal in males. It has cutaneous, skeletal, and ocular manifestations; it also is referred to as X-linked dominant chondrodysplasia punctata or Happle syndrome. It was fully delineated by Happle between 1977 and 1981 as an X-linked gene defect .The clinical phenotype of the CHH syndrome is variable, ranging from stillborn or lethal forms to mild, clinically almost undetectable forms. The clinical hallmarks of the CHH syndrome are linear ichthyosis, chondrodysplasia punctata, asymmetrically shortened limbs, unilateral, and usually sectorial, cataracts, and short stature [2].

Patients with CHHS are born with ichthyosiform erythroderma that is characterized by feathery, adherent hyperkeratosis and a distribution along Blaschko lines.

The erythroderma usually resolves spontaneously during the first months of life. Subsequently, residual streaks and swirls of follicular atrophoderma and, occasionally, hyper- or hypopigmentation are noted. Scalp involvement results in patchy, scarring alopecia. Skeletal abnormalities include short stature, craniofacial anomalies, asymmetric limb reduction defects, vertebral malformations,and hip dysplasia. The sign of stippled calcifications of the epiphyses (chondrodysplasia punctata) [2] can be noted on x-rays only during the first months of life.

CHHS is caused by mutations in the gene that encodes the emopamil binding protein (EBP), causing a defect in sterol biosynthesis pathway. The EBP gene resides on the short arm of the X chromosome.

**Ruggieri-Happle syndrome**

This is a particular type of cutis tricolor (combination of congenital hyper- and hypopigmented skin lesions in close proximity to each other on a background of normal complexion), when it occurs as a part of a complex malformation syndrome.

Cutis tricolor may be a marker of underlying skeletal or neurological involvement [3].

**Figure 1. Rudolf Happle with the author during the 10th International Congress of Dermatology, Prague, Czech Republic, May 20-24, 2009**

**Happle-Tinschert syndrome**

Happle and Tinschert described the case of a multisystem birth defect with segmentally arranged basaloid follicular hamartomas associated with extracutaneous defects in the form of short leg, polydactyly and hypoplastic teeth. They presented a comprehensive overview of 8 similar cases reported under various designations, and provided evidence that this syndrome includes various additional defects of the bones, teeth and brain. This syndrome was later named Happle-Tinschert syndrome [4].

**Other conditions**

It is not uncommon to find the name of Professor Happle in the titles of other dermatological conditions to which he contributed by his great researches. For example the types of segmental involvement in autosomal dominant diseases [5]. Also, in phacomatosis pigmentokeratotica, which is a rare and distinct variant of the epidermal nevus syndrome, first described by Happle et al. It comprises the association of a linear organoid (epidermal) nevus with sebaceous differentiation and a speckled lentiginous nevus of the papular type arranged in a checkerboard pattern [6].

**REFERENCES**


1. König A: [Rudolf Happle -- the 65th birthday]. J Dtsch Dermatol Ges. 2003; 1: 837-840.
2. Hartman RD, Molho-Pessach V, Schaffer JV: Conradi-Hünermann-Happle syndrome. Dermatol Online J. 2010; 16: 4.
3. Ruggieri M, Roggini M, Kennerknecht I, Polizzi A, Distefano A, Pavone V: Spectrum of skeletal abnormalities in a complex malformation syndrome with „cutis tricolor" (Ruggieri-Happle syndrome). Acta Paediatr. 2011; 100: 121-127.
4. Itin PH: Happle-Tinschert syndrome. Segmentally arranged basaloid follicular hamartomas, linear atrophoderma with hypo- and hyperpigmentation, enamel defects, ipsilateral hypertrichosis, and skeletal and cerebral anomalies. Dermatology. 2009; 218: 221-225.
5. König A: [Segmental leiomyomatosis: from haplotype to type Happle]. J Dtsch Dermatol Ges. 2005; 3: 671-672.
6. Wollenberg A, Butnaru C, Oppel T: Phacomatosis pigmentokeratotica (Happle) in a 23-year-old man. Acta Derm Venereol. 2002; 82: 55-57.

DOI: 10.7241/ourd.20122.35

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# ISO-KIKUCHI SYNDROME; AN OVERVIEW

ZESPÓŁ ISO-KIKUCHI; PRZEGLĄD

Khalid Al Aboud

*Pathology Department, Wake Forest University, Winston-Salem, NC, USA*

**Corresponding author:** Dr Khalid Al Aboud *amoa65@hotmail.com*

Our Dermatol Online. 2012; 3(2): 145-146

Date of submission: 27.02.2012 / acceptance: 16.03.2012

Conflicts of interest: None

Iso-Kikuchi syndrome or congenital onychodysplasia of the index fingers (COIF), is a rare condition characterized by various forms of nail dysplasia commonly involving the index fingers [1-3]. Not infrequently, the neighboring fingers such as the middle fingers and thumbs are also affected [1].

Box.1 concisely lists the historical landmarks and the main features of this syndrome.

The first case report of this condition was by Kamei [1], in 1966.
Ryosuke Iso (1937–2009) (Fig. 1), a Japanese plastic surgeon collected a series of patients and defined the clinical syndrome [4,5].
Reported later, by Ichiro Kikuchi (Fig. 1), a contemporary Japanese dermatologist, who coined the term 'congenital onychodysplasia of the index fingers' (COIF) and identified a clinical syndrome consisting of nail dysplasia of the index fingers associated with underlying bone abnormalities [6].
The name, Iso-Kikuchi syndrome was given by Baran in 1980 [3].
Most of the reports are from Japan.
Can be either hereditary as autosomal dominant or sporadic.
International incidence of 4.2 cases per 100,000 live births.
Five criteria characterize the syndrome: congenital occurrence, unilateral or bilateral index finger involvement, variability in nail appearance, hereditary involvement and frequently associated bone abnormalities. Micronychia, polyonychia, anonychia, hemionychrogryphosis and malalignment are the observed index finger defects.

**Box I. Lists the historical landmarks and the main features of Iso-Kikuchi syndrome**

**Figure 1. This photo was taken in the house of Dr Iso during the Tokyo Dermatology Congress (1982).**
**From right to the left of the photo; Dr Iso, Dr Baran, and Dr Kikuchi, together with the wife's of Dr Iso and Dr Baran**

## REFERENCES

1. Padmavathy L, Rao L, Ethirajan N, Kanthimathi R, Adaikappan M: Iso-Kikuchi syndrome with absence of ring fingers and metacarpal bone abnormality. Indian J Dermatol Venereol Leprol. 2008; 74: 513-515.
2. Hussein TP, Brandt HR, Gabbi TV, Nico MM: Malformations of the index nails. Clin Exp Dermatol. 2009 ;34: 890-891.
3. Baran R: Iso Kikuchi syndrome (C.O.I.F. syndrome): A report on 2 cases and a review of 44 cases in the literature. Ann Dermatol Venereol 1980; 107: 431-435.
4. Iso R: Congenital nail defects of the index finger and reconstructive surgery. Seikei Geka. 1969; 20: 1383–1384.
5. Al Aboud A, Al Aboud K: Eponyms in dermatology literature linked to Japan. Clin Cosmet Investig Dermatol. 2012; 5: 15-21.
6. Kikuchi I, Horikawa S, Amano F: Congenital onychodysplasia of the index fingers. Arch Dermatol. 1974; 110: 743-746.

