

# A SPECTRUM OF SKIN DISEASES IN DAMMAM CENTRAL HOSPITAL (DCH) EASTERN PROVINCE (EP) KINGDOM OF SAUDI ARABIA (K.S.A.) Part One

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## Abstract

In a prospective study to find out the incidence of various dermatoses in Dammam Central Hospital, Eastern Province, Kingdom of Saudi Arabia a total of 4223 new patients were seen in the years 1992 and 1993 and the commonest diseases found were acne 9%, warts 8.21%, scabies 7.2%, atopic dermatitis 6.8%, urticaria 5%, pityriasis versicolor 4.5%, contact dermatitis 4.3%, pyodermas 3.9%, psoriasis 3.91%, chronic eczema 3.9%, seborrhoeic dermatitis 3.5%, vitiligo 2.3%

## INTRODUCTION

Dammam is a rapidly developing city in the Eastern Province (EP)

of the Kingdom of Saudi Arabia (KSA). Dammam Central Hospital (DCH) is the main referral health center. The information about the incidence of various skin diseases in this hospital is lacking.

The pattern of incidence of diseases in this area is expected to be affected by many changes that are occurring such as urbanization, industrialization, culture and horticulture, influx of emigrants from KSA and international communities, changes in social, educational, economic status and the presence of efficient facilities for a comprehensive health care that is well accepted by all inhabitants.

In order to find out the incidence of different groups of skin diseases seen in the outpatient department a prospective study was carried out in the years 1992 and 1993.

## MATERIAL AND METHODS :

Only new patients attending the dermatology clinic in DCH in the years 1992 and 1993 were included in this prospective study. The diagnosis was made on the clinical finding and confirmed by laboratory tests when necessary.

The informations about every patient were coded and recorded on a special sheet. The information included patient serial number, date, age, sex, nationality, occupation, province in KSA, social status, duration of disease, family history of skin disease, associated systemic disorders, past illness and the diagnosis of the present condition.

A computer program was developed in order to process the data, store them and get the information about epidemiology and incidence of skin diseases in DCH. The diseases were grouped under thirteen main groups which were further subdivided into specific diseases and the results tabulated.

## RESULTS :

The total number of patients attending DCH in the years 1990-1992 is shown in Tables one and two (T-1 & T-2). The number of dermatology patients averaged 10.9% of the total attendees in DCH. The present survey covered 4223 new patients, males were 55.8% and females 44.2% (T-3). The Saudis represented 67.5% (males 38.4% and females 29.1%), other Arabs were 22.9% (males 11.8% and females 11.1%), Non Arabs were 9.6% (males 5.7% and females 3.9%) (T-3). The major groups of skin diseases seen and their percentages to the grand total are shown in (T-4).

The group of specific infections had the highest incidence (34.9%) and included viral, fungal, parasitic, bacterial and sexually transmitted diseases in a descending order of frequency. In this group the Saudis were 62.1%, other Arabs 29.2% and non-arabs 8.7% (T-5). The eczema dermatitis group of diseases were found in 20.3% (T-6). 17.2% of the patients seen had diseases of hairs and pilosebaceous follicles (T-7). 6.6% suffered from papulosquamous

**Table 1**

Total Hospital Outpatient Attending Dammam Central Hospital

YEAR	MALES	FEMALES	CHILDREN	TOTAL
1990	95441	64811	17990	178242
1991	94757	70765	22175	187697
1992	94963	72786	24308	192057
TOTAL	285161	208362	64473	557996

Total Patients who attended DHC in the years 1990 - 1992.

**Table 2**

Number of Dermatology Patients attending DCH skin outpatient ( 1990 - 1992 )

Year	Male	Female	Children	Total	Percentage to Total Hospital Out- Patient
1990	7705	7319	2942	17966	10.1%
1991	9156	8507	3533	21196	11.3%
1992	8971	9068	4056	22095	11.5%
Total	25832	24894	10531	61252	10.9%

