

# Cutaneous manifestations in patients attending the hematology clinic at King Fahd Hospital of the University during a 13 week-period

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## ABSTRACT

**Background:** Cutaneous disorders are common in patients with hematological diseases especially anemia. Dermatologists usually contribute to the management of these patients in parallel with other medical specialties. **Aim:** To report common dermatological problems in patients attending the hematology clinic at a secondary care hospital. **Materials and methods:** The study was conducted at the hematology clinic of King Fahd Hospital of the University during a thirteen week period starting 17<sup>th</sup> of November, 2013 till 31<sup>st</sup> of January, 2014. All patients were fully examined and a consultative opinion was given to the attending hematologist. Data sheet was filled and analyzed by SPSS (Statistical Package for the Social Sciences) software version 17.0. **Results:** 138 patients were seen during the period of 13 weeks. There were 27 males and 111 females. Hemoglobin level was less than 10 gm/dl in 40.6% of patients. The most common reported cutaneous features were diffuse alopecia, hair thinning, pallor, pruritus, fragile skin, easy bruisability, dry mouth and gum bleeding in descending frequency. **Conclusion:** Hematology patients suffered from variable dermatological disorders which suggest the importance of the initial dermatology consultation for those patients as part of their management plan.

**Key words:** Anemia; Alopecia; Dermatitis; Pallor; Pruritus

## INTRODUCTION

Dermatologists play an important role in providing consultative service to other medical specialties. Previous studies have shown that the discipline of Medicine make the most requests for inpatient dermatologic services [1-4]. While most requests for dermatologic consultations are for common skin conditions, challenging scenarios and diagnostic dilemmas are frequently encountered. Skin problems are common in patients with hematological disorders and dermatologist usually add to the management plan of those patients.

## OBJECTIVE

To characterize the profile of dermatological issues frequently encountered in patients attending the hematology outpatient clinic at King Fahd Hospital of the University during three months period.

## MATERIALS AND METHODS

This prospective cross sectional study was conducted at the hematology outpatient clinic of King Fahd of the University Hospital in Alkhobar, Saudi Arabia during a 13-week period starting 17<sup>th</sup> of November, 2013 till

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31<sup>st</sup> of January, 2014. The Hematology Department in this hospital accepts referrals from other departments and outside hospitals in the Eastern Province also. All patients were fully examined by a consultant dermatologist with assisting interns trained by the dermatologist. Data sheet was filled for each patient with documentation of age, gender, associated conditions and all observed cutaneous lesions. Data was entered in the computer and analyzed by SPSS (Statistical Package for the Social Sciences) software Version 17.0.

## RESULTS

A total of 138 patients were examined during the study period. There were more females (n = 111; 80.4%) than males (n = 27; 19.6%) and the mean age was 45 years (range: 13-66 years). Hemoglobin level was less than 10 gm/dl in 40.6% of patients and less than 9 gm/dl in 21.7%. Causes of anemia in a descending frequency included Iron deficiency anemia 73 (53%), sickle cell anemia 37 (26.8%), thalassemia 15 (10.9%) and less than 10 cases with G6PD (Glucose-6-phosphate dehydrogenase), thrombocytopenia, vitamin B12 deficiency and leukemia. A total of 67 dermatologic conditions were diagnosed Table 1. The frequency of these dermatologic conditions in descending pattern included: alopecia 92 (66.7%), pallor 71 (51.4%), thinning of the hair 54 (20.3%), skin dryness 49 (35.5%), pruritis 33 (23.9%), increased skin fragility 28 (20.3%), dry mouth 21 (15.2%), gum bleeding 18 (13%), dermatitis 17 (12.3%), jaundice 17 (12.3%) and fragile ridged nails. Different types of dermatitis were represented, ranging from contact, asteatotic, seborrhoeic and nummular eczema Figure 1.



**Figure 1:** Variable skin, nail and hair changes in our patients. A. Dermatitis and severe dryness. B. Brittle nail with super imposed fungal infection. C. Nail Clubbing. D. Diffuse alopecia

None of the patients had a skin biopsy because a clinical diagnosis was deemed sufficient. There was other associated medical conditions in some patients including hypertension, diabetes mellitus, hepatitis c, liver cirrhosis, gastritis, dyslipidemia, hypothyroidism, congenital adrenal hyperplasia, acne vulgaris, discoid lupus eruthematosus and psoriasis.

## DISCUSSION

Cutaneous problems are common in patients with anemia. Unfortunately no similar study was previously conducted in Saudi Arabia to compare it. However, the study reveals the importance of

**Table 1:** Percentage of some of the reported cutaneous conditions found our patients

Dermatological conditions	Percentage
Dryness	35.5
Pruritis	23.9
Increased skin fragility	20.3
Dry mouth	15.2
Dermatitis	12.3
Gum bleeding	13
Edema	7.4
Psoriasis	4.4
Actinic keratosis	3.7
Gingival hypertrophy	3.7
Angular stomatitis	2.2
Post-transfusion purpura	2.2
Glossitis	1.5
Pityriasis alba	1.5
Varicose vein	1.5
Milia	1.5
Leg ulcer	0.7
Livedo reticularis	0.7
Prurigo nodularis	0.7
Telangiectasia	0.7
Acrocyanosis	0.7
Keratosis pilaris	0.7
Skin discoloration	
Pallor	51.4
Jaundice	12.3
Hyperpigmentation	7.4
Blue sclera	3.7
Hemosiderin deposition	0.7
Hair changes	
Alopecia	66.7
Thin, dry hair	20.3
Dandruff	1.5
Hirsutism	1.5
Nail changes	
Brittle nails	0.7
Leukonychia	3.0
Koilonychia	2.2
Clubbing	1.5
Onycholysis	0.7
Ingrowing nails	0.7
Pitting	0.7

internist, hematologist and dermatologist in the management of patients with anemia. In a random review of patients admitted to a Hematology-Oncology unit, Pearson et al found mucocutaneous disorders in 88% of cases seen. The most common findings in their study were alopecia, mucositis, palm and sole erythema [5]. In another similar study done by Hy Koh in Singapore [6], 692 patients were referred for primary dermatological issues during six months period. This implies that non-dermatologists face difficulties diagnosing common dermatoses [1,4,7-10]. Besides, a dermatologic consultation resulted in changes in diagnosis and management in 60% to 77% of the cases [1,8,10], which highlights the importance of dermatologic education of the consulting physicians regardless of his specialty [11]. Our findings in this study highlights the importance of the involvement of the dermatologist in the management of hematology patients through initial consultation as part of their general management plan.

## CONSENT

The examination of the patient was conducted according to the Declaration of Helsinki principles. Ethical Requirements for Studies Involving live human subjects or animal: accepted by all authors.

Written informed consent was obtained from the patient for publication of this article.

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