DOI: 10.7241/ourd.20122.36

NASZA DERMATOLOGIA Online
OUR DERMATOLOGY Online

# DERMATOLOGY EPONYMS – PHENOMEN / SIGN – LEXICON – (SUPPLEMENT)

Piotr Brzeziński[1], Ahmad Thabit Sinjab[2], Casey M. Campbell[3], Nis Kentorp[4], Carsten Sand[4], Krzysztof Karwan[5]

[1]*Dermatological Clinic, 6th Military Support Unit, Ustka, Poland* brzezoo77@yahoo.com
[2]*Department of General Surgery, District Hospital in Wyrzysk a Limited Liability Company, Poland* sinjab@wp.pl
[3]*Department of Periodontics, Wilford Hall USAF Medical Center, Lackland AFB, Texas 78236, USA* casey.campbell@us.af.mil
[4]*Departmen of Dermatology and Venerology, Bispebjerg Hospital D 40, Copenhagen NV, Denmark* csan0001@bbh.regionh.dk
[5]*The Emergency Department, Military Institute of Medicine, Warsaw, Poland* karwankris@wp.pl

Our Dermatol Online. 2012; 3(2): 147-155
Date of submission: 24.01.2012 / acceptance: 06.03.2012
Conflicts of interest: None

**Abstract**
Eponyms are used almost daily in the clinical practice of dermatology. And yet, information about the person behind the eponyms is difficult to find. Indeed, who is? What is this person's nationality? Is this person alive or dead? How can one find the paper in which this person first described the disease? Eponyms are used to describe not only disease, but also clinical signs, surgical procedures, staining techniques, pharmacological formulations, and even pieces of equipment. In this article we present supplement to eponyms (the letter A to F). The symptoms and their synonyms, and those who have described this symptom or phenomenon.

**Streszczenie**
Eponimy stosowane są niemal codziennie w praktyce w klinicznej dermatologii. A jednak informacja na temat osoby związanej z danym eponimem jest trudna do znalezienia. Kto to jest? Jakie jest jego obywatelstwo? Czy jeszcze żyje, jeśli nie to kiedy zmarł? Jak można znaleźć artykuł, w którym osoba ta po raz pierwszy opisała chorobę? Eponimy są używane do opisywania nie tylko choroby, ale również objawu klinicznego, zabiegu chirurgicznego, technik barwienia, preparatów farmakologicznych, a nawet elementów wyposażenia. W tym artykule prezentujemy uzupełnienie objawów (od A do F). Objawy i ich synonimy oraz tych, którzy opisali ten objaw lub zjawisko.

**Key words:** eponyms; skin diseases; sign; phenomen
**Słowa klucze:** eponimy; choroby skóry; objaw; fenomen

## ABLUTION SIGN
Bilharzia parasite infection from ablution pools in mosques. Also known as *Yemen sign*.

## OBJAW ABLUCJI
Infekcja pasożytnicza bilharcjozą pochodzącą z basenów ablucji w meczetach. Znany również jako *objaw Jemeński*.

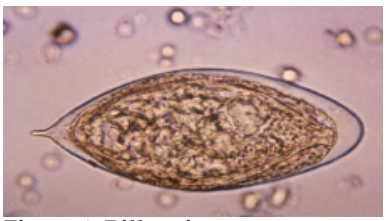


**Figure 1. Bilharzia-ova**

## ACCESSORY SIGN
The existence of any nonpathognomonic objective finding as a sign of disease. Also known as *assident sign*.

## OBJAW POMOCNICZY
Istnienie niepatognomonicznych, obiektywnych wniosków objawów choroby. Znany również jako *objaw wskazujący na obecność choroby* (ale nie jest konieczne wystąpienie związku z tą chorobą).

## ACONITE SIGN

Prickling and tingling sensations with giddiness and possible numbness in the mouth. The prickling feeling spreads on to the face and then to the whole body. A sign of aconite poisoning. Also known as *Monkshood sign*.

**Figure 2. Aconitum**

**Figure 3. Aconitum**

## OBJAW ZATRUCIA ACONITUM (Tojad)

Kłucie i mrowienie z zawrotami głowy i możliwym drętwieniem w ustach. Uczucie kłucia rozprzestrzenia się na twarzy, a potem na całe ciało. Objaw zatrucia tojadem. Znany również jako *objaw zatrucia Mordownikiem*.

---

## ANAPHYLACTOID SIGN

Pseudoanaphylaxis - a clinical reaction identical to anaphylaxis, but which is not caused by allergy.

## OBJAW ANAFILAKTOIDALNY

Pseudoanafilaksja - reakcja klinicznie identyczna z anafilaktyczną, lecz nie będąca wynikiem alergii.

---

## ANDRAL'S SIGN

An early sign of pleurisy. When a patient lies on the sound side, also known as *decubitus on the sound side*. Also known as *Andral's decubitus*.

## OBJAW ANDRALA

Wczesny objaw zapalenia opłucnej. Gdy pacjent leży na boku, znany jako *odleżyna po stronie dźwięku* (stanu zapalnego). Znany również jako *odleżyna Andrala*.

## GABRIEL ANDRAL

French physician, 1797-1876. Was a distinguished French pathologist and a professor at the University of Paris. In 1828 Andral was appointed professor of hygiene. In 1823 he became a member of the Académie Nationale de Médecine. He was elected a Foreign Honorary Member of the American Academy of Arts and Sciences in 1849. Andral is remembered for his pioneer investigations of blood chemistry. He is considered to be the founder of scientific hematology, and is credited with its integration into clinical and analytical medicine. Andral's crowning written achievement was Clinique médicale, a five-volume work that discussed almost every facet of medicine known at the time. Andral is credited as the first physician to describe lymphangitis carcinomatosa, a disease that is usually associated with cancers of the lung, breast, stomach, and cervix.

**Figure 4. Gabriel Andral**

**Francuski lekarz**, 1797-1876. Był wybitnym francuskim patologiem i profesorem na Uniwersytecie w Paryżu. W 1828 Andral został mianowany profesorem higieny. W 1823 roku został członkiem Académie Nationale de Medecine. Został wybrany Zagranicznym Honorowym Członekiem Amerykańskiej Akademii Sztuki i Nauki w 1849 roku. Andral jest uważany za pioniera badań chemicznych krwi. Uważany jest za twórcę naukowej hematologii i przypisuje się mu integrację medycyny klinicznej i analitycznej. Ukoronowaniem dokonań była Clinique médicale; pięciotomowe dzieło. Andral jest uznawany za pierwszego lekarza, który opisał rozsiew nowotworowy drogami naczyń chłonnych, chorobę, która zwykle kojarzy się z rakiem płuc, piersi, żołądka i szyjki macicy.

