

Pattern of skin diseases in Farwaniya Region in Kuwait

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Abstract

Background: - Although skin diseases are common problem, little is known about the dermatologic needs of the population.¹ Only a very few prospective studies concerning the incidence of skin diseases among limited population are available in the literature.² This study was done to describe the pattern of skin diseases among all the new patients attending dermatology out-patient clinic at Farwaniya hospital, Kuwait. And also to compare the incidence of various common dermatoses amongst the Kuwaiti and non-Kuwaiti patients.

Method :- The relative frequency of dermatological diseases was calculated as the percentage of cutaneous diagnosis of all new patients seen by dermatologists from 1 / 1 / 2003 to 31 / 12 / 2003 at Dermatology Out-patient clinics, Farwaniya Hospital, Kuwait. The data was recorded and it was then compared with that of some nearby and other developing countries.

Results: - Out of the total of 37246 new patients seen, 76.8 % were adults and the rest 23.2 % were children up to age of 12 years. In adults male to female ratio was 1.33:1. Fifty six percent of the total patients were Kuwaiti's and the rest were constituted by the immigrant population mainly from India, Bangladesh, Egypt and Pakistan. Patients with non-infective disorders constituted 74.25% while patients with infectious disorders (viral, bacterial and superficial fungal infections and parasitic infestations) constituted 25.75%. Sexually transmitted diseases constituted 2.78%. The most common diseases seen were atopic dermatitis (11.07%), acne

vulgaris (9.41%) and contact dermatitis (8.57%). Other common skin diseases included viral warts (7.59%), psoriasis (5.61%), alopecia areata (4.37%), dermatophytosis (3.29%), lichen planus (2.91%), pityriasis versicolor (2.34%) and folliculitis (1.99%). On comparing the incidence of various dermatoses amongst the Kuwaiti's and non Kuwaiti's it was found that vitiligo, warts, furunculosis, candidal intertrigo and atopic dermatitis were much more common among Kuwaiti's, whereas other superficial fungal infections, parasitic infections, sexually transmitted diseases were seen mainly in non Kuwaiti population

Conclusion :- Our results showed that the pattern of skin diseases among the population in Farwaniya area, Kuwait was affected by many factors including improved economic status, better health education and hygiene and ready availability of dermatology services. This fact was highlighted by the differences observed on comparing Kuwaiti with non Kuwaiti patients.

Introduction

Skin diseases form an important group of disorders in any big hospital.³ They represent one of the most frequent causes of morbidity in developing countries.^{4,5} The incidence of various skin diseases differs widely in various geographical locations.⁶ It depends upon various factors like; the genetic and racial constitution, religious factors, socioeconomic and hygienic standards, customs and occupations, the nutritional status and age structure of the community, the climatic factors, state of industrialization ...etc.^{6,7,8}

The knowledge about the prevalence of different skin diseases within a population can be used as a basis for research as well as planning for the delivery of health services.^{9,10}

There are only a few published reports on the pattern of skin diseases in general and on specific disease.^{2,6}

In this report an attempt was made to describe the pattern of dermatological disorders amongst the local inhabitants of Farwaniya area in Kuwait.

Subjects and Methods

All the new patients attending the Dermatology Out-patient Clinics of Farwaniya Hospital, during a 12-month period from 1 January 2003 to 31 December 2003 were included in this study. Demographic details of each of the patient along with the diagnosis made were recorded. The diagnosis was based on the clinical features and the necessary laboratory investigations, wherever indicated. A total of 37246 new patients were enrolled in the study.

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The following parameters were studied: age and sex distribution, distribution of dermatoses according to their percentage of frequency, and pattern of skin diseases in different age groups, distribution of the dermatoses according to the sex of the patients, and categorization of the dermatoses under specific groups in accordance with international classification of diseases (ICD-9, 1975).⁶ The results were compared with that of some nearby and other developing countries. The comparison was also done among the Kuwaiti and non Kuwaiti patients.

Results

A total of 37246 new patients were examined in the Dermatology Out-patient clinics, of AL-Farwaniya Hospital during 12 months from 1 / 1 / 2003 to 31 / 12 / 2003 and their diagnosis were recorded.

Thirty seven thousand eight hundred and ninety eight diagnosis were made for the dermatological problems seen in the enrolled patients. The dermatological diagnosis made were categorized into 12 major categories and arranged in decreasing order of their frequencies (table 1). The skin diseases were classified according to a general format and the disorders not coming under the format like bullous disorders, Drug reactions, Collagen disorders, nevi and cutaneous malignancies were classified as "others".

