EPIDEMIOLOGY OF PSORIASIS IN A CLINIC FROM NORTH INDIA

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Clinical and epidemiological data on 782 patients of psoriasis collected from a clinic in north India is presented. Psoriatics accounted for 1.4% of the total dermatology outpatients. There was a male preponderance. Three fourths of the patients had over 50% involvement of the skin surface. Severity of the disease was same in both sexes. Plaque type disease was commonest in over 90%. Family history of psoriasis was present in 7.4%, the age of onset was significantly lower in them as compared to the patients without family history. More than half of the patients did not experience any seasonal variation. Scalp was the first site of involvement followed by legs and arms. Nails, joints and mucosal involvement were seen in 62.2, 9.7 and 2.3% patients respectively. Pruritus was experienced by 63.5% patients.

Key words : Psoriasis, Clinical analysis.

The prevalence of psoriasis varies from 0.1 to 2.84% in different clinical and epidemiological studies.[1-4] Only one small study is available from north India,[5] which prompted the data collection for the present study.

Materials and Methods

Seven hundred and eighty two patients were studied over a period of 3 years. The patients were picked up from the psoriasis clinic of our centre. The diagnosis was clinical, though biopsy was done in lesions with an unusual presentation, or when the oral mucosa was involved.

Results

Five hundred and fifty six (71.09%) patients were males and 226 (28.90%) were females, with male : female ratio of 2.3 : 1. There were 46 (5.8%) children (more than 12 years), 29 (63.04%) were females and 17 (36.95%) males. During the period of study, the sex distribution ratio for the general dermatology patients worked out to be male to female 1.5 : 1. Psoriasis accounted for 1.4% of the total dermatology outpatients.

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The extent of disease, calculated according to Wallace's formula of 9, was 50% in 75% patients, and 54-70% skin surface involvment in 15% patients. The area involved was less in others. The disease was equally severe in both sexes. Plaque type (discoid, annular, and geographic) lesions were the commonest, being present in 708 (90.5%) patients. Guttate lesions were present in 58 (7.41%), erythrodermic in 9 (1.15%), and flexural in 3 (0.38%) patients. Generalised pustular psoriasis interrupting the placid course of the disease was seen in 6 patients who responded to usual measures. Koebner's phenomenon was present in 228 (29.1%) patients and Auspitz sign was positive in 666 (85.1%) patients.

The mean age of onset for females and males was 29.34 ± 15.10 and 36.9 ± 15.10 years respectively. The difference was statistically significant ($p<0.05$).

Fifty five (7.0%) patients had one or more family members having psoriasis. In 44 (80.0%), the first degree relatives (parents, brother, sister, sibs) were affected, in 10 patients (18.2%) the second degree relatives (grand parents, maternal and paternal uncles and aunts) were affected, and in one patient the third degree relative (cousins, nephew, nieces) was affected.

The mean age of onset in the patients with a

positive family history was 22.65 years, as compared to 27.83 years in the others. The difference was statistically significant ($p<0.05$). The age of onset was earlier (18.29 years) in the females with a positive family history, as compared to the males (27.42 years). The difference was statistically significant ($p<0.05$).

The first site of involvement was scalp in 32.99%, legs in 24.3%, arms in 9.5%, palms in 7.5%, soles in 6.0% and back in 4.0%. In some (1.7%) patients, the disease started at multiple sites. Involvement of the flexures or nails alone was seen in 0.38% and 0.51% patients respectively. Mucosal involvement was seen in 2.3% patients, occurring in the form of irregular erythematous lesions on the tongue, lips and buccal mucosa. Yellowish brown or shiny erythematous lesions were present on the glans in 16 patients. Lesions of psoriasis were present on other parts of the body in patients having mucosal involvement.

Nails were involved in 346 (62.23%) males and 120 (53.09%) females. The difference was not statistically significant ($p>0.05$). The incidence of nail involvement had no relevance to the duration or the extent of the disease. The nail changes recorded were pitting (56.3%), thickening (5.7%), discoloration (31.8%), subungual hyperkeratosis (10.1%), partial or complete onycholysis (7%) and yellow brown discoloration of nail plates (22%). In 4 (0.51%) patients, the nails alone were involved.

Joints were involved in 80 (10.24%) patients, 54 (6.94%) males and 26 females (3.30%). The difference was statistically not significant ($p< 0.05$). Arthralgia, swelling and deformity of the joints were the findings in that order of frequency. Small joints of the hands and feet were involved in 75.0%, while bigger joints were involved in 9 (11.2%) patients only. In one patient, the arthropathy was indistinguishable from rheumatoid arthritis. Two patients had mutilating arthritis of the hands and feet. Involvement of the sacro-iliac joints in association with other joints was seen in 4 patients. Joint involvement occurred independent of the duration of the disease. Interestingly, the joint involvement was present less often in patients with extensive disease. All patients with joint involvement had nail involvement.

Almost half (45.8%) of the patients had no influence of the seasons on their disease. More than 1/3rd (39.6%) patients had remissions in summer months, while 13.5% of patients had remissions in winter months.

Only a small number (12.0%) of patients, recalled a precipitating cause which either brought on the disease or made it worse. The triggering factors were trauma (4.1%), infection (3.5%), emotional factors (2.9%) and drugs (1.4%). Vaccination, pregnancy and parturition modified the severity of psoriasis in 4 patients.

No positive correlation was found with any systemic or cutaneous disease. Acne vulgaris, vitiligo, bronchial asthma and diabetes mellitus were seen in 10 patients each.