---

## ANTICHRIST SIGN

… and with the arrival of a man with black lips, it will be the beginning of the end.

This is an occult belief where the man will bring destruction in the from of disease or political oppression, respectively as a carrier of the Bubonic Plague or with his cult of personality promise wealth to the lazy and weak minded only to enslave them in a form of Totalitarianism. Black lips are a classic indication of an infection with *Yersinia pestis*.

## OBJAW ANTYCHRYSTA

… i wraz z pojawieniem się człowieka z czarnymi ustami; będzie to początek końca.

Jest to okultystyczne wierzenie, w którym mężczyzna spowoduje zniszczenia, od choroby lub ucisku politycznego, odpowiednio jako nośnik dżumy lub przez jego bogactwa, obietnice, osobowość, poglądy, i zniewoli słabych w formie totalitarnego systemu. Czarne usta są klasycznym wyznacznikiem zakażenia *Yersinia pestis.*

---

## ANUG SIGN

Painful acute necrotizing ulcerative gingivitis, also known as ulceromembranous gingivitis, Vincent's infection, *Vincent's War sign*, *Trench Mouth sign*, and *HIVP sign*, *LGE sign*, *NUP sign*.

**OBJAW ANUG**
Ostre, bolesne martwiczo-wrzodziejące zapalenie dziąseł, znane również jako błoniasto-wrzodziejące zapalenie dziąseł, infekcja Vincenta, *objaw wojny Vincenta* oraz *objaw okopów w jamie ustnej* i *objaw HIVP*, *objaw LGE*, *objaw NUP*.

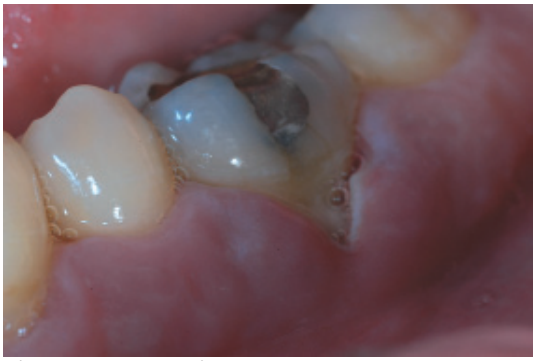


**Figure 5. ANUG sign**

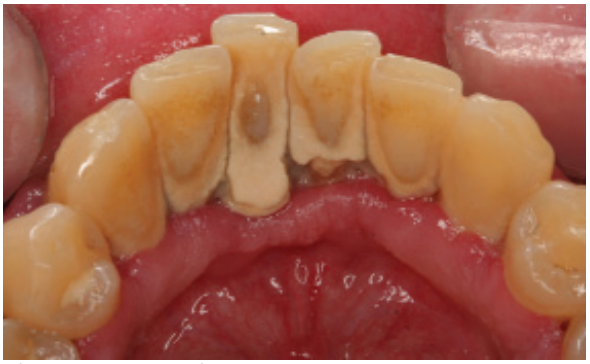


**Figure 6. ANUG sign**

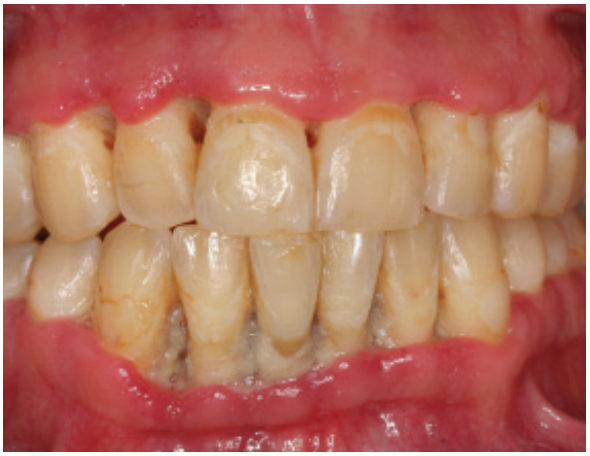


**Figure 7. ANUG sign**

**HENRI VINCENT**
French physician, 1862-1950.

**Francuski lekarz**, 1862-1950.

---

**ARCHIBALD'S SIGN**
A fever with drowsiness occurring in Sudan. Caused by the Enterobacter cloacae group microorganism.

**OBJAW ARCHIBALDA**
Gorączka z sennością występująca w Sudanie. Spowodowana przez mikroorganizmy z grupy *Enterobacter cloacae*.

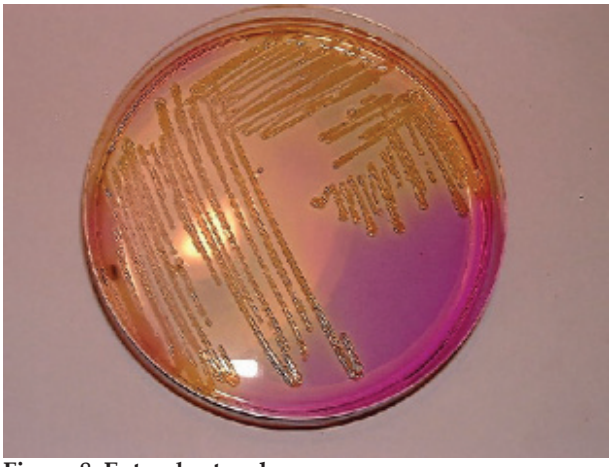


**Figure 8. Enterobacter cloacae**

**ROBERT GEORGE ARCHIBALD**
British army surgeon, professor of bacteriology and parasitology, 1880-1953. 1908-attached to Egyptian Army; 1908-Blue Nile operations; 1915-1916-Royal Army Medical Corps, Mudros East and Hellas Laboratories, Dardanelles; 1920-1935-Director, Wellcome Tropical Research Laboratories; 1928-Director Stack Medical Research Laboratories.

**Brytyjski chirurg polowy**, profesor bakteriologii i parazytologii, 1880-1953. 1908-przydzielony do egipskiej armii; 1908-operacja Blue Nile; 1915-1916-pracował w Royal Army Medical Corps, Mudros East and Hellas Laboratories, Dardanelles; 1920-1935-Dyrektor Wellcome Tropical Research Laboratories; 1928-Dyrektor Stack Medical Research Laboratories.

---

**ARGYLL ROBERTSON PUPIL SIGN**
A pupil which is miotic and responds to accommodation effort, however it does not respond to light. Pathognomonic of neurosyphilis. Also known as *Vincent's sign*.

**OBJAW ŹRENICY ARGYLL ROBERTSONA**
Źrenica, która jest miotyczna i reaguje na akomodację, jednak nie reaguje na światło. Znamienne dla neurosyphilis. Znany również jako *objaw Vincenta*.