On detailed analysis of the common dermatoses groups (table 2), we found that out of 28657 patients there were 20322 adults and 8335 children below 12 years of age. In adults; male: female ratio was 1.33:1. Results showed that eczema group upper handed the list (23.41%), followed by viral infections (12.44%), papulo-squamous disorders (10.35%), acne group (9.62%), superficial fungus infections (7.53%), alopecia and related disorders (6.57%), bacterial infections (4.71%), urticaria (4.32%), STD's (2.78%), pigmentary disorders (2.71%) and parasitic diseases (1.07%). Non-infective dermatoses accounted for 74.25% of all dermatoses, while dermatoses due to infective etiology accounted for 25.75% of all dermatoses.

In eczema group, atopic dermatitis was the most common disorder which constituted 47.32% of the group and 11.07% of all skin diseases. Children accounted for almost two third (73.8%) of the cases. Of the 3048 children presenting with atopic dermatitis, 2431 (79.75%) were Kuwaitis (table 3). More than ninety percent (90.28%) of cases of contact dermatitis were adults, and males were affected more frequently (61.34%), when compared to females (38.66%). Of the total adult pa-

tients with contact dermatitis, 1836 (63.70%) were Non-Kuwaitis (table 4).

Among the infections groups, viral infections (12.44%) were the most common, while pyogenic infections (4.71%) were the least common. Verrucae were the most common of all the viral infections (61.02%). Of the total 2827 patients of warts, there were 1866 (66%) Kuwaitis. More than sixty percent of the viral warts were seen in adults and males were more commonly affected than females (1.89:1). Molluscum contagiosum and chicken pox were seen mostly in children, whereas herpes zoster and herpes simplex was seen mostly in adults (94.84%). Orf was recorded in two non Kuwaiti male patients working in slaughter-house.

In bacterial infections group, primary bacterial infections were the most common; it constituted 94.4% of the group. Folliculitis constituted 42.34% of the group, followed by furunculosis (28.13%). Both folliculitis and furunculosis were more common in Kuwaiti adults (61.14% & 59.32% respectively), and many of these patients were diabetic. About 92% of cases of impetigo were children, of which almost two third (72.72%) were non Kuwaitis. Leprosy was confined to Non-Kuwait population and was more common in males (84.61%). All the patients of leprosy were adults.

Dermatophytosis was the main cause of superficial fungal infections, comprising 43.75% of cases in that group. Out of the total 1227 patients, 828 (67.48%) were adults, with male to female ratio of 3.7:1. Candidiasis was seen more commonly in Kuwaiti adults (70.55% of the total cases). Whereas pityriasis versicolor was more common in Non-Kuwaiti adults (76.14% of total cases). Only 24.60% of the total patients of superficial mycosis, were children (<12 years of age). Tinea capitis and candidial intertrigo were the most common superficial mycosis seen in children.

Among papulosquamous disorders, psoriasis was the most common dermatosis recorded, accounting for 54.24% in that group and 5.61% of all skin diseases. Of the total 3855 patients with papulosquamous diseases, 3202 (83.06%) were adults. Only 8 (0.007%) cases of lichen planus were seen in the children, out of total 1086 cases. 30.67% of Pityriasis rosea cases were children. All the diseases of papulosquamous group were seen slightly more commonly (54.94%) in Kuwaiti population.

In acne group acne vulgaris comprised 97.88% of the cases in that group, and females were affected more than males (1.6:1). Out of total 3407 patients of acne vulgaris 2152 (63.16%) were Kuwaitis.

Among the pigmentary disorders, vitiligo accounted for 60.55% of the cases in that group. There were 369(60.29%)Kuwaitis, out of total 612 patients with vitiligo. Vitiligo was more common in males (57.51%), while melasma was more common in females (86.23% of the cases).

Alopecia areata accounted for 70.98% of cases of all group of alopecia and related disorders. Alopecia areata was more common in males than in females (1.92: 1) while diffuse hair fall (28.16% of cases in that group) was more common in females than in males (22.7:1). Kuwaitis constituted most(83.79%) of the patients of telogen effluvium.

Discussion

All dermatological cases referred by general practitioners from clinics belonging to catchments area had been seen in the outpatient clinics by dermatologists of Farwaniya Hospital.

