

**CLINICAL SPECTRUM OF NEONATAL SKIN
DISORDERS AT HAMDARD UNIVERSITY HOSPITAL
KARACHI, PAKISTAN**
KLINICZNE SPEKTRUM SKÓRY NOWORODKÓW W SZPITALU
UNIWEKSYTECKIM HAMDARD W KARACHI, PAKISTAN

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Conflicts of interest: None

Abstract

Objective: To analyze the clinical spectrum of skin conditions in neonates at Hamdard university hospital. **Study Design:** Descriptive (Observational) cross sectional study.

Methods: This study was conducted from January 2008 to December 2009. All neonates seen at Hamdard university hospital during this period were examined. Neonates with skin conditions within 28 days of birth were registered on a predesigned questioner by the house officer these cases were confirmed by the pediatric consultant, followed by detail physical systemic examination and skin examination. Dermatologist was involved in the diagnosis of difficult cases.

Results: Total numbers of new born seen during the year 2008- 2009 were 1660, there were 65% males and 35% females, 1360 (81.92%) were above 2.5 Kg at birth, 18.08% were below 2.5 Kg. Numbers of neonates with skin lesions were 577 (34.75%). Neonates with skin infections were 25.12%, 15.59% had with nappy rash and 15.59 % had erythema toxicum neonatum. Neonates with milia were 60 (10.39%) and with erythema were 27 (4.67%).

Conclusion: Clinical spectrums of neonatal skin are different in this study as compared to other regional and international studies.

Streszczenie

Cel: Analiza kliniczna spektrum chorób skóry u noworodków w szpitalu Uniiwersyteckim Hamdard. **Projekt badania:** Opisowy (obserwacyjny) przekrój badania.

Metody: Badanie zostało przeprowadzone w okresie od stycznia 2008 do grudnia 2009 roku. W tym okresie zbadano wszystkie noworodki widziane w szpitalu uniwersyteckim Hamdard. Noworodki z chorobami skóry w 28 dni od urodzenia były zarejestrowane na gotowych kwestionariuszach przez lekarza rezydenta, następnie te przypadki zostały potwierdzone przez konsultanta dziecięcego, po szczegółowym systemowym badaniu fizykalnym i badaniu skóry. Dermatolog był zaangażowany w diagnostyce trudnych przypadków.

Wyniki: Całkowita liczba noworodków obserwowana w latach 2008 - 2009 wynosiła 1660, w tym 65% płci męskiej i 35% płci żeńskiej, 1360 dzieci (81,92%) było powyżej 2,5 kg po urodzeniu, 18,08% było poniżej 2,5 kg. Liczba noworodków z zmianami skórnymi wynosiła 577 (34,75%). Noworodków z zakażeniami skóry było 25,12%, 15,59% miało pieluszkowe zapalenie skóry a u 15,59% stwierdzono toksyczny rumień noworodków. Noworodków z prosakami było 60 (10,39%) a z rumieniem 27 (4,67%).

Konkluzja: Kliniczne spektrum skóry noworodków w tym badaniu różni się w porównaniu do innych badań regionalnych i międzynarodowych.

Key words: newborn; dermatology; dermatose

Słowa kluczowe: noworodek; dermatologia; dermatozy

Introduction

Children suffer from different dermatological conditions than adults.

Neonates form special group, the skin of the infant differs from that of the adult, in that it is thinner, delicate, has weaker intercellular attachments and produces fewer sweat and sebaceous gland secretions and is more susceptible to several infections [1]. Pediatric dermatological conditions

accounted for large number of referrals [2].

Material and Methods

This study was carried out at Hamdard university hospital, an undergraduate teaching hospital All neonates born at hospital during Jan 2008 to Dec 2009 were included in the study, critically sick neonates on ventilator were not included in the study, a detailed history of the neonates' age

sex, maturity, birth weight, significant maternal history and mode of delivery was elicited. and a pretested questionnaire was used, data was collected by the house officer department of pediatrics, diagnosis was confirmed by consultant, difficult cases were discussed by the dermatologist and diagnosis confirmed by detail physical systemic examination and skin examination. SPSS 15 was used to determine frequencies and endnote for writing references.

Limitation of study: Sort duration of study two year, small number of cases, relation of skin lesions to preterm, term, post term neonates, and low birth weight / normal weight neonate was not studied.