**DOUGLAS MORAY COOPER LAMB ARGYLL ROBERTSON**
Scotch ophthalmologist and surgeon, 1837-1909. After earning his degree in 1857 from the University of St Andrews, he went to Berlin to study under Albrecht von Graefe. Robertson spent most of his medical career in Edinburgh as an eye surgeon at the Edinburgh Royal Infirmary and teacher of ophthalmology at the University of Edinburgh. For a while he was honorary eye physician to Queen Victoria and King Edward VII. Robertson made several contributions in the field of ophthalmology; in 1863 he researched the effects on the eye made by physostigmine, an extract from the Calabar bean (Physostigma venenosum), which is found in tropical Africa. He correctly predicted that physostigmine would become very important in the treatment of eye disorders. He also described a symptom of neurosyphilis that affects the pupils of the eye, which is known today as Argyll Robertson pupils.

**Figure 9. Douglas Argyll Robertson**

**Szkocki okulista i chirurg**, 1837-1909. Po uzyskaniu dyplomu w 1857 roku na Uniwersytecie St Andrews, udał się do Berlina, aby studiować u Albrechta von Graefe. Robertson spędził większość swojej kariery medycznej w Edynburgu jako chirurg oka na Edinburgh Royal Infirmary i nauczyciel okulistyki na Uniwersytecie w Edynburgu. Przez pewien czas był honorowym lekarzem oka królowej Wiktorii i króla Edwarda VII.
Robertson kilkakrotnie wykładał w dziedzinie okulistyki, w 1863 roku badał skutki działania na oczy fizostygminy, wyciągu z fasoli Calabar (venenosum Physostigma), który znajduje się w tropikalnej Afryce. Prawidłowo przewidział, że fizostygmina stanie się bardzo ważna w leczeniu chorób oczu. Opisał także objaw kiły układu nerwowego, który wpływa na źrenicę oka.

---

**ARLT'S SIGN**
Trachoma granular conjunctivitis. Syn. Egyptian conjunctivitis.

**OBJAW ARLTA**
Trachoma granular conjunctivitis. Syn. Egipskie zapalenie spojówek.

**CARL FERDINAND RITTER VON ARLT**
Austrian ophthalmologist, 1812-1887. He earned his doctorate in Prague in 1839, and later became a professor of ophthalmology in Prague (1849-1856) and Vienna (1856-1883). Arlt published a prodiguous number of books and articles concerning diseases of the eye, and collaborated with Albrecht von Graefe and Franciscus Donders on the journal Archiv für Ophthalmologie. He was the first physician to provide proof that myopia (short-sightedness) is generally a consequence of excessive length of the sagittal axis of the eye.

**Austryjacki okulista**, 1812-1887. Zdobył doktorat w Pradze w 1839 roku, a później został profesorem okulistyki w Pradze (1849/56) i Wiedniu (1856/83). Arlt opublikowanych liczne książki i artykuły na temat chorób oczu, razem z Albrechtem von Graefem i Franciscusem Dondersem redagował „Archiv für Ophthalmologie". Jako pierwszy wykazał, że krótkowzroczność jest zwykle spowodowana nadmiernym wydłużeniem osi strzałkowej oka.

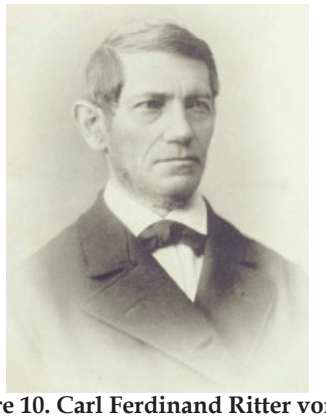


**Figure 10. Carl Ferdinand Ritter von Arlt**

---

**ARMADILLO PLAGUE SIGN (Texas, Louisiana)**
Refers to possible zoonotic transmission of leprosy to humans. The bacterium *Mycobacterium leprae* has been found in the armadillo, cynomolgus macaque, chimpanzee, and the sooty mangabey.

**OBJAW PLAGI PANCERNIKA (Texas, Louisiana)**
Odnosi się do możliwych odzwierzęcych transmisji trądu na ludzi. Bakteria *Mycobacterium leprae* została wyizolowana z pancernika, makaka jawajskiego, szympansa i mangaby szarej.

---

**ARTHUS'S SIGN**
A phenomenon of anaphylaxis.

**OBJAW ARTHUSA**
Zjawisko anafilaksji.

**NICOLAS MAURICE ARTHUS**
French immunologist and physiologist, 1862-1945. He studied medicine in Paris, he became Professor of Physiology at the University of Fribourg, Switzerland. He returned to France to work at the Pasteur Institute in 1900, and later taught at the Ecole de Médecine de Marseilles. In 1907-1932, he was appointed to the Chair of Physiology at the University of Lausanne in Switzerland. Subsequently, until his death he was director of the Institute of Bacteriology and Hygiene of Fribourg. In his research he was venoms and toxins, as well as anaphylaxis.

**Figure 11. Professor Arthus and assistants**

**Francuski fizjolog i immunolog**, 1862-1945. Studiował medycynę w Paryżu, a potem na Uniwersytecie we Freiburgu-Szwajcaria, gdzie został profesorem fizjologii. W 1900 r. został kierownikiem Instytutu Pasteura w Lille, następnie pracował w École de Médécine w Marsylii. W latach 1907-1932 pełnił funkcję dyrektora Instytutu Fizjologicznego w Lozannie. Następnie aż do śmierci był dyrektorem Instytutu Bakteriologii i Higieny we Fribourgu.
W swoich badaniach naukowych zajmował się jadami i toksynami, a także anafilaksją.

---

**ASSIDENT SIGN**
see: **Accessory sign**

---

**ATAXIC GAIT SIGN**
Gait of tabes dorsalis.

**OBJAW NIEZBORNYCH RUCHÓW**
Sposób poruszania się w przebiegu tabes dorsalis.

---

**AURICULAR LEPROSY SIGN**
Thickening of the greater auricular nerve where it crosses the sterno mastoid muscle. A sign of tuberculoid leprosy.

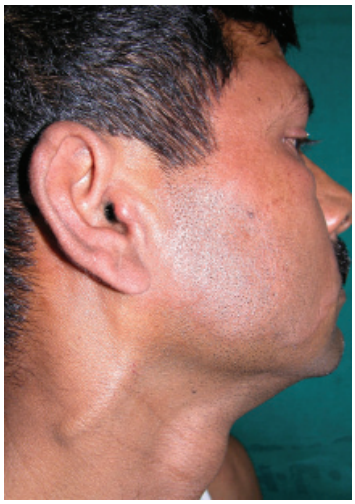


**Figure 12. Borderline tuberculoid leprosy in reaction with plaque on the cheek and the thickened great auricular nerve**

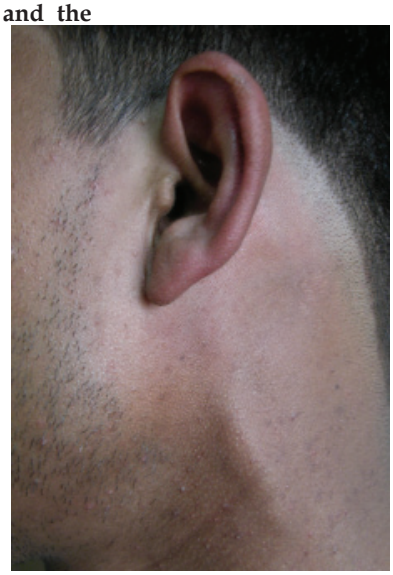


**Figure 13. Auricular Leprosy sign**

**OBJAW TRĄDU USZNEGO**
Pogrubienie większego nerwu usznego, w miejscu gdzie przecina on mięsień mostkowo-sutkowy. Objaw trądu tuberkuloidowego.

