

Frequency of undiagnosed HIV infection in patients of seborrheic dermatitis

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Abstract

Introduction The incidence of human immunodeficiency virus (HIV) infection, is increasing in Pakistan. Seborrheic dermatitis (SD) can be seen in patients having HIV infection, so it can be a marker of disease diagnosis and progression.

Objective To see the occurrence of HIV infection in patients with SD.

Methods A prospective study was conducted in Dermatology Department, DHQ teaching hospital, University Medical Complex and Research Center, Sargodha, from September, 2019-February, 2020. Two hundred and eighty-five cases of SD diagnosed clinically were taken and serological examination for HIV by rapid diagnostic test was done on all cases. Data analysis were done by Statistical Package for the Social Sciences (SPSS) Version 20 and expressed as frequency and percentage.

Results In 285 cases of SD majority (53.6%) were males. Ages of patients ranged from 8 months to 60 years. Out of the 31 patients positive for HIV, 25 were males and rest were females. Majority of HIV positive cases (70.96%) had severe SD.

Conclusion SD is a dermatological manifestation of HIV infection. As in developing countries like Pakistan with limited health facilities it is difficult to have CD4+ counts done, skin examination should be an important tool for assessing immune status and management of HIV positive patients.

Key words

Human immunodeficiency virus (HIV), seborrheic dermatitis (SD), CD4 count, dermatological manifestation, immune status.

Introduction

Human immunodeficiency virus infection is not

only a challenge faced by world; its incidence is increasing alarmingly in Pakistan. This is due to a rapid rise in infection in intravenous drug addicts.^{1,2} Infection with HIV can cause systemic T cell destruction, leading to reduced cell mediated immunity. It can directly damage tissues like brain, lung and can also cause systemic organ damage by affecting endothelium.³

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In HIV infection various dermatological manifestations can be seen even before immunological dysfunction and AIDS.⁴ Cutaneous disorders can be a marker of disease progression, which shows the importance of understanding their pathogenesis.^{5,6} HIV infection can be diagnosed by CD4 lymphocyte count, detection of viral load, and viral culture. As developing countries lack these facilities, evaluation of skin remains an important tool in the diagnosis of HIV infection. Skin diseases can be diagnosed by inspection and biopsy.⁷

One of the common cutaneous manifestation of HIV infection is seborrheic dermatitis.⁸ It is a chronic inflammatory disease that affects quality of life.⁹ Seborrheic dermatitis mainly affects face and scalp and causes itching. It is considered an early sign of HIV infection.¹⁰ Lesions of seborrheic dermatitis are erythematous, scaly papules, plaques, greasy thick scale on scalp.¹¹ Histologically hyperkeratosis, parakeratosis, acanthosis, spongiosis and necrotic keratinocytes along with inflammatory cells can be seen.⁸

Methods

It was a prospective descriptive study in which 285 cases of seborrheic dermatitis diagnosed clinically were taken. In suspicious cases skin biopsy was taken in 10 % formalin, processed in automatic processor. Slides prepared were stained with hematoxylin and eosin stain. Screening for HIV infection was done by rapid diagnostic test on all the cases of SD. The study

was conducted in Dermatology department, DHQ teaching Hospital, University Medical Complex and Research Center, Sargodha from September, 2019 to February, 2020. After taking patient’s consent, data was written on proforma.

Inclusion criteria was patients of any age and sex having seborrheic dermatitis.

Exclusion criteria was patients having dermatological manifestations other than seborrheic dermatitis.

The data was expressed as frequency and percentage and analyzed using SPSS Ver 20.0.

Results

This prospective study was conducted from September, 2019-February, 2020 in Department of Dermatology, DHQ teaching Hospital, University Medical Complex and Research Center, Sargodha. Study duration was 6 months. Diagnosis of seborrheic dermatitis was made clinically. Five suspicious cases, were confirmed on biopsy. HIV screening by rapid diagnostic test was done on all patients. Total number of patients with seborrheic dermatitis was 285, of which 153 (53.6 %) were males and 132 (46.3%) were females. The ages of the patients were from 8 months to 60 years. Maximum number of cases of seborrheic dermatitis were in 41-50 years age group (**Table 1**). Thirty-one patients (10.87%) with seborrheic dermatitis were positive for HIV infection. Of those who were positive for HIV infection, 25 (80.64%) were males and 6 (19.35 %) were females.

Table 1 Age and sex distribution of mild, moderate and severe seborrheic dermatitis.

S. No.	Age	Mild			Moderate			Severe		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	0-10	10	9	19	13	10	23	3	9	12
2	11-20	8	9	17	12	7	19	2	4	6
3	21-30	2	4	6	3	5	8	1	2	3
4	31-40	5	4	9	4	6	10	12	5	17
5	41-50	14	9	23	11	9	20	22	6	28
6	51-60	11	10	21	6	9	15	18	11	29
7	Total	50	45	95	49	46	95	58	37	95



Figure 1a 50 years old male with severe seborrheic dermatitis.



Figure 1b 8 months old infant with moderate seborrheic dermatitis. Both were positive for HIV infection.

Majority of HIV positive cases (70.96%) had severe SD which is characterized by itching in areas of body with sebaceous glands with moderate to severe scaling or there can be erythrodermic stage in which there is involvement of more than 90% skin surface area (**Table 2, Figure 1a, 1b**).

Table 2 Severity of seborrheic dermatitis in HIV positive patients in both sexes.

Severity of seborrheic dermatitis	Male	Female	Total
Mild	2	0	2 (6.45%)
Moderate	5	2	7 (22.58%)
Severe	18	4	22 (70.96%)
Total	25 (80.64%)	6 (19.35%)	31

Discussion

This prospective study was conducted from September, 2019-February, 2020 in Department of Dermatology, Sargodha medical college, Sargodha. Study duration was 6 months. Diagnosis of seborrheic dermatitis was made clinically. Five suspicious cases were confirmed on biopsy. HIV rapid diagnostic screening was done in all patients. HIV can be diagnosed timely in short time by rapid diagnostic tests when resources are limited.¹²

Seborrheic dermatitis is recurring inflammatory disorder of skin in which there are macules and plaques with scaling.¹³

In this study of 285 patients having SD, 53.6% were males and 46.3% were females. Amado Y (2013) found SD more in men (28%) than women (16%).¹⁴ Sanders MGH (2018) found SD more in males than females and those having darker skin.¹⁵

The ages of the patients were from 8 months to 60 years. Maximum number of cases of seborrheic dermatitis were in 41-50 years age group (**Table 1**). Emre S *et al.* (2020) found SD in patients of 13-63 years age group with maximum number of cases in 26-40 years age.¹⁶

Thirty one patients (10.87%) with seborrheic dermatitis were positive for HIV infection. Of those who were positive for HIV infection, 25 (80.64%) were males and 6 (19.35 %) were females. Majority of HIV positive cases

(70.96%) had severe seborrheic dermatitis which is characterized by itching in areas of body with sebaceous glands with moderate to severe scaling or there can be erythrodermic stage in which there is involvement of more than 90% skin surface area (Table 2, Figure 1a, 1b). There is increased incidence of seborrheic dermatitis (30-80%) in patients with AIDS.¹⁷ Ippolito F (2000) concluded that HIV infection is not only a dermatological marker of disease but indicator of progression also.¹⁸

Conclusion

It is concluded that SD is a dermatological manifestation of HIV infection. As in developing countries like Pakistan with limited health facilities it is difficult to have CD4+ counts done, skin examination should be an important tool for assessing immune status and management of HIV positive patients.