**Table - 3**

Total number of patients according to Sex and Nationality  
Non-Arabs = 9.6%

Sex	SA	OA	I	S	P	B	PH	O	Total
No.	16204	98	158	6	29	11	31	5	2358
Male %	38.4	11.8	3.70	10	0.7	0.3	0.7	0.1	55.8
No. Female	1230	468	1.1	20	25	1	50	24	1865
%	29.1	11.1	47	0.5	0.6	0.02	1.2	0.6	44.2
No. Total	2850	966	205	26	54	12	81	29	4223
%	67.5	22.9	4.8	0.6	1.3	0.3	1.9	0.7	100

NB : SA : Saudies  
 OA : Other Arabs  
 I : Indian  
 S : Sri Lankan  
 P : Pakistani  
 B : Bangladeshi  
 PH : Philippines  
 O : Others

eruptions (T-8). 5% had urticarias which included acute, chronic, cholinergic, papular, insect bites, dermographism, angio-oedema, urticaria pigmentosa and cold urticaria. Skin tumours were seen only in 0.7% of these patients (T-9) and 5.3% were tabulated under miscellaneous group which included 40 skin diseases (T-10).

**DISCUSSION :**

There are probably 2000 skin diseases<sup>(1)</sup> seen in neonates, infants, children, adolescents and adults.

It has been estimated that 16.6 - 25% of patients seen by general practitioners are likely to suffer from a skin disease<sup>(2)</sup>. This percentage was 10-12% in

**Table - 4**

Major groups of skin diseases and their percentages to the Grand Total

Sr. No.	Disease Group	Total Number	Percentage
1	Infections	1473	34.9
2	Eczema dermatitis	858	20.3
3	Hairs and pilosebaceous follicle	727	17.2
4	Populosquamous	277	6.6
5	Urticarias	211	5.0
6	Pigmentary disorders	164	3.9
7	Skin hypertrophies	89	2.1
8	Erythemas and drug eruptions	56	1.3
9	Genodermatoses	48	1.1
10	Nevi	42	1.0
11	Skin Tumors	31	0.7
12	Autoimmune diseases	20	0.5
13	Miscellaneous	227	5.3
Total		4223	99.9

**Table - 6**  
Eczema Dermatitis Group

Disease	Number	% to grand total
Atopic dermatitis	258	6.8
Contact dermatitis	182	4.3
Chronic eczema	165	3.9
Seborrhoeic dermatitis	148	3.5
Napkin dermatitis	32	0.8
Intertrigo	32	0.8
Photodermatitis	11	0.2
Total	858	20.3

**Table - 5**

Infections = 1473 = 34.9% of Grand total

Disease	Saudies	Other Arabs	Non-Arabs	Total	Percentage to Grand total
Viral Infections	314	96	37	447	10.6
Superficial mycosis	286	108	44	438	10.4
Parasitic Diseases	166	181	32	379	8.9
Bacterial Infections	127	44	14	185	4.4
Sexually transmitted Diseases	21	2	1	24	0.6
Total	914	431	128	1473	34.9
Percentage to Total Group	62.1%	29.2%	8.7%	100%	

Table - 7

Disease of Hairs and Pilosebaceous Follicles

Disease	Number	Percentage of grand total
Acne vulgares	382	9.00
Diffuse hair loss	152	3.6
Alopecia areata	83	1.96
Pityriasis capitis	47	1.11
Pseudosycosis	16	0.4
Hirsutism	15	0.36
Androgenic alopecia	11	0.26
Trichotillomania	10	0.24
Infundibulo-folliculitis	5	0.12
Toxic alopecia	4	0.1
Cicatricial alopecia	2	0.05
Total	727	17.20

Table - 9

Skin tumors = 31 = 0.7%

Disease	Saudies	Other Arabs	Non-Arabs	Total	Percentage to grand total
Basal cell carcinoma	2	-	-	2	
Skin tags	10	-	-	10	
Syringoma	3	2	-	5	
Sebaceous cyst	5	1	-	6	
Epidermoid cyst	2	1	-	3	
Dermatofibroma	1	-	1	2	
Lipoma	1	-	-	1	
Dermoid cyst	1	-	-	1	
Mycosis fungoides	1	-	-	1	
Total	26	4	1	31	0.7

Table - 8

The Papulosquamous eruptions 277 (6.6%)