Results

Total numbers of new born during the year 2008- 2009 were 1660 newborns.

Total numbers of male children were 1078 (65%), female neonates were 582 (35%).

Total numbers of children above 2.5 Kg birth weight were 1360 (81.92%).

Number of low birth weight were 300 (18.08%).

442 mothers were between the ages of 19 years to 30 years. (76.62%) 358 mothers delivered vaginally (62%) 219 mothers had instrumental delivery (38%) 352 mothers were given antibiotics 24 hours prior to delivery due to various reasons (61%).

Total numbers of neonates with skin lesions were 577 (34.75%) (Tabl I).

Numbers of neonates with skin infections were 145 (25.12%). neonates with nappy rash were 90 cases (16.0%). There were 120 cases of Mongolian spots (21%) 90 cases of erythema toxicum neonatrum were present in this study (16%) neonates with nappy rash were 90 (16.0%). Numbers of neonates with milia were 59 (10.22%), numbers of cases with erythema were 27 (4.67%), there were 25 cases of neonatal acne (4.33%) there were 10 cases of haemangioma (1.73%) there were 2 cases of café-eu-lail, seborrheic dermatitis, collodian baby one case of harlequin fetus, Epidermolysis bullosa, Sucking blister Scalded Skin Syndrome, Neonatal pustular melanosis.

Dermatological conditions	No of cases	Percentage
Infections	145	25.12 %
Mongolian spots	120	20.79%
Transient toxic erythemia	90	15.59 %
Nappy rash	90	15.59%
Milia	59	10.22 %
Erythema	27	4.67 %
Neonatal acne	25	4.33%
Hamangioma	10	1.73 %
Café- eu-lail	2	0.34 %
Collodian baby	2	0.34 %
Seborrheic Dermatitis	2	0.34%
Epidermolysis bullosa	1	0.17%
Sucking blister	1	0.17%
Scalded Skin Syndrome	1	0.17%
Neonatal pustular melanosis	1	0.17%
Harlequin fetus	1	0.17%
Total	577	

Table I. General distribution of skin conditions

Discussion

Neonates skin condition deserve special attention in hot humid, subtropical climate of Karachi, there is limited data on neonatal dermatology in Pakistan. Five year study by Maqbool S. Razzak S. [3] and Zahoorullaha [4] on skin disorders in children, there is no case report of neonatal skin lesion. Benton EC [5] has not reported a single case of neonatal dermatitis during 25 years of their study period. Some international studies have mainly focused on benign cutaneous lesions in newborns [6,7].

34.75% neonates had skin manifestations during the study period, reported incidence is 27.6% to 31% [8,9].

Maximum numbers of cases in this study were due to Skin infections (25.12%) this is particularly important because our

neonates are over covered, in hot humid, subtropical climate. Reported incidence is between 5% to 47.15% [10-11].

There were 21% neonates with Mongolian spots, mainly on buttocks in this study; reported incidence is 56% to 98% [13-14].

There were 15.59% with nappy rash in this study; Ferahbas A et al [14] reported incidence of 2% this difference may be due to financial reasons, our mothers do not change nappies as frequently as required leading to prolong stool contact resulting in nappy rash.

Erythema toxicum neonatrum is the most common pustular dermatitis in newborns a benign condition requiring no intervention, presented in 15.50% of neonates in this study, reported incidence is 21-40% [15,16].

There were 10.22% neonates with milia in this study; reported incidence is 40-50% in other studies [17]. There were 4.33% reported incidence is 40% - 50% in other studies [18].

There were 1.73% neonates with Hemangioma in this study, Mishra PC, et al reported similar incidence [19]. 0.34% neonates presented as collodian baby, seborrheic dermatitis, and café – au-lait in this study. There was one case of Harlequin's fetus (0.17%). Sarkar reported an incidence of 0.11% [20] 0.17% neonates in this study had Epidermolysis bullosa, Sucking Blister Scalded Skin Syndrome, and Neonatal pustular melanosis. The pattern of skin infection in neonate is also different then other studies reported in regional and international studies [21-27].

Limitation of study: Sort duration of study two year, small number of cases, relation of skin lesions to preterm, term, post term neonates, and low birth weight / normal weight neonate was not studied.