---

**AVICENNA'S SIGN**
1. Encapsulated tumor - Malignant tumors may be partially but never completely encapsulated; confined to a specific area; the tumor remains in a compact form. 2. Marked tenderness on the anterior surface of leg (shin) on pressure of about 4 kg by thumb. For diagnosing rheumatoid arthritis.

**OBJAW AVICENNY**
1. Encapsulated tumor - Nowotwory złośliwe mogą być częściowo, ale nigdy całkowicie zamknięte; ograniczone do określonego obszaru; guz pozostaje w kompaktowej formie. 2. Oznaczenie czułości na przedniej powierzchni nóg (podudzia) ciśnienia około 4 kg nacisku kciuka. Służy do diagnostyki reumatoidalnego zapalenia stawów.

**ABU ALI AL-HUSAYN IBN ABD ALLAH IBN SINA**
Persian physician, c. 980-1037, wrote almost 450 treatises on a wide range of subjects, of which around 240 have survived. In particular, 150 of his surviving treatises concentrate on philosophy and 40 of them concentrate on medicine. His most famous works are The Book of Healing, a vast philosophical and scientific encyclopaedia, and The Canon of Medicine, which was a standard medical text at many medieval universities. The Canon of Medicine was used as a text-book in the universities of Montpellier and Leuven as late as 1650. Ibn Sīnā's Canon of Medicine provides a complete system of medicine according to the principles of Galen (and Hippocrates). His corpus also includes writing on philosophy, astronomy, alchemy, geology, psychology, Islamic theology, logic, mathematics, physics, as well as poetry. He is regarded as the most famous and influential polymath of the Islamic Golden Age.


**Figure 14. Avicenna**

**Perski lekarz**, ok. 980-1037, napisał prawie 450 rozpraw na różne tematy, z których przetrwało około 240. W szczególności, 150 z jego zachowanych pism skoncentrowane były na filozofii, a 40 z nich koncentrują się na medycynie.

Jego najbardziej znane dzieła to The Book of Healing, ogromna encyklopedia filozoficzna i naukowa, Canon of Medicine, który był standardowym tekstem na wielu średniowiecznych uniwersytetach. Canon of Medicine był wykorzystywany na uniwersytetach w Montpellier i Leuven dopiero w 1650 roku. Kanon Medycyny oferuje kompletny system wiedzy medycznej, zgodnie z zasadami Galena (i Hipokratesa). Jego dzieła zawierają również pisma o filozofii, astronomii, alchemii, geologii, psychologii, teologii islamskiej, logice, matematyce, fizyce, jak i poezji. Jest uważany za najbardziej znanego i wpływowego erudyta Islamskiego Złotego Wieku.

**BEADS SIGN**
Papules on the nail shafts in multicentric reticulohistiocytosis.

**OBJAW PACIORKÓW**
Grudki na wałach paznokciowych w wieloogniskowej retikulohistiocytozie.

**BIRD'S SIGN**
Defined area of dulness and absence of respiratory sounds. A sign of hydatid cyst in the lungs or liver, caused by tapeworms. Also known as *Dougan-Bird's sign*.

**OBJAW BIRDA**
Określony obszar stłumienia i braku dźwięku. Objaw torbieli bąblowcowej w płucach lub w wątrobie, spowodowany przez tasiemce. Znany również jako *objaw Dougan-Birda*.

**SAMUEL DOUGAN-BIRD**
Australian physician, 1832-1904. He was president of the Medical Society of Victoria in 1869 and physician to the Benevolent Asylum and the Immigrants Aid Society. For thirty years he was chief medical officer to the Australian Mutual Provident Society in Victoria. His lectures were said to be lucid and forthright and the same qualities can be seen in his medical writings. Showed interest in chest disease.


**Figure 15. Samuel Dougan-Bird**

**Australijski lekarz**, 1832-11904. Był prezesem Towarzystwa Lekarskiego Victorii w 1869 roku i lekarzem Benevolent Asylum i Immigrants Aid Society. Przez trzydzieści lat był głównym oficerem medycznym w Australian Mutual Provident Society w Viktorii. Jego wykłady medyczne były uważane za przejrzyste i proste i w tej samej jakości można był zobaczyć je w jego pismach medycznych. Wykazywał zainteresowania chorobami klatki piersiowej

**CANDLE SIGN**
Characteristic symptoms of psoriasis, based on the fact that the Scratch typical of the disease papules, scales, beneath the surface it looks like it was covered with a layer of stearin.

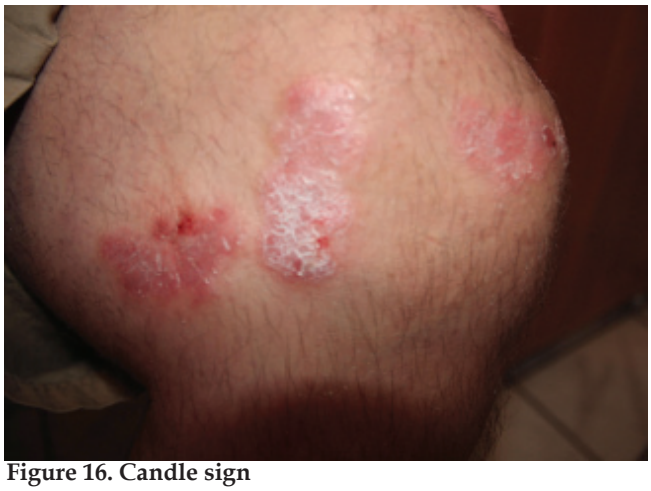


**Figure 16. Candle sign**

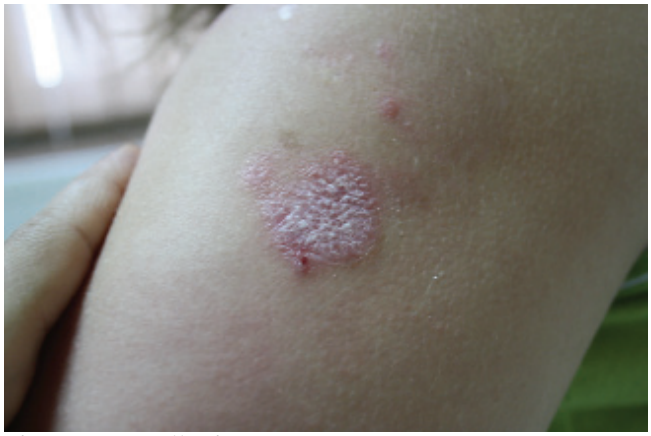


**Figure 17. Candle sign**

**OBJAW ŚWIECY STEARYNOWEJ**
Charakterystyczny dla łuszczycy objaw, polegający na tym, że po zdrapaniu charakterystycznych dla tej choroby grudek, łusek, powierzchnia pod nimi wygląda jakby była pokryta warstewką stearyny.