Disease	Saudies	Other Arabs	Non-Arabs	Total	Percentage to grand total
Psoriasis	115	40	10	165	3.91
Parapsoriasis	1	-	1	2	0.04
Pityriasis rosea	38	15	5	58	1.4
Lichen planus	38	6	4	48	1.14
Actinic lichen	-	-	1	1	0.02
Lichen striatus	1	-	-	1	0.02
Lichen sclerosus et atrophicus	1	1	-	2	0.04
Total	194	62	21	277	6.57

Psoriasis among Saudi Patients = 4.1%

Table - 10

**Miscellaneous (5.3%)**

Disease	No	Disease	No	Disease	No
Pemphigus	3	Striae distensae	3	Gianotti crosti	4
Behcet	8	Localized pruritus	4	Graft versus host	1
Aphthous ulcers	3	Generalized pruritus	35	Hyperhidrosis	6
Diabetic Dermopathy	10	Dry skin	57	Prickly heat	8
Diabetic Scleredema	5	Blepharitis	1	Chromidrosis	1
Granuloma annular	6	Onychodystrophy	1	Dermatitis herpetiformis	1
Xanthlasma	4	Onycholysis	1		
Leg ulcers	5	Onychophagia	3		
Nodular Vasculitis	4	Ingrowing toe nail	3		
Chill blains	4	Pyogenic granuloma	3		
Livedoreliculares	2	Keratolysis exfoliativa	8		
Lichen spinulosus	2	Cherry angioma	2		
Purpura	9	Darier's	1		
Prurigo	4	Schamberg	2		
Pregnancy Prurigo	4	Telangiectasia	2		
Pregnancy Pemphigoid	1	Localized amyloidosis	1	Total	227
Burn	4	Jessner lymphocytic infiltration	1	Percentage to Grand Total	5.3

Table -11

Top 14 diseases seen in the present study as compared with three other Gulf States

Diseases	Dammam Saudi Arabia	Qatar	Kuwait	Abu-Dhabi (U.A.E.)
Acne Vulgaris	9.00	8.3	7.75	9.07
Warts	8.21	9.9	7.39	5.47
Scabies	7.2	2.9	1.1	-
Atopic dermatitis	6.8	6.9	3.9	-
Urticarias	5.00	4.1	4.41	-
Pityriasis versicolor	4.5	6.8	4.7	3.7
Contact dermatitis	4.3	7	1.6	-
Pyodermas	3.9	2.6	10.75	2.55
Psoriasis	3.91	2.4	3.05	4.49
Chronic eczema	3.9	2.9	8.7	-
Seborrhoeic dermatitis	3.5	4.7	1.8	-
Vitiligo	2.3	1.9	3.17	3.18
Alopecia areata	2.0	3.2	3.21	-
Telogen effluveum	3.6	4.4	5.6	-

other publication<sup>(3)</sup>. In the present prospective study the dermatology patients averaged 10.9% of the total outpatients seen in DCH-EP-KSA. In a recent retrospective study done in Qatar<sup>(4)</sup> the dermatology patients represented 10.5% of the total number of outpatients seen in the various medical and surgical disciplines at Hamad Medical Corporation. It has been estimated that dermatologists care for one third of all visits for skin complaints while primary care health centres care for 40%<sup>(5)</sup>.

In a survey in USA one third of 20 thousand Americans aged 1-74 years were found to have one or two skin diseases<sup>(5)</sup>. 97% of the skin problem are seen as outpatients with 83.4% suffering from one problem and 15.7% from more than one problem, 0.6% coming as emergency, and 2.2% of cases seen by dermatologists are non dermatologic problems<sup>(6)</sup>. The most common diseases found in USA were acne, dermatophytosis, benign and malignant skin tumours, seborrhoeic dermatitis, atopic dermatitis, eczema and ichthyosis. In the present study the most commonly seen diseases were acne (9%), warts (8.21%), scabies (7.2%), atopic dermatitis (6.8%), urticarias (5%), pityriasis versicolor (4.5%), contact dermatitis (4.3%), pyodermas (3.9%), psoriasis (3.91%), chronic eczema (3.9%), seborrhoeic dermatitis (3.5%), vitiligo (2.3%), alopecia areata (1.96%) and telogen effluveum (3.6%). These top diseases are compared with those published from Qatar<sup>(4)</sup>, Kuwait<sup>(7)</sup>, and Abu-Dhabi<sup>(8)</sup>. As shown in (T-11) most of the common fourteen skin diseases reported from these four Gulf States have similar frequency with minor differences. Few diseases show some variation in incidence as scabies, atopic dermatitis, contact dermatitis, pyodermas and chronic eczemas. The percentage of scabies patients in Kuwait series was 1.1% in 1973 while it was in Qatar 2.9% and in Dammam Hospital (KSA) the

