A STUDY OF SKIN DISEASE IN CHITRAL

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Abstract

Two thousand six hundred and twenty five cases were examined in five different villages of Chitral to study the prevalence of skin disease. One thousand nine hundred and three (72.5%) were actually found to have a dermatological problem. Nail disorders (27.8%), pediculosis capitis (15.2%), branding (12.5%), mouth diseases (10.6%), hyperkeratosis (10.2%), cutaneous tumours (7.8%), eczema (6.6%), xeroderma (6.2%), lnsect bites (6%) and pityriasis alba (5%) were the ten common dermatoses (JPMA 37: 247 , 1987).

INTRODUCTION

Lying in the heart of Hindu Kush, Chitral is a 400 Km long valley forming the northern most district of Pakistan. It is bounded on the north and west by Afghanistan, on the south by Dir and on the east by Gilgit. It is separated from China by Hunza and since annexation of the pan-handle to like Wakhan corridor of Afghanistan by Russia now lies adjacent to it. Its total area is about 11,500 square Km and is 80 Km at its widest. The altitude ranges from 1,000 to 4,000 meters. The narrow valleys drained by the Mastuj river and its tributaries leave very little ground for cultivation. Its per capita income of Rs. 40 is lowest in the country. Chitral is mild in summer and often deep in snow during the winter cutting it off from the rest of Pakistan except by air.

Medical services are poor and dermatolo -gical care non-existent. The Aga Khan Central Health Board for Pakistan in collaboration with the Pakistan Association of Dermatologists organised a ten day study tour of Chitral from 31st August 1985 to 9th September 1985 to determine the prevalence of skin disease in the area.

MATERIAL AND METHODS

Five day-long camps were organised in five different villages of Chitral valley (Table I).

TABLE I
Total Cases seen at various Villages.

Village	Male	Female	Total
Parabeg	252	316	568
Eizh	265	297	562
Mogh	157	201	358
Booni	410	336	746
Kaghuzi	217	174	391
	1301	1324	2625

Prior announcement about the doctors' visit was made so that anybody with any medical problem could attend and not necessarily those with skin diseases alone. The team comprised of four dermatologists, a physician and a paediatrician.
All patients were seen and treated and their particulars recorded on a previously prepared two page proforma.

RESULTS

Of 2,625 cases only 492 (18.7%) had a presenting dermatological complaint. Subsequent examination showed 1,903 (72.5%) had a skin problem and some had more than one skin disease.

TABLE II
Age and Sex distribution of Skin Patients.

Years	0–1	1–5	6–10	11–20	21–30	31–40	41–50	51–60	61–70	Above 70	TOTAL
MALE	23	144	153	226	105	131	93	59	32	13	979
FEMALE	24	95	135	134	192	151	124	49	19	1	924
TOTAL	47	239	288	360	297	282	217	108	51	14	1903

Table II shows age and sex distribution and Table III,

TABLE III

Comparative Incidence of Common Skin Diseases (%).

1.	Nail Disorders	27.8	14.	Bacterial Infections	2.6
2.	Pediculosis capitis	15.2	15.	Naevi	2.4
3.	Branding	12.5	16.	Fungal infections	2.4
4.	Mouth diseases	10.6	17.	Alopecia	2.2
5.	Hyperkeratosis (Hands and feet)	10.2	18.	Erythema ab igne	1.3
6.	Tumours	7.8	19.	Pruritus	1.2
7.	Eczema	6.6	20.	Hyperhidrosis	0.6
8.	Xeroderma	6.2	21.	Genodermatoses	0.5
9.	Insect bites	6.0	22.	Urticaria	0.4
10.	Pitrysiasis alba	5.0	23.	Psoriasis	0.2
11.	Acne	4.2	24	Scabies	0.1
12.	Pigmentary disorders V 19) M81)	4.2	25.	Tuberculosis	0.1
13.	Viral infections	3.2	26.	Rosacea	0.05
			27.	Photosensitivity	0.05

the comparative incidence of common skin diseases.

There were no cases of leprosy, cutaneous leislunaniasis, syphilis, gonorrhoea, lichen plaus, pemphigus, dermatitis herpetiformis, lupus erethematosus or thug eruptions.

DISCUSSION

Nail disorders were the most common skin problem. 79.5% of which were due to koilonychia. The toe nails also showed marked spooning; 10.6% revealed thickening of nails while 4.1% had clubbing. Other nail disorders included traumatic dystrophy (10 cases), brittle nails (8 cases), paronychia (3 cases), leuconychia (2 cases) and one case each of racquet nail, onycholysis, anonychia; onychogryphosis and pterygium. Causative factors are poor hygiene, manual labour and anaemia. Pediculosis capitis was seen in 93.4% of the females. No age group was immune and the incidence was highest in the first decade of life

Practical absence of Scabies (3 cases) was significant since this is the most common skin disease in other parts of the country. Infestation in 3 cases occurred on visit to Karachi where scabies heads the list of skin diseases[1]. Twenty three other patients presented with generalized pruritus in which there was no visible skin disease.