**DOUBLE BORDER SIGN**
In ulcus molle. The edges of the ulcer are slightly raised, undermined. Symptom states when there is erythematous rim, and then a thin yellow necrotic zone.

**OBJAW PODWÓJNEGO OBRZEŻA**
W ulcus molle. Brzegi wrzodu są nieco uniesione, podminowane. Objaw stwierdza się gdy występuje obwódka rumieniowa, a następnie cienka żółta strefa martwicza.

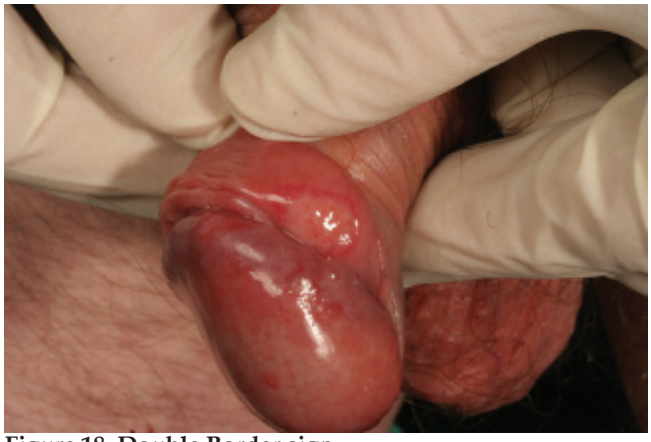


**Figure 18. Double Border sign**

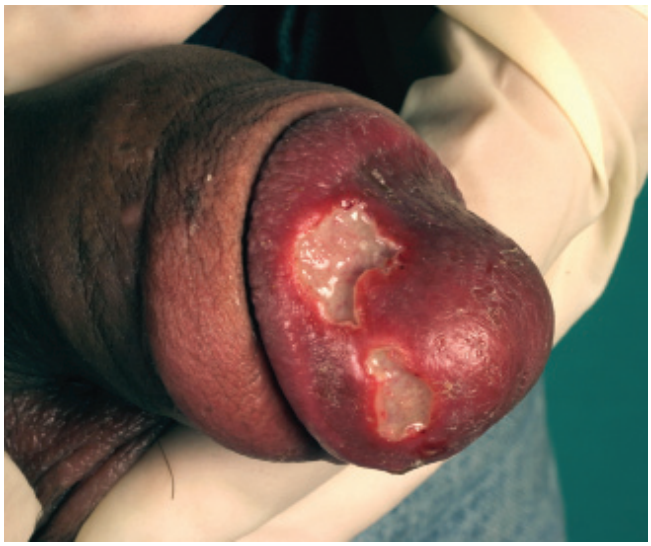


**Figure 20. Double Border sign**

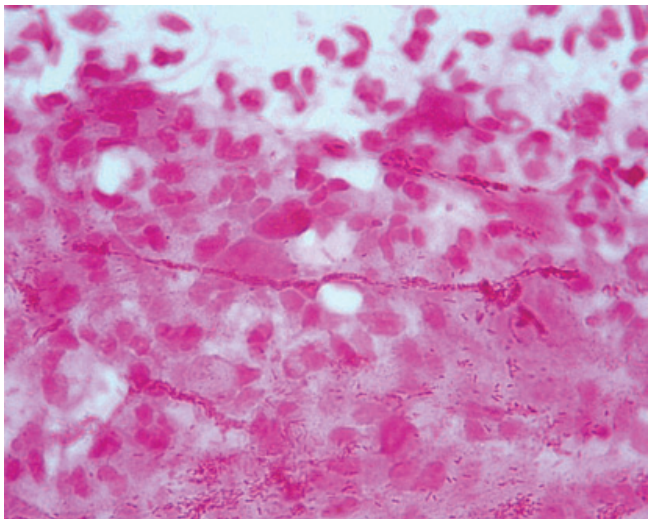


**Figure 21. School of fishes appearance of Haemophilus ducreyi**

## DE DUNCAN BUCKLEY SIGN

de Duncan Buckley membrane (piel muy fina). In psoriasis. When all scales are removed formed moist, thin, translucent layer of skin covering the lesions. Known also as *last membrane sign*.

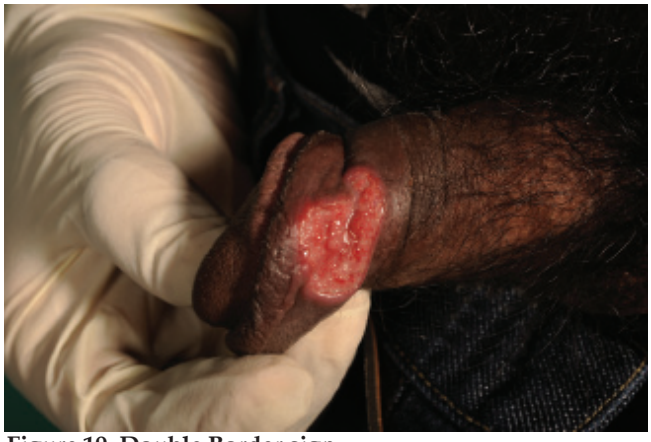


**Figure 19. Double Border sign**

## OBJAW DE DUNCAN BUCKLEYA

Błona de Duncan Buckley'a (cienka skóra); w łuszczycy. Gdy wszystkie łuski zostaną usunięte powstaje wilgotna, cienka, przeświecająca warstwa skóry pokrywająca zmiany. Znany jako *objaw ostatniej błonki*.

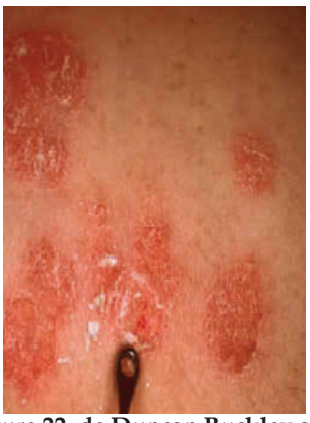


**Figure 22. de Duncan Buckley sign**

## LUCIUS DUNCAN BULKLEY

American physician, 1845-1928. Bulkley wrote extensively on the dangers of biopsies. In 1885, Dr. Bulkley organized the New York Skin and Cancer Hospital (NYSCH). This distinguished physician gradually became convinced that surgery was useless, and that a careful, nourishing diet was the answer. Criticizing surgery and advocating natural methods. In 1924, he published the results of 250 cases of breast cancer eliminated without surgery.