The results of the present study was compared with the results of studies done in four countries including Al-Jouf, Saudi Arabia⁶ ; Abu Dhabi, UAE¹¹ ; Trivandrum, India¹² and Kenya¹³ (table 5).

Eczemas group still represents the most common cause of skin diseases in other reports specially in Al Jouf, Saudi Arabia (34.14%) and Abu Dhabi, UAE (20.98%) like our recorded results (23.41%).

Acne made up 9.62% in our study as was found in Al Jouf, Saudi Arabia (9.57%) and Abu Dhabi, UAE (9.07%). These results were higher than that recorded in India (2.0%) and Kenya (3.9%). This high incidence could be due to a higher beauty consciousness among youth in these countries where even the mild cases of acne seek specialists opinion. Better health education and the ready availability of free medical services could be the other minor factors responsible for high incidence of reporting of minor ailments.

Pyogenic infections and superficial fungus infections were found to be less in our results (4.7% and 7.53% respectively) than in other countries especially in Al Jouf, Saudi Arabia (10.87% and 7.81% respectively), India (8.46% and 14.18% respectively) and Kenya (6.4% and 9.5% respectively) . The low incidence of bacterial and superficial fungus infections may reflect the better personal hygiene, better socioeconomic status and regular health check-up amongst local inhabitants of Farwaniya area in Kuwait.

The higher incidence of viral warts infection in our

results (7.59%) may reflects the greater awareness of patients about any minor disability.

Our study showed that vitiligo had a low prevalence rate (1.64%) than other countries whereas lichen planus (2.91%) and psoriasis (5.61%) occurred more or less in similar frequencies as in other countries. Our findings were in general similar to that findings recoded in Al-Jouf, Saudi Arabia and Abu Dhabi, UAE ; the neighboring countries.

It is interesting to note that the low incidence of sexually transmitted diseases recorded in our study (2.78%) may be due to the trend of such patients to avoid government institutions and their preference for private clinics and consultants due to the social stigma of these diseases. Also the fact that more than ninety percent of STD cases were non Kuwaiti males, mostly of labour class could be because they were all staying alone in Kuwait, with their wives back home.

Comparison of Kuwaiti patients and Non-Kuwaiti patients revealed that the incidence of atopic dermatitis, viral warts and vitiligo were more among Kuwaiti childrens. Whereas superficial fungal infections, pyogenic infections and contact dermatitis were more frequently seen in Non-Kuwaiti patients. In addition Kuwaiti females had a higher incidence of acne and telogen effluvium. Leprosy is not seen in Kuwaiti's, all the reported patients being expatriats. All the 8 cases of cutaneous malignancies diagnosed during the study were Kuwaiti male adults.

Conclusion

Our results showed that the pattern of skin diseases among the population in Farwaniya area , Kuwait were affected by many factors including improved economic status, better health education and hygiene and ready availability of dermatology services.

It was concluded that improvement in socioeconomic conditions along with education may be needed to decrease the prevalence of some of these skin disorders in order to decrease costs related to treatment.

This study highlights the epidemiological information about the common skin diseases in Farwaniya area; Kuwait. This can be used as the basis for researches as well as planning for the delivery of health services so that proper prophylactic measures and rational development of program on health care including education, proper diagnosis, investigations, treatment and referral can be practiced.

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Table 1: Various skin diseases seen at Dermatology Clinics, Farwaniya Hospital

Disease groups	Total cases	Percentage
Eczemas	8720	23.41
Viral infections	4633	12.44
Papulosquamous disorders (psoriasis, lichen planus & pit. rosea)	3855	10.35
Acne group	3585	9.62
Sup. fungal infections	2804	7.53
Alopecia and related diseases	2295	6.16
Bacterial infections	1755	4.71
Urticaria	1609	4.32
STD's	1097	2.78
Pigmentary disorders	1010	2.71
Parasitic diseases	398	1.07
Others (Connective tissue diseases, bullous diseases, tumors, drug rash, nevi etc...)	6133	16.46

TABLE 2 shows the distribution of some common skin diseases in different groups according to age, sex and frequency.