REFERENCES

1. Wagner IS, Hansen RC: Neonatal skin and skin disorders. In: Pediatric Dermatology, 2nd edn. New York, Churchill Livingstone, 1995; p. 263-346.
2. Javed M, Jairamani C: An audit at Hamdard university Hospital. Pak Derma Journal. 2006. 16 93-96.
3. Maqbool, Razzaq.S: Pediatric outpatient department experience of 5 years. Pak Paed J. 1990; 23: 57-60.
4. Zahoorullaha, Akhtar T. Mumtaz A: Pattern of children disease and their management by consultants in Peshawar. Pak J Pathol. 1998; 9: 131-136.
5. Benton EC, Kerr OA, Fisher A: The changing face of dermatology practice 25 years experience. Br J Dermatol. 2008; 159: 413-418.
6. Barker LP, Gross P, Mc Carthy JT: Erythrodermas of infancy. Arch Dermatol. 1958; 77: 201-209.
7. Jacobs AH, Walter RG: The incidence of birth marks in the neonate. Pediatrics. 1976; 58: 218- 222.
8. Osburn K, Schosser RH, Everett MA: Congenital pigmented and vascular lesions in newborn infants. J Am Acad Dermatol. 1987; 16: 788-792.
9. Yasmeen N, Riaz Khan M: Spectrum of common childhood skin diseases: a single centre experience. J Pak Med Assoc. 2005; 55: 60-63.

10. Gül U, Cakmak SK, Gönül M, Kiliç A, Bilgili S: Pediatric skin disorders encountered in a dermatology outpatient clinic in Turkey. Pediatr Dermatol. 2008; 25: 277-278.
11. Goh CL, Akarapanth R: Epidemiology of skin disease among children in a referral skin clinic in Singapore. Pediatr Dermatol. 1994; 11: 125-128.
12. Sardana K, Mahajan S, Sarkar R, Mendiratta V, Bhushan P, Koranne RV, et al: The spectrum of skin disease among Indian children. Pediatr Dermatol. 2009; 26: 6-13.
13. Dash K, Grover S, Radhakrishnan S, Vani M: Clinico epidemiological study of cutaneous manifestations in the neonate. Indian J Dermatol Venereol Leprol. 2000; 86: 26-28.
14. Ferahbas A., Utas S, Akrakus M: Prevalence of mutinous finding in hospitalized neonatal prospective observation study. Pediatr Dermatol. 2009; 26: 139-142.
15. Kaur S, Nagpa M, Dewan S: Cutaneous lesions in new born Indian J Dermatol Venerol Leprol. 2002; 68: 334-337.
16. Keital HG, Yadav V: Etiology of toxic erythema. Am Dis Child. 1963; 106: 366-367.
17. Kahana M, Feldman M, Abudi Z, Yurman S: The incidence of birthmarks in Israeli neonates. Int J Dermatol. 1995; 34:704-706.
18. Phung TL, Hochman M, Mihm MC: Current knowledge of the pathogenesis of infantile hemangiomas. Arch Facial Plast Surg. 2005; 7: 319-321.
19. Mishra PC, Mathur GP, Mathur S, Singh YD, Sharma D, Gupta AK: Normal anatomic variants in the newborn. Indian Pediatr. 1985; 22: 649-652.
20. Kulkarni ML, Singh R: Normal variants of skin in neonates. Indian J Dermatol Venereol Leprol. 1996; 62: 83-86.
21. Saraeli T, Ken JA Jr, Scoot RB: Common skin disorders in the newborn Negro infant. Observations based on the examination of 1,000 babies. J Pediatr. 1963; 62: 359-362.
22. Jacobs AH, Walton RG: The incidence of birthmarks in the neonate. Pediatrics. 1976; 58: 218-20.
23. Jorgenson RJ, Shapiro SD, Salinas CF, Levin LS: intraoral findings and anomalies in neonates. Pediatrics. 1982; 69: 577-581.
24. Perstein MA: Evaluation of certain preparations for care of the skin of new born infants. Am J Dis Child. 1948; 75: 385-393.
25. Schleicher SM, Scott JM, Lim DO: Congenital nevi. Int Dermatol. 1995; 34: 825-829.
26. Sachdeva M, Kaur S, Nagpal M, Dewan SP: Cutaneous lesions in new born. Indian J Dermatol Venereol Leprol. 2002; 68: 334-337.
27. Hirdano A, Purwako R, Jitsukawa K: Statistical study of skin changes in Japanese neonates. Pediatr Dermatol. 1986; 3: 140-144.