

SKIN MORBIDITY PATTERN AMONG PATIENTS SEEN AT A UNIVERSITY PRIMARY CARE CLINIC IN RIYADH, SAUDI ARABIA

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ABSTRACT

Information on the morbidity pattern of patients seen at a primary care clinic is sparse or not readily available for most countries in the Middle East including Saudi Arabia. A prospective study of all new patients presenting with skin disorders at the Primary Care Clinic of King Khalid University Hospital, Riyadh, Saudi Arabia was, therefore, carried out over a period of one year (1993-94). An analysis of the skin morbidities of 1183 new patients seen over this period is reported here. There is a male preponderance overall and more than 87% of the patients were below 40 years of age. Out of all patients with diseases of the skin, 77.5% were referred for specialist care. It is conceivable that the commonly observed pattern of dermatological diseases in this study may change over a period of time due to the interventions adopted by the primary care clinics, as part of social development, or as a cumulative effect of both. The primary care physician has to be aware of such changes by periodically analyzing the available morbidity pattern.

INTRODUCTION

Primary care has expanded dramatically in the Kingdom of Saudi Arabia during the past two decades¹ due to the rapid socio-economic development of the country. However, considerable gaps still exist

in the knowledge of the morbidity pattern of the patients at the Primary Care Clinics (PCC), including skin diseases. Yet such knowledge remains one of the ways of ascertaining the true status and significance of skin diseases in the health profile of the community. It is with this objective that the prospective study was undertaken.

PATIENTS AND METHODS

The study was conducted at the Primary Care Clinics (PCC) of King Khalid University Hospital, Riyadh, Saudi Arabia between May 1993 and April 1994 inclusive. The hospital serves Saudi citizens from all over the Kingdom and also provides care to expatriates. The PCC is designed for patients 12 years of age and older, and a similar clinic for children under 12 years is also in operation in the hospital. There was an accurate census of the total number of patients attending the PCC during the period of the study and all the new skin patients were studied. They were subjected to a detailed medical history and clinical examination and were investigated appropriately. The age, sex and nationality of each patient were recorded and the principal diagnosis was coded in accordance with the Ninth Edition of the International Classification of Diseases (ICD-9)¹. Where a diagnosis could not be made, the most important clinical feature was recorded.

RESULTS

Of 10285 new patients at primary care clinics (PCC) within the one year period of this study, 1183 patients were seen with skin disorders. The represented 11.5% of all new patients seen during the study period. The age, sex and nationality distributions of the patients are presented in Table 1. Saudis comprised 1127 (95.3%) of the patients. There was a male preponderance (2:1) overall and 87.7% of the patients were less than 40 years of age. Females and non-Saudis were younger than males and Saudi group.

Table 2 shows mean SD of male and female patients. Generally female patients were younger than males.

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Table 1: Patient Age by Sex and Nationality (N= 1183)

Age	(A) Sex		Total 1183 (100%)
	Male 788 (100%)	Female 395 (100%)	
12 - 19	216 (27.4)	145 (36.7)	361 (30.5)
20 - 29	324 (41.1)	142 (35.9)	466 (39.4)
30 - 39	143 (18.1)	68 (17.2)	211 (17.8)
40 - 49	53 (6.7)	15 (3.8)	68 (5.7)
50 - 59	34 (4.3)	14 (3.5)	48 (4.1)
60 - 93	18 (2.3)	11 (2.9)	29 (2.5)

Age	(B) Sex		Total 1183 (100%)
	Saudi 1127 (100%)	Non-Saudi 56 (100%)	
12 - 19	356 (31.6)	5 (8.9)	361 (30.5)
20 - 29	440 (39.0)	26 (26.4)	466 (39.4)
30 - 39	192 (17.0)	19 (33.9)	211 (17.8)
40 - 49	64 (5.7)	4 (7.1)	68 (5.7)
50 - 59	46 (4.1)	2 (3.6)	48 (4.1)
60 - 93	29 (2.6)	0 (0.0)	29 (2.5)

Table 2: Mean age distribution by gender by various diseases (N= 1183)