Disease groups	Children		Adults		Total (no.)	% in	% of
	Male	Female	Male	Female			
Eczemas							
Atopic dermatitis	1554	1494	573	505	4126	47.32	11.07
Contact dermatitis	118	192	1958	924	3192	36.61	8.57
Seb. dermatitis & related	170	123	169	100	562	6.44	1.50
Others	151	114	292	283	840	9.63	2.25
Viral infections							
Warts	573	554	1113	587	2827	61.02	7.59
Molluscum contagiosum	255	230	35	43	563	12.15	1.51
Chicken pox	75	51	7	2	135	2.91	0.36
Herpes zoster	5	6	366	226	603	13.017	1.62
Herpes simplex	27	19	259	198	503	10.86	1.35
Orf	0	0	2	0	2	0.043	0.005
Papulosquamous disorders							
Psoriasis	192	245	1005	649	2091	54.24	5.61
Lichen planus	5	3	708	370	1086	28.17	2.91
Pit. rosea	102	106	237	233	678	17.59	1.82
Acne group							
Acne vulgaris	48	114	1319	2026	3507	97.88	9.41
Rosacea	0	0	13	65	78	2.12	0.21
Sup. fungal infections							
Dermatophytosis	215	184	653	175	1227	43.75	3.29
Pit. versicolor	59	49	514	249	871	31.08	2.34
Candidiasis	86	97	242	281	706	15.17	1.89
Alopecia and related diseases							
Alopecia areata	176	247	896	310	1629	70.98	4.37
Diffuse hair fall	5	9	22	501	537	23.39	1.44
Others	6	6	79	38	129	5.62	0.34
Bacterial infecions							
Furuncle	62	78	274	80	494	28.13	1.32
Impetigo	184	190	12	21	407	23.19	1.09
Folliculitis	103	66	340	234	743	42.34	1.99
Leprosy	0	0	11	2	13	0.74	0.034
Secondary bact infection	24	25	23	26	98	5.6	0.26
Pigmentary disorders							
Vitiligo	41	47	311	213	612	60.55	1.64
Post inflame hyperpimentation	22	24	61	80	187	18.55	0.50
Melasma	0	0	19	119	138	13.64	0.37
Others	3	7	20	43	73	7.22	0.19

Table 3. Comparison of incidence of various common dermatoses amongst the Kuwaiti and Non-Kuwaiti children

Disease Group	Kuwaiti			Non kuwaiti			Total
	male	female	Total(%)	male	female	Total(%)	
Eczemas							
Atopic dermatitis	1230	1201	2431(79.75)	324	293	617(20.24)	3048
Contact dermatitis	58	92	150(48.38)	60	100	160(51.61)	310
Seb dermatitis	90	70	160(54.60)	80	53	133(45.39)	293
Others	72	64	136(51.32)	79	50	129(48.67)	265
Bacterial infections							
Furuncle	22	30	52(37.14)	40	48	88(62.85)	140
Impetigo	69	23	92(24.59)	115	167	282(75.40)	374
Folliculitis	36	11	47(27.81)	67	55	122(72.18)	169
Leprosy	0	0	0(0.0)	0	0	0(0.0)	0
2ry sec. bacterial infections	9	12	21(42.85)	15	13	28(57.14)	49
Viral infections							
Warts	395	367	762(67.61)	178	187	365(32.38)	1127
Molluscum contagiosum	131	116	247(50.92)	124	114	238(49.07)	485
Chicken pox	37	25	62(49.20)	38	26	64(50.79)	126
Herpes Zoster	1	2	3(27.27)	4	4	8(72.72)	11
Herpes Simplex	10	9	19(41.30)	17	10	27(58.69)	46
ORF	0	0	0(0.0)	0	0	0(0.0)	0
Sup Fungal infections							
Dermatophytosis	97	89	186(46.61)	118	95	213(53.38)	399
Pit Versicolor	21	11	32(29.62)	38	38	76(70.37)	108
Cut Candidiasis	49	49	98(53.55)	37	48	85(46.44)	183
Papulosquamus group							
Psoriasis	89	121	210(48.05)	103	124	227(51.94)	437
Lichen Planus	2	1	3(37.5)	3	2	5(62.5)	8
Pityriasis Rosea	59	41	100(48.07)	43	65	108(51.92)	208
Acne Group							
Acne Vulgaris	31	75	106(65.43)	17	39	56(34.56)	162
Rosacea	0	0	0(0.0)	0	0	0(0.0)	0

Table 5.