TABLE 12 COMPARISON

-Reference No.	-Present Work	11	7	8	1	9	10	11	12	13	14	15	16	17	18	19
Percentage of Disease and Disease Group	Dammam	Qatar	Kuwait	UAE	U.K.	West Scotland	Northern Ireland	Singapore	Calcutta, India	Uganda	Nigeria	Pretoria, Transvaal Bantu	Transvaal White Population	Rural Jamaica	Jamaica	Peru
Eczema dermatitis	20.3	24.64	26.25	20.98	17	22.6	11.44	38.8	0.5-1.5	25.0	17.3	24.8	28.8	7.1	34.6	27.3
Acne	9.0	8.3	7.75	9.07	5.2	6.6	4.42	10.9	3.5	1.0	-	6.0	10	1.3	4.3	20.7
Superficial Mycosis	10.4	11.4	10.66	8.5	2.4	4	3.79	5.4	20-15	5.7	13.7	5.1	4.2	11.8	14.6	4.2
Viral Infection	10.6	13.3	8.94	7.39	17.4	24.3	8.9	9.4	2	2.47	-	4.4	4.7	2.3	2.35	11.4
Pigmentary disorder	3.9	5.8	4.56	5.41	-	-	-	1.9	-	0.76	-	0.5	0.8	-	1.6	14.5
Psoriasis	3.91	2.4	3.05	4.49	5.6	408	5.53	3.3	0.5-1.5	1.9	-	0.7	4	0.35	1.3	0.8
Lichen Planus	1.16	0.5	0.84	0.95	0.9	-	0.58	-	0.5-1.5	2.1	-	0.7	0.7	-	1.5	-
Pityriasis Rosea	1.4	1.3	0.94	0.75	-	1.8	0.99	-	-	2.9	-	2	1	0.25	2.7	-
Alopecia Areata	1.96	3.2	3.21	2.26	1.5	-	2.16	2.4	-	0.28	-	0.3	1.0	-	1.5	-
Pyodermas and Bacterial Infections	4.4	2.6	10.75	2.55	1.1	0.12	4.14	2.9	35	18.85	11.9	0.5	2.7	10.7	4	2.1
Sexually Transmitted Disease	0.6	0.37	-	2.86	-	-	-	-	-	-	-	-	-	-	-	-
Popular Urticaria and Insect Bites	2.1	4.1	1.91	-	2.3	-	-	7	-	2.1	-	3	0.8	0.35	0.9	-
Scabies	7.2	2.9	1.1	-	0.9	1.52	-	0.1	20	6.6	-	11.0	1	30.5	1.4	1.9
Malignant Tumors	0.1	0.1	-	4.5	4.2	-	-	-	-	-	-	-	-	-	-	-
Malignant Melanmo	Nil	Nil	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-

incidence of scabies was 7.2% in 1992-93. This difference may reflect the effect of conditions created by wars that occurred in the regions and may also reflect missed diagnosis thus precipitating spread of scabies. Skin diseases may cause mental and physical pain and are very common. It has been estimated that each year in USA one in every three persons has a skin disorder and a survey in UK showed that every fifth patient consults general practitioner (G.P.) because of skin diseases<sup>(5)</sup> and this shows the necessity for adequate training of GP in dermatology.

Since the incidence of various dermatologic problems vary from one locality to the other as shown from the comparison table number 12 the training should concentrate on the commonest problems that may be revealed by epidemiologic studies. From the present study one can recommend that primary care doctors may have the chance of being trained in diagnosing and managing the most common dermatoses that have relatively high incidence in The Gulf States (T-11) particularly acne, viral warts, atopic dermatitis, pityriasis versicolor, parasitic infestations, pyodermas and alopecia areata.

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