Lacking modern medical facilities, Chitralisuse household remedies. To relieve pain, a piece of a local herb (KARUSHK) is applied at the site and ignited. This leaves behind branding marks resembling cigarette burns. Every eighth patient seen by us had one or more such marks. The male to female ratio was 3:1. Branding is more prevalent around Garam Chashma than Boom and Kaghuzi. Chitralis also apply goat's horn (after grinding and incinerating) to the children's faces and scalps to protect them against sun and coryza. Similarly, girls produce various patterns on their faces with nail polish to enhance their beauty.

Oral diseases, particularly cheiitis (7%),gingivitis (3.3%) and dental caries are common. Teeth are usually cleaned with water or walnut bark.

Poor hygiene and manual occupations,e.g. farm work, leads to hyperkeratosis of palms, feet and lower legs. The lower extremities are affected due to working barefooted in the fields.Conversely, severe maceration of the feet due to wearing of non-porous plastic boots is also seen, particularly in villages around Garam Chashma,because water gets inside the boots and people .05 keep wearing them without changing.

Other forms of keratinisation disorders— seen were callosities (10 cases), keratosis pilaris (4 cases) and corns (1 case). Incidence of Psonasis (0.2%) was low; all five cases were males and one of them an infant. In other parts of Pakistan Psoriasis has a higher incidence ,as well as in neighbouring India[2] and Iran. 3 Differences observed may be due to the variations in sampling techniques.

Acne (42%) is common but severer types are rare. Only one case of rosacea was seen. One would normally expect a higher incidence of rosacea in colder clnnate[4] like Chitral as reported from West of Scotland.[5] Amongst the pigmentary disorders melasma (3.2%) and vitiigo (1%) were the main offenders. Other pigmentary disturbances seen were post-inflammatory leuco. derma (2 cases), idiopathic guttate hypomelanosis (1 case) and progressive pigmented purpuric dermatosis (1 case). People peeling raw walnuts also show an intense black discolouration of their hands. Pityriasis alba (5%) was very common and often aroused a suspicion of vitiligo.

The incidence of various types of eczema is shown in Table IV.

TABLE IV
Types of Eczema.

Types of Eczema	No	%
Asteatotic	15	0.7
Atopic	10	0.5
Seborrhoeic	9	0.4
Contact	9	0.4
Nummular	8	0.4
Infective	3	0.2
Stasis	Nil	
Lichen simplex	4	0.2
Miscellaneous	18	0.5
Cradle cap	50	2.6
Total	126	6.6%

Dryness of skin is common as shown by 6.2% of total cases, hence the presence of a large number with asteatotid eèzema. Eczema as a group is less common in this district with no industry. Nineteen percent of patients in Karachi, an industrial city, were seen with eczema. If fifty cases of cradle cap were to be excluded from this group then the incidence would fall still further. Although eight cases of varicose veins were seen but there was no case of stasis eczema or ulceration.

Chitralis are fair skinned hence a higher incidence of freckles (24%). Sunny climate and outdoor nature of work results in considerable degree of senile changes (5.9%). These were noticed as early as the third decade. Not a single case of basal cell carcinoma or melanoma was seen.[6] Haroon[1] from Karachi presents a similar picture but then the population there has a darker skin according protection against sunlight. The only malignant tumour seen in our study was a perianal squamous cell carcinoma. Benign tumours, particularly skin tags (6.4%) were seen. Other benign tumours recorded were seborrhoeic

warts (8 cases), lipomas (7 cases), pilar cysts (3 cases), milia (3 cases), libromas (2 cases), ganglions (2 cases) and umbilical polyp (one case).
Amongst the infections, viral infections were the most common accounting for 3.2% of cases (Table V).

TABLE V
Viral Infections.

Viral Infections	No	%
Common warts	37	2.0
Plane warts	6	0.3
Herpes simplex	15	0.75
Chicken pox	2	0.1
Herpes zoster	1	0.05
Total	61	3.2%

No case of Molluscum contagiosum or plantar wart was seen.
Bacterial infections accounted for 2.6% of cases. Out of a total of SI patients 37 had impetigo, 11 furunculosis, 2 folliculitis and one trichomycosis nodosa.
Only three cases of mycobacterial infections were observed. All of them had scrofuloderma. Other forms of tuberculosis were not seen although pulmonary tuberculosis is believed to be common in Chitral. Leprosy did not figure in our study at all. This is surprising since a leprasorium does exist in Southern Chitral at Darosh.
Forty six cases (2.2%) of superficial fungal infections were recorded (Table VI).

TABLE VI
Fungal Infections.