Diseases	ICD	Mean age ±SD		Total 1183
		Male 788	Female 395	
Carbuncle and Furuncle	680	7(31.7±12.6)	3(38.3±20.2)	10
Cellulitis and abscess	682	8(45.9±33.8)	3(43.0±22.3)	11
Acute lymphadenitis	683	4(32.0±13.1)	6(22.0± 6.5)	10
Pilonidal cyst	685	41(32.0± 9.4)	0(0.0)	41
Atopic dermatitis	691	45(25.4±16.1)	18(28.7±24.5)	63
Contact dermatitis	692	140(32.1±17.8)	84(30.1±19.9)	224
Psoriasis	696	36(34.4±25.5)	2(62.5±51.6)	38
Pruritus	698	35(36.4±21.3)	21(36.0±18.3)	56
Corn and callosities	700	16(25.2± 6.3)	0(0.0)	16
Atrophic & hypertrophic conditions of the skin	701	75(29.4±17.4)	22(32.9±25.1)	97
Diseases of the nail	703	7(25.9± 9.9)	3(22.7± 4.7)	10
Diseases of hair and hair follicles	704	72(32.0±18.9)	55(28.5±19.4)	127
Diseases of sebaceous	706	115(29.4±22.3)	76(26.5±18.8)	191
Urticaria	708	28(29.7±12.1)	13(22.2± 8.9)	41
Other disorders of skin and subcutaneous tissue		159(27.8±19.1)	89(27.3±20.9)	248

Table 3 shows frequency of skin diseases and their referral rate. The highest frequency was seen in cases of eczema followed by diseases of sebaceous glands and diseases of hair and hair follicles. The referral rate of these problems was also the highest.

Table 4 shows the outcome of the management of the patients. Only 22.5% of the patients were treated at the PCC and the majority (77.5%) were referred to specialist clinics.

The frequency of presentation of the patients to the clinics showed seasonal variations during the study period (Fig. 1).

Table 3: Frequency of Skin Diseases and their referral rate to Dermatologists

Diseases	ICD	Frequency and (%) of all cases	(%)Cases referred to specialist out of all
Carbuncle and Furuncle	680	10 (0.8)	3 (30.0)
Cellulitis and abscess	682	11 (0.1)	5 (45.5)
Acute lymphadenitis	683	10 (0.8)	1 (10.0)
Pilonidal cyst	685	41 (3.5)	31 (75.6)
Atopic dermatitis	691	63 (5.3)	40 (63.5)
Contact dermatitis	692	224 (18.0)	161 (71.8)
Psoriasis	696	38 (3.2)	30 (78.9)
Pruritus	698	56 (1.4)	37 (66.0)
Corn and callosities	700	16 (1.4)	14 (87.5)
Atrophic & hypertrophic conditions of the skin	701	97 (8.2)	85 (87.5)
Diseases of the nail	703	10 (0.8)	8 (80.0)
Diseases of hair and hair	704	127 (10.7)	109 (85.8)
Diseases of sebaceous	706	191 (16.1)	131 (68.5)
Urticaria	708	10 (0.8)	32 (78.0)
Other disorders of skin and subcutaneous tissue		248 (20.9)	218 (87.9)
TOTAL		1183	917 (77.5)

DISCUSSION

Taking into consideration the well-recognized limitations and incompleteness of hospital based data, this analysis of the morbidity pattern of patients at the primary care clinics (PCC) of our hos-

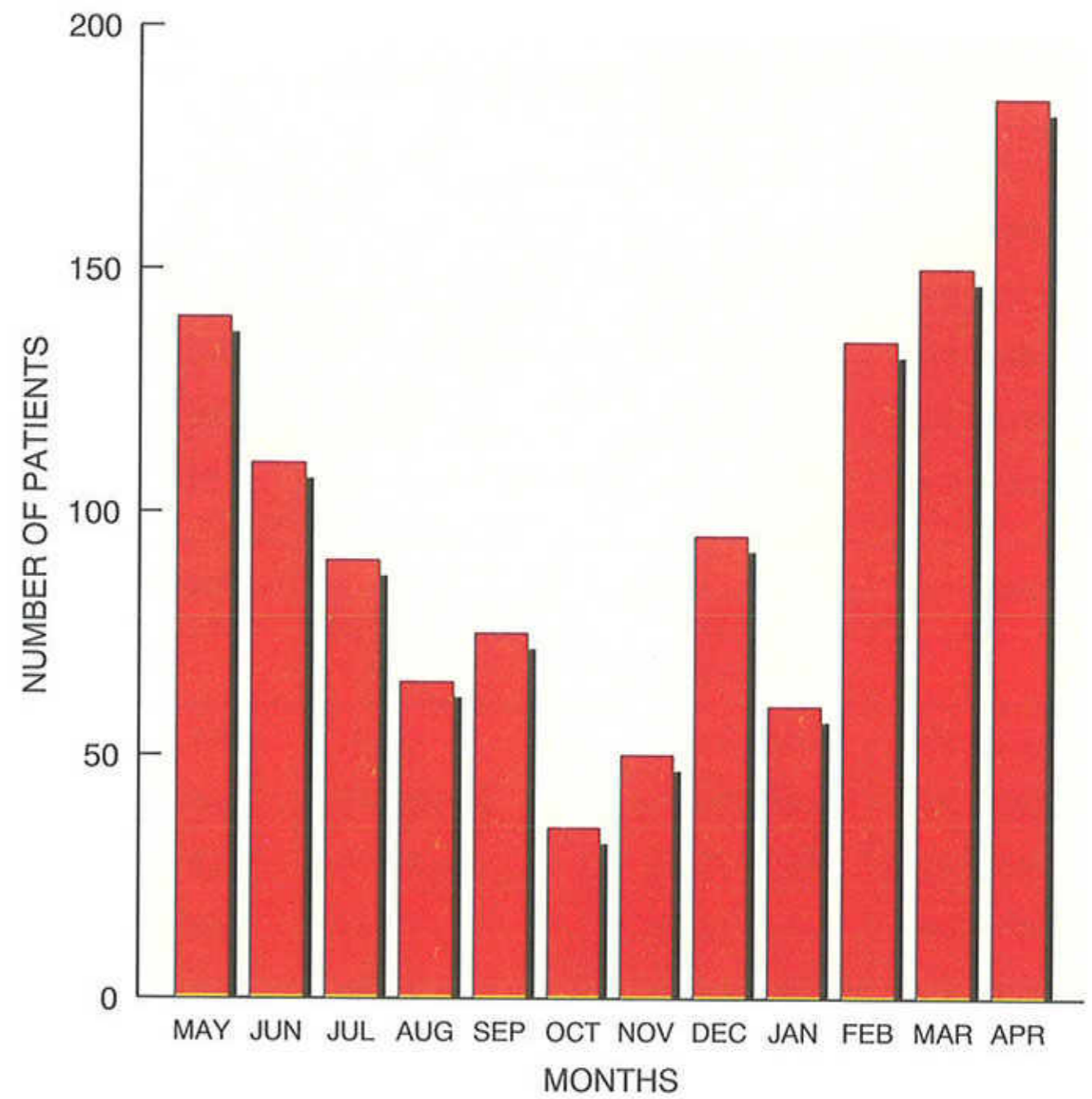
Table 4: Patients' Characteristics by referral (N= 1183)