Table 4. Comparison of incidence of various common dermatoses amongst the Kuwaiti and Non-Kuwaiti children

Disease Group	Kuwaiti			Non kuwaiti			Total
	male	female	Total(%)	male	female	Total(%)	
Pigmentary Disorders							
Vitiligo	31	20	51(57.95)	10	27	37(42.04)	88
Post inflammatory	10	13	23(50.0)	12	11	23(50.0)	46
Melasma	0	0	0(0.0)	0	0	0(0.0)	0
Others	3	5	8(80.0)	0	2	2(20.0)	10
Alopecias Group							
Alopecia areata	38	71	109(50.23)	37	71	108(49.76)	217
Telogen Effluvium	4	6	10(71.42)	1	3	4(28.57)	14
Others	3	4	7(58.33)	3	2	5(41.66)	12
Total	2597	2528	5125	1563	1647	3210	8335

Table 5. Comparison of incidence of various common dermatoses amongst the Kuwaiti and Non-Kuwaiti adults

Disease Group	Kuwaiti			Non kuwaiti			Total
	male	female	Total(%)	male	female	Total(%)	
Eczemas							
Atopic dermatitis	424	394	818(75.88)	149	111	260(24.11)	1078
Contact dermatitis	754	292	1046(36.29)	1204	632	1836(63.70)	2882
Seb dermatitis	90	54	144(53.53)	79	46	125(46.46)	269
Others	154	150	304(52.86)	138	133	271(47.13)	575
Bacterial infections							
Furuncle	159	51	210(59.32)	115	29	144(40.67)	354
Impetigo	1	8	9(27.27)	11	13	24(72.72)	33
Folliculitis	178	173	351(61.14)	162	61	223(38.85)	574
Leprosy	0	0	0(0.0)	11	2	13(100.0)	13
2ry Sec. bacterial infections	7	8	15(30.6)	16	18	34(69.38)	49

Table 6. Comparison of incidence of various common dermatoses amongst the Kuwaiti and Non-Kuwaiti adults

Disease Group	Kuwaiti			Non kuwaiti			Total
	male	female	Total(%)	male	female	Total(%)	
Viral infections							
Warts	771	333	1104(64.94)	342	254	596(35.05)	1700
Molluscum contagiosum	11	23	34(43.58)	24	20	44(56.41)	78
Chicken pox	3	1	4(44.44)	4	1	5(55.55)	9
Herpes Zoster	152	110	262(44.25)	214	116	330(55.74)	592
Herpes Simplex	134	91	225(49.23)	125	107	232(50.76)	457
ORF	0	0	0(0.0)	2	0	2(100.0)	2
Sup Fungal infections							
Dermatophytosis	149	45	194(23.42)	504	130	634(76.57)	828
Pit Versicolor	101	81	182(23.85)	413	168	581(76.14)	763
Cut Candidiasis	167	202	369(70.55)	75	79	154(29.44)	523
Papulosquamus group							
Psoriasis	589	381	970(58.64)	416	268	684(41.35)	1654
Lichen Planus	373	202	575(53.33)	335	168	503(46.66)	1078
Pityriasis Rosea	151	109	260(55.31)	86	124	210(44.68)	470
Acne Group							
Acne Vulgaris	831	1215	2046(61.16)	488	811	1299(38.83)	3345
Rosacea	7	41	48(61.53)	6	24	30(38.46)	78
Pigmentary Disorders							
Vitiligo	198	120	318(60.68)	113	93	206(39.31)	524
Post inflammatory	40	61	101(71.63)	21	19	40(28.36)	141
Melasma	11	81	92(66.66)	8	38	46(33.33)	138
Others	12	31	43(68.25)	8	12	20(31.74)	63
Alopecias Group							
Alopecia areata	598	226	824(58.35)	399	189	588(41.64)	1412
Telogen Effluvium	18	422	440(84.13)	4	79	83(15.86)	523
Others	40	22	62(52.99)	39	16	55(47.0)	117
Total	6123	4927	11050	5511	3761	9272	20322

Table 7. Comparison of some common dermatoses in other countries

Disease groups	Al-Farwaniya, Kuwait	Al Jouf, Saudi Arabia⁶	Abu Dhabi, UAE¹¹	Trivandrum, India¹²	Kenya¹³
Eczemas	23.41	34.14	20.98	19.38	28.1
Acne	9.62	9.57	9.07	2.0	3.9
Psoriasis	5.61	5.33	4.49	6.25	3.2
Lichen planus	2.91	1.21	0.95	1.78	1.6
Vitiligo	1.64	3.35	3.18	3.12	2.9
Bacterial infections	4.71	10.87	2.55	8.46	6.4
Sup. mycoses	7.53	7.81	8.50	14.18	9.5
Viral warts	7.59	2.85	5.47	5.10	2