Fungal Infection	No	(%)
Tinea versicolor	31	1.6
Tinea corporis	5	0.25
Tinea capitis	5	0.25
Tinea pedis	4	0.25
Tinea unguium	1	0.05
Tinea cruris	Nil	Nil
Candidiasis	Nil	Nil
Total	46	2.4%

Preponderance of tinea versicolor in a relatively cooler climate ot Chitral is interesting. Tinea versicolor is also the most common type of fungal infection in Karachi. Absence of tinea cruris is remarkable since it has been commonly reported from the Indo-Pak subcontinent[7-15]

No case of favus was isolated. It is known to exist in hilly areas of Pakistan. Khan and Anwar[16] reported 73 cases of tinea capitis in Karachi 27.4% of which had favus. This high percentage has not been substantiated in subsequent studies from Karachi[1,12,17] Afghan refugees are known to suffer from favus and since their influx into Chitral, more cases are likely to be seen. Leprosy and cutaneous leishmaniasis are also common in Afghanis. Favus is also the most common type of tinea capitis in Iran as reported by Mehregen.[3] All our five cases of tinea capitis were of black dot variety.

Mycetoma is the only deep seated mycosis seen with some frequency in various parts of Pakistan. We did not see a single case of mycetoma or any other deep seated mycotic infection.

Seventy seven cases of the disorders of hair were seen. Thirty one had male pattern alopecia. Twenty eight presented with dandruff, seventeen with canities, seven with cicatricial alopecia and four with alopecia areata.

Naevi accounted for 47 cases. Melanocytic naevi (30) were the most common type, three of them being hairy. Other naevi seen were depigmented naevi (6), portwine stain (5), mongolian spots (3), epidermal naevi (2) and cavernous haemangioma (1).

Ten cases of genodermatoses were recognised. Three had ichthyosis vulgaris. Two each had multiple lentigenes and supernumerary digits and there was one case of knuckle pads, syndactily and tuberous

sclerosis.
Amongst the vascular phenomena (47 cases), erythema ab igne accounted for 26 cases. Nine cases suffered from urticaria in all of which an obvious cause was not readily forthcoming. The remaining cases had erythema (5), telangiectasia (3), dermographism (2), cutis marmorata(1) and purpura(l). Only one case of dermatitis artefacta was seen in a young mentally subnormal male.
Very few papers have been published on the incidence of sldn diseases from various parts of Pakistan, therefore it is difficult to compare the presented figures. Moreover, a prolonged study is required to assess the true nature of dermatoses seen in Chitral. This study however, gives a gooc insigtit into the dermatoiogicai problems prevailing in that district.

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REFERENCES

1. Haroon, T.S. Pattern of skin disease in Karachi. JPMA., 1985;35:73.
2. Desai, S.C. Ecologic perspective of dermatological problems in India. Arch. Dermatol., 1960; 82:701.
3. Mehregen, A.H. Skin diseases in Iran. Dermatologica, 1964; 129:349.
4. Marks, R. and Wilkinson, D.S. Rosacea and perioral dermatitis, in textbook of dermatology. Edited by Arthur Rook et al. 3rd ed. Oxford, Blackwell, 1979, p. 1433.
5. Ratzer, M.A. The incidence of skin diseases in the west of Scotland. Br. J. Dermatol., 1969; 81: 456.
6. Ramsay, C.A. Cutaneous reactions to actinic and ionizing radiations, in textbook of dermatology. Edited by Arthur Rook et al. 3rd ed. Oxford Blackwell, 1979, p. 523.
7. Khan, K.A. and Anwar, A.A. The aetiology of tinea cruris in Karachi. Br. J. Dermatol., 1969; 81:858.
8. Haroo n, T .S. Dermatophytes causing tinea cruris in Karachi. JPMA., 1979; 29:190.
9. Shah, H.S., Amin, A.G., Kanvinde, M.S.,Kanvinde, SM. and Patel, G.D. An analysis of 2000 cases of dermatomycoses. Indian J. Pathol. Bacteriol., 1975; 18:32.
10. Dutta, S.B. and Rao, P.V. Mycological aspects of dermatomycoses in Hyderabad. Indian 3. Pathol. Bacteriol., 1970; 13:30.
11. Uppal, T.B. and Kamil, D. Survey of dermatophytes in Peshawar region. Pakistan 3. Med. Res., 1974; 13:43.
12. Faruqi, A.H., Khan, K.A., Haroon, T.S.and Khan, A.F. Study of 1324 cases of dermatomycoses. Indian J. Dermatol., 1984; 29:7.
13. Khan, M.A. and Hafiz, A. Causal agents of dermatomycoses isolated in Karachi. JPMA., 1979; 29:50.
14. Kandhari, K.C. and Sethi, K.K. Dermatophytosis in Delhi area. J. Indian Med. Ass., 1964; 42: 324.
15. Gupta, R.N. and Shome, S.K. Dermatomycoses in Uttar Pardesh; an analysis of 620 cases. 3. Indian Med. Assoc., 1959; 33: 39.
16. Khan, K.A. and Anwar, A.A. Study of 73 cases of tinea capitis and tinea favosa in adults and adolescents. J. Invest. Dermatol., 1968; 51:474.
17. Faruqi, Al-I., Khan, K.A., Haroon, T.S. and Qazi, A.A. Tinea capitis in Karachi. JPMA., 1982; 32 : 263.