

A CLINICO-AETIOLOGICAL STUDY OF EXFOLIATIVE DERMATITIS

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Summary

Twenty five cases of exfoliative dermatitis, (21 males and 4 females) were selected at random for study. In addition to routine history and clinical examination, investigations like histopathology of skin and lymph nodes, peripheral blood smear for abnormal cells and bone marrow examinations were done. Etiologically, the cases could be classified into three categories namely exfoliation in pre-existing dermatoses, drug induced exfoliation and idiopathic exfoliation. One case showed abnormal monocytoïd cells (Sezary cell) in peripheral blood smear.

KEY WORD : Exfoliative dermatitis.

Exfoliative dermatitis refers to the involvement of all or most of the skin surface by scaly, erythematous lesions. It is a non-infectious, chronic, itchy dermatosis. The wide spread inflammatory and exfoliative eruption produces secondary effects on other organ systems and on the body as a whole. Exfoliative dermatitis should perhaps be considered to be a syndrome resulting from many different causes. Some of the recognised etiological factors are exacerbation of an existing dermatoses; drugs and reticulosis^{1,2}. Etiology remains doubtful in great many cases and hence management becomes a difficult problem. Incidence

of exfoliative dermatitis in this country appears to be on the increase, but very little work has been done related to this condition particularly with regard to etiology of the disease. Hence, most of the cases of exfoliative dermatitis are labelled as idiopathic. Some of these apparently idiopathic cases may at a later stage manifest certain reticulosis.

The present study was undertaken to find out if possible, the causes which lead to this disorder.

Material and Methods

Twentyfive patients comprising of 21 males and 4 females with exfoliative dermatitis were selected for the study. Only well established and clinically typical cases were chosen. A detailed history was taken for all patients, who after clinical examination were subjected to the following investigations.

Hb., E.S.R., total and differential white cell count, serum proteins total and differential, blood for STS, liver function tests, peripheral blood smear

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Received for publication on 15-6-1982

for abnormal cells, X-ray of chest and skin and lymph node biopsies.

Total leucocyte count and peripheral blood smear was repeated at weekly intervals for evidence of immature or abnormal monocytoïd cells. Bone marrow examination by sternal puncture was done in five cases. Since liver function tests were normal in all patients, liver biopsy was not done in any one of them.

Presence of heavy metals in skin, hair or nails could not be detected due to lack of facility. None of the patients gave history of ingestion of metals or metalloid in any form and hence the need for doing the investigation was not felt to be significant.

Age and sex

The disease was observed maximally in the 6th decade (32%) followed by 5th decade (24%) and 7th decade (20%) of life (Table 1). Mean age incidence is 49.5 years. This figure of mean age appears to be in conformity with the findings of other workers^{3,4}. Incidence of exfoliative dermatitis is more in males than in females in this series. Similar observations have been made by other workers^{1,5-7}.

TABLE 1
Showing age and sex distribution

Age group in years	Males	Females	Total	Incidence in %
0-10	—	—	—	—
11-20	1	—	1	4
21-30	2	—	2	8
31-40	3	—	3	12
41-50	6	—	6	24
51-60	5	3	8	32
Above 60	5	—	5	20
Total	22	3	25	100

Duration of disease

In the present series in majority (44%) of cases duration of the disease

was 1-5 years. In 28% duration of the disease was less than 6 months (Table 2). Shortest duration of disease was 10 days and longest was 10 years. Contrary to our observation Nigam et al⁶ observed duration of the disease less than 3 months in 62.5% of their cases.

TABLE 2
Showing duration of disease

Duration	No. of cases	%
Less than 6 months	7	28
6-12 months	4	16
1-5 years	11	44
More than 5 years	3	12
Total	25	100

Preceding illness :

In the present series, the cases could be classified according to the causative factors shown in Table 3.