Characteristics	Referral to Dermatologist		
	Total	Yes (%)	No (%)
Age	1183	917 (77.5%)	226 (21.5%)
12 - 19	361	285 (78.9)	76 (21.1)
20 - 29	466	358 (76.8)	108 (23.2)
30 - 39	211	54 (79.4)	48 (22.7)
40 - 49	68	54 (79.4)	14 (20.6)
50 - 59	48	36 (75.0)	12 (25.0)
60 - 93	29	21 (72.4)	8 (27.6)
Sex			
Males	788	589 (74.7)	199 (25.3)
Females	395	328 (83.0)	67 (16.9)
Nationality			
Saudi	1127	886 (78.6)	241 (21.4)
Non-Saudi	56	31 (55.4)	25 (44.6)

pital may be considered to represent a broad outline of the current pattern of skin diseases in a primary care setting in Saudi Arabia. This type of morbidity pattern is seen in almost all primary health care facilities in neighbouring and developing countries, such as Sudan⁽³⁾ and Pakistan⁽⁴⁾. The fact that males are preponderant overall corroborates our previous observation from the analysis of adult admissions in this hospital⁽⁵⁾ and cannot be easily explained. This may be because males have much greater freedom of movement in Saudi society and can, therefore, attend clinics more frequently than the females. Similarly, that the majority of patients were below 40 years of age, (the economically productive segment of the society) is an indication of the demographic picture of Saudi Arabia as a young population.

Dermatological diseases constitute 11.5% of all diseases and are less than the corresponding value in western countries^(6,7). Eczema was the most common and was found in 24.2% of all the skin diseases, which is similar to a finding reported from the south of Saudi Arabia⁽⁸⁾. Basically there are two types of contact dermatitis; allergic and irritant.

Fig. 1: Seasonal Variations of Skin Diseases



Atopic dermatitis is part of atopy, with polygenic inheritance and can be aggravated by climatic changes in Saudi Arabia, (ie severe cold and dry weather). Also psychological and emotional stress can promote the development of some skin diseases which include atopic dermatitis and psoriasis. Besides atopic and contact eczema, acne vulgaris was one of the most common dermatoses found in 16.1% of patients. This is higher than the incidence in Orientals⁽⁹⁾.

Leishmaniasis is geographically spread within Saudi Arabia and the Middle East in general, though the relative incidence is low in our clinic⁽¹⁰⁾. Morbidity studies are useful in planning curricula for undergraduate and postgraduate trainees. They are also helpful for continuing medical education programs. High referral rates reflect inadequate management at the primary care (PC) level. This may be due to inefficient dermatological training of PC physicians, easy access to specialists and public demand for specialist services, particularly in dermatology.

Seasonal variations may be expected as the fre-

quency of cases reach its lowest level during summer months and increases during winter months. This may be related to the pre-enrollment check-up

of the university students and these students are required to have dermatological examination before swimming pool enrollment.

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