**Amerykański lekarz**, 1845-1928. Bulkley pisał o niebezpieczeństwach związanych z biopsją. W 1885 roku dr Bulkley zorganizował New York Skin and Cancer Hospital (NYSCH). Ten wybitny lekarz, słał przekonane, o bezużyteczności zabiegu chirurgicznego oraz uważał, że prawidłowe odżywianie to odpowiedź na wszystkie choroby krytykuje chirurgię i poleca naturalne metody. W 1924 roku opublikował wyniki 250 przypadków raka piersi wyeliminowanych bez użycia metod chirurgicznych.

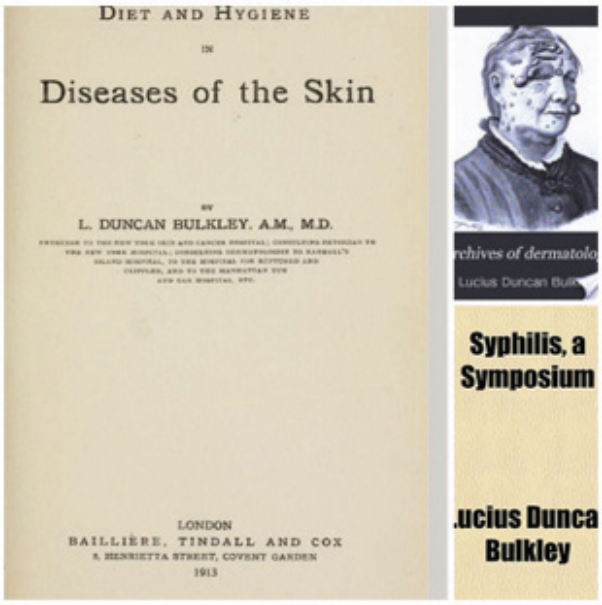



**Figure 23. Lucius Duncan Bulkley - Monographs**

## ELECTRIC FOOT SIGN

Gopalan syndrome. A burning sensation of the feet associated with hyperhidrosis and raised skin temperature, thought to be caused by vitamin B deficiency. Syn: Barashek, burning feet syndrome, chacaleh, lightning foot, painful feet syndrome.

## OBJAW ELEKTRYCZNEJ STOPY

Zespół Gopalana. Pieczenie stóp związane z nadmierną potliwością i podwyższoną temperaturą skóry. Uważa się że jest to spowodowane niedoborem witaminy B. Syn: Barashek, zespół piekących stóp, chacaleh, piorunująca stopa, zespół bolesnej stopy.

## GOPALAN C

20 th century Indian biochemist. The last position: President, Nutrition Foundation of India, New Delhi. Other positions held: President, International Union of Nutritional Sciences (IUNS) (1975-1979), Chairman, Regional Advistory Committee on Medical research, WHO (1975-1980). Dr Gopalan founded the Nutrition Society of India. The Society is today, the National Forum for Nutrition scientists all over India. Dr Gopalan initiated the First asian Congress of Nutrition (CAN) as its President and ensured the continuity of this effort, by setting up the Federation if Asian Nutrition Societies (FANS). He has been a Member of the Nutrition Expert Panel WHO/FAO from 1953.

**20-to wieczny hinduski biochemik**. Ostatnia piastowana pozycja: Prezes Fundacji Żywienia Indii, New Delhi. Inne zajmowane pozycje: Prezydent Międzynarodowej Unii Nauk Żywieniowych (IUNS) (1975-1979), przewodniczący Regionalnego Komitetu Doradczy w Badaniach Medycznych, WHO (1975-1980). Dr Gopalan założył Towarzystwo Żywienia w Indiach. Towarzystwo jest dziś Krajowym Forum dla dietetyków w całych Indiach. Dr Gopalan zainicjował Pierwszy Azjatycki Kongres Żywienia (CAN) jako jej przewodniczący oraz zapewnił ciągłość tych działań poprzez utworzenie Federacji jako Azjatyckiego Towarzystwa Żywienia (FANS). Był członkiem Zespołu Ekspertów Żywienia WHO / FAO od 1953 r.

## FOX'S SIGN

Is a clinical sign in which bruising is seen over the inguinal ligament. It occurs in patients with retroperitoneal bleeding, usually due to acute haemorrhagic pancreatitis.

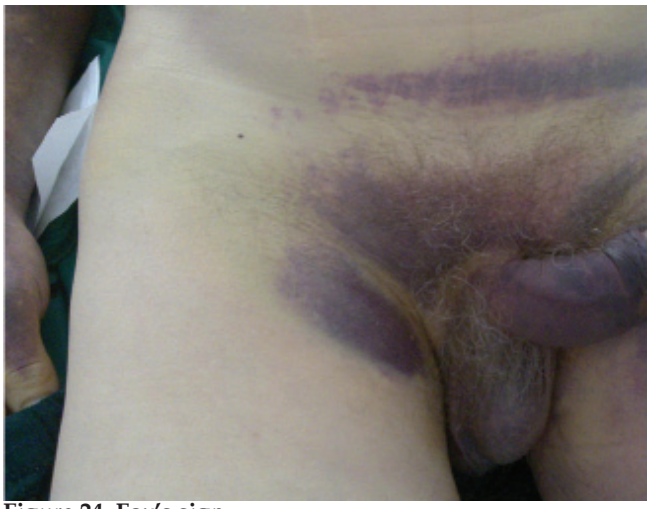


**Figure 24. Fox's sign**

## OBJAW FOXA

Jest objawem klinicznym, jest obecność siniaków na więzadłach pachwinowych. Występuje u pacjentów z krwawieniem do przestrzeni zaotrzewnowej, zwykle w związku z ostrym krwotocznym zapaleniem trzustki.

## GEORGE HENRY FOX

American dermatologist, 1846-1937. Studied in Berlin, London, Paris and Vienna. He was professor of dermatology at the New York Medical College for Women, Starling Medical College in Columbus, Ohio, Columbia University and the New York Post-Graduate Medical School and Hospital. One of the most important American pioneers in dermatology. Writer, physician, and teacher whose work influenced generations. He argued that the study of Skin Diseases without cases or colored plates is like the study of osteology without bones, or the study of geography without maps. He, therefore, began having his patients photographed and these photographs he shared with other physicians, and eventually published as Photographic Illustrations of Skin Disease (1880), Photographic Illustrations of Cutaneous Syphilis (1881), and Photographic Illustration of Skin Disease (Second Series, 1885).

**Amerykański dermatolog**, 1846-1937. Studiował w Berlinie, Londynie, Paryżu i Wiedniu. Był profesorem dermatologii w New York Medical College for Women, Starling Medical College w Columbus, Ohio, Columbia University i New York Post-Graduate Medical School and Hospital. Jeden z najważniejszych pionierów amerykańskiej dermatologii. Pisarz, lekarz i nauczyciel, którego praca wpływała na pokolenia. Twierdził, że badania chorób skóry bez przypadków lub kolorowych obrazów jest jak badanie osteologii bez kości, lub nauk geograficznych bez mapy. Zaczął więc swoich pacjentów fotografować i ostatecznie opublikował zdjęcia jako Photographic Illustrations of Skin Disease (1880), Photographic Illustrations of Cutaneous Syphilis (1881) i Photographic Illustration of Skin Disease (druga seria, 1885).