Most (96.15%) patients reported complete clearing of the lesions during some part of the year, a small number (3.85%) were never free of the disease. This improvement was attributed to medication (topical and/or systemic) or a particular system of medicine (homeopathy, ayurvedic, unani), while in 8 patients the lesions cleared spontaneously. Duration of remissions in most patients was 2-8 months, but this could not be correlated to any particular treatment. In 5 patients, the remission lasted from 2-8 years irrespective of treatment.

The lesions healed with hyperpigmentation in 40.92% and hypopigmentation in 18.92%. In 3 (0.38%) patients, the lesions healed with scarring because of irritant therapy.

Pruritus was experienced by 63.55% of the patients, pruritus and burning by 24.42%. Burning or irritation was present in 1.53% and 1.40% patients respectively. Only 7 (0.89%) patients attended the clinic for cosmetic problem.

Complication like erythroderma(0.12%), eczematization (0.36%), folliculitis (3.8%) and local irritation (1.9%) was present in some patients. Folliculitis had occurred both with tar (2.3%) and dithranol therapy (1.5%) but irritation was produced by dithranol alone.

Comments

Psoriasis is believed to be rare among the coloured races living in the tropics.[6-8] However, the clinic incidence of 8.7% reported from Sri Lanka[9] is very high as opposed to 2% incidence reported[10] from United States and our ncidence of 1.4%.

Plaque psoriasis has been reported to be the commonest variety, followed by nail, palmoplantar, flexural and guttate psoriasis.[9] The figures in the present study were almost similar except for psoriasis of the nails which was rarer (0.51%). No correlation was found between the age of onset and the type of disease as earlier reported.[9,11] The erythrodermic form of psoriasis in most of the patients had progressed from the usual psoriatic lesions; in others it was due to therapy with topical/systemic corticosteroids, dithranol or other indigenous medicines.

Psoriasis was reported to occur with equal frequency in the males and females,[2,4,12,13] but in the present study there was a male preponderance.

Ingram[8] and Gunawardena et al[9] found the peak age of onset for both sexes at puberty and another minor peak at climacteric. However, Farber and Nall[14] did not observe the late onset peak. In the present study, the late onset peak was not observed.

The tendency for the females to get the disease earlier than the males has been well documented,[9,11,14,15] as also observed in the present study.

It is less often appreciated that patients with a family history of psoriasis have earlier age of onset. Asboe Hansen[16] had reported that two thirds of the children below 16 years were girls and 64% had a family history of psoriasis. Farber and Nall[14] reported that approximately three fourths of patients with a family history of psoriasis were below thirty years of age when psoriasis started. Holgate[11] observed that when one parent had psoriasis, 94% probands of both sexes developed the disease before thirty years, whereas in the total sample, 59.8% developed the disease before thirty years. The lowest age of onset reported by Lomholt[12] may be because of a high incidence of positive family history in the group. Familial occurrence of psoriasis has been reported to vary from 4.4%[17] to 90.9%.[9,18]

Psoriasis is a known inheritable disease,[18,21] the mode being autosomal dominant[21] or double recessivity.[22] Family studies,[23] however, support multifactorial inheritence.

The frequency of lesions has been reported to be high on the scalp, elbows, trunk and lower extremities.[2,18,20-24,25] In the present study, palmo-plantar involvement was seen in 14.5%. Involvement of genitalia, reported to be 49%,[14] was seen in only 2% patients. Involvement of toe and finger nails was as frequent as reported earlier (50%).[14,24]

Association of psoriasis with arthropathy has been reported to be 4%[23,26] and 7%,[8] compared to 9.71% in the present study, though it has been claimed[28,29] that 90% of psoriatics have positive joint scans even in the absence of clinical or radiological evidence of arthropathy. Trivial psoriasis may be accompanied by crippling arthritis.[27] Every type of joint involvement has been found associated with psoriasis.[30,31]

Romanus[21] did not find seasonal variations in psoriasis, though Lomholt[18] found 80% improvement of psoriasis when exposed to sun. Yasuda et al[25] in a study from Japan noted high prevalence of psoriasis in cold north east and low in warmer, humid south east. In the present study, nearly half of the patients did not observe any seasonal effect. In 39.6% there

was remission in summer months, while a smaller percentage (13.5%) of patients had remissions in winter months.

Braun=Falco[2] reported trauma to be the most common (70%) precipitating factor. Sore throat as a precipitating cause was associated in 6%[14] to 72%[2] patients. In the present study infection (28.4%), emotional factors (24.2%) and drugs (11.6%) were considered to be the precipitating factors respectively. No positive correlation with a systemic or cutaneous disease was observed as in the previous studies.[1,5,32]

Spontaneous clearing of psoriasis was recorded in 39.0%[14] and 55.0%[25] patients in earlier studies. The duration of remission varied from 2-8 months in the present study, in some it lasted more than two years, though some (3.85%) patients were never free of the disease. Itching in psoriasis is variable, its degree is thought to reflect the mental state of the patient rather than a manifestation of the disease process itself.[33] However, itching experienced by 87.0% of our patients is difficult to attribute to other factors than the disease itself.

Local and systemic complications are uncommon[33] except due to topical or systemic therapy given for the disease. Absence of generalised pustular psoriasis in the present and the Sri Lanka studies[9] may be because of more judicious use of topical and systemic modes of therapy for controlling the disease.

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