56% of cases had exfoliated on a pre-existing dermatosis. Drug allergy was considered to be responsible for exfoliation in 12% of cases. These findings are consistent with the findings of other workers^{1,4,8}.

TABLE 3
Showing causative factors

Etiology	Number of cases	%
Preceding dermatosis		
Psoriasis	10	40
Lichen planus	1	4
P.R.P.	1	4
Eczema	2	8
Total	14	56
b. Secondary to drug		
Dilantin (epilepsy)	1	4
APC (Headache and fever)	1	4
INH (Pul. tub.)	1	4
Total	3	12
c. Idiopathic where the cause could not be found as yet		
	8	32

40% of our patients had psoriatic erythroderma. Rattan Singh and Garg⁷ also reported high incidence of psoriatic erythroderma. Psoriatic erythroderma appears to be less common in temperate countries. Among our ten cases of psoriatic erythroderma, five gave history which suggested topical application as the probable precipitating factor.

Clinical features were similar in all cases. In psoriatic erythroderma scales were dry, thin, small and silvery white. Two cases with preceding history of eczema showed oozing and superficial crusting in some places. One case of exfoliative lichen planus showed violaceous papules over the trunk, and had marked pruritis. In one case of pityriasis rubra pilaris with exfoliation, follicular, horny plugs could be seen on the back of the fingers and on the toes. Itching was minimal in cases of psoriasis. Nail changes in psoriatic erythroderma were pitting, discoloration and onycholysis. In seven cases nails showed transverse and longitudinal striations. Varying degrees of loss of hair was observed in 12 cases. Palms and soles were involved in 18 cases. Wilson⁶ in his study found it difficult to differentiate clinically, the cases of exfoliative dermatitis on the basis of etiology.

Enlargement of superficial lymph nodes was observed in 22 cases. The involvement was maximum in the inguinal group of glands. Lymphadenopathy was rarely encountered in the series studied by Sehgal and Rege⁵ and Nigam et al⁶. None of our cases had hepatomegaly or splenomegaly. Several other workers^{3,6} have documented these findings in their series. Two cases had benign enlargement of prostate detected on routine examination.

Laboratory investigations revealed no significant abnormality excepting in one case in which the peripheral blood

revealed 12% of abnormal monocytic cells. These cells had large reticular nuclei with irregular chromatin clumps. Folding of the nuclear membrane was seen in most of these cells, while true lobulation was present in an occasional one. Cytoplasm was fairly abundant, light blue in colour but with no granules. The finding of abnormal cells in the peripheral blood, resembling the Sezary cell under light microscope, in the presence of the skin changes prompted us to diagnose Sezary's syndrome in this case. This would of course require confirmation by electron microscopy and other specific tests to confirm the characteristics of Sezary cells. Facilities for these were not available.

Histopathology: Biopsy findings of the skin in ten cases was compatible with a diagnosis of psoriasis and in 13 cases it showed changes of non-specific chronic dermatitis. Other authors have also reported non-specific changes in large number of cases of exfoliative dermatitis⁵⁻⁷. Wilson⁴ reported changes consistent with reticulosis in 3 out of 30 cases. None of our cases showed evidence of reticulosis. One biopsy showed changes of lichen planus, and another changes suggestive of pityriasis rubra pilaris. Lymph node biopsy in all the cases was consistent with a diagnosis of dermatopathic lymphadenitis. None of our patients showed evidence of lymphoma. Montgomery⁹ found changes suggestive of Hodgkin's disease in two cases, and reticulosis in one out of 18 patients.

Conclusion

In determining the etiology of the present series of cases of exfoliative dermatitis, history and the physical examination was of maximum help. Laboratory investigations contributed little towards diagnosis. One case was suspected to be one of Sezary syndrome on the basis of blood smear

examination. Histology of the skin was beneficial in cases suspected to be related to pre-existent psoriasis, lichen planus and pityriasis rubra pilaris. In our series, highest single cause of exfoliative dermatitis was psoriasis.

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