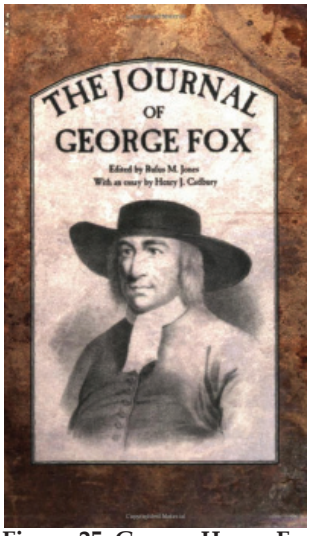


**Figure 25. George Henry Fox**

**ACKNOWLEDGEMENT**

Prof. V. Ramesh (for Figure 12,13)
e-mail: *weramesh@hotmail.com*
Dermatology and STD Department, SJ Hospital & VM Medical College, New Delhi, India

Dr Trisha Peel (for Figure 21)
e-mail: *t.peel@pgrad.unimelb.edu.au*
Alfred Hospital, Melbourne, Victoria, Australia

Dr Ahmadreza Afshar
e-mail: *afshar_ah@yahoo.com*
Urmia University of Medical Sciences, Department of Orthopedics, Imam Khomeini Hospital, Urmia, Iran

Prof. Michael Kemp
e-mail: *Michael.Kemp@ouh.regionsyddanmark.dk*
Odense University Hospital, University of Southern Denmark

**REFERENCES**

1. Arfaa F: Studies on Schistosomiasis in the Yemen Arab Republic. Am J Trop Med Hyg. 1972; 21: 421-424.
2. Oshish A, AlKohlani A, Hamed A, Kamel N, AlSoofi A, Farouk H, et al: Towards nationwide control of schistosomiasis in Yemen: a pilot project to expand treatment to the whole community. Trans R Soc Trop Med Hyg. 2011; 105 :617-27.
3. Liu Q, Zhuo L, Liu L, Zhu S, Sunnassee A, Liang M, et al: Seven cases of fatal aconite poisoning: forensic experience in China. Forensic Sci Int. 2011; 212: e5-9.
4. Russell WJ, Smith WB: Pseudoanaphylaxis. Anaesth Intensive Care. 2006; 34: 801-803.
5. Kołacz M, Mayzner-Zawadzka E, Wanyura H, Krasny K: [Anaphylactic reaction, anaphylactic shock]. Czas. Stomat. 2005, 7: 525-529.
6. Doyle L:Gabriel Andral (1797-1876) and the first reports of lymphangitis carcinomatosa. J R Soc Med. 1989; 82: 491-493.
7. Scasciamacchia S, Serrecchia L, Giangrossi L, Garofolo G, Balestrucci A, Sammartino G, Fasanella A, et al: Plague epidemic in the kingdom of naples, 1656-1658. Emerg Infect Dis. 2012; 18: 186-188.
8. Campbell CM, Stout BM, Deas DE: Necrotizing ulcerative gingivitis: a discussion of four dissimilar presentations. Tex Dent J. 2011; 128: 1041-1051.
9. Nzeako BC, Al-Sumri SH: The Disinfecting Potential of Contact Lens Soutions used by Sultan Qaboos University Students. Sultan Qaboos Univ Med J. 2011; 11: 252-258.
10. [No authors listed]: Sir Robert G. Archibald. Br Med J. 1953; 1: 1112-1113.
11. Aziz TA, Holman RP: The Argyll Robertson pupil. Am J Med. 2010; 123: 120-121.
12. Grzybowski A: [The history of neuro-ophthalmology in Edinburgh. Part I]. Klin Oczna. 2005; 107: 167-169.
13. Labetoulle M, Raymond J: [Trachoma is still a pediatric disease]. Arch Pediatr. 2005; 12 Suppl 1: S35-S41.
14. Noguera-Palau JJ: [Ferdinand Ritter von Arlt (Obergraupen, 1812 - Vienna, 1887]. Arch Soc Esp Oftalmol. 2007;82:791-792.
15. Hamilton HK, Levis WR, Martiniuk F, Cabrera A, Wolf J: The role of the armadillo and sooty mangabey monkey in human leprosy. Int J Dermatol. 2008; 47: 545-550.
16. Ishii N, Udono T, Fujisawa M, Idani G, Tanigawa K, Miyamura T, et al: [Leprosy in a chimpanzee]. Nihon Hansenbyo Gakkai Zasshi. 2011; 80: 29-36.
17. Bache S, Petersen JT, Garvey LH:Anaphylaxis to ethylene oxide - a rare and overlooked phenomenon? Acta Anaesthesiol Scand. 2011; 55: 1279-1282.
18. Sonoo M, Katayama A, Miura T, Shimizu T, Inoue K: Tibial nerve SEPs localized the lesion site in a patient with early tabes dorsalis. Neurology. 2005; 64: 1452-1454.
19. Ramesh V, Jain RK, Avninder S: Great auricular nerve involvement in leprosy: scope for misdiagnosis. J Postgrad Med. 2007; 53: 253-254.
20. Afshar A: Honoring Avicenna, the great Persian physician on the world's postage stamps. Arch Iran Med. 2010;13: 447-453.
21. Barzegar-Jalali S, Hatami-Sadabadia F: New diagnostic sign for rheumatoid arthritis: Avicenna sign . APLAR J Rheumatol. 2004. 2: 117-122.
22. Tajirian AL, Malik MK, Robinson-Bostom L, Lally EV: Multicentric reticulohistiocytosis. Clin Dermatol. 2006; 24: 486-492.
23. Brzeziński P, Wollina U, Poklękowska K, Khamesipour A, Herrero Gonzalez JE, Bimbi C, et al: Dermatology Eponyms – Phenomen / Sign–Lexicon (D). N Dermatol Online. 2011; 3(2): 158-170.
24. Busch A, Landau J, Moody M, Goldberg: Pediatric psoriasis. Skin Therapy Lett. 2012; 17: 4-7.
25. Maan MA, Hussain F, Iqbal J, Akhtar SJ: Sexually transmitted infections in Pakistan. Ann Saudi Med. 2011; 31: 263-269.
26. Duncan Bulkley L: Monographs of diseases of the skin. [Not in copyright]. 1877.
27. Simopoulos AP, Gopalan C: Plants in Human Health and Nutrition Policy. World Rev Nutr Diet. Basel. Karger 2003; 91: 1-21.
28. http://www.docstoc.com/docs/86698584/Dr-C-Gopolan
29. Andersson E, Ansari D, Andersson R: Major haemorrhagic complications of acute pancreatitis. Br J Surg. 2010; 97: 1379-1384.
30. http://drtenge.livejournal.com/623426.html
31. [No authors]: George Henry Fox.. Bull N Y Acad Med. 1932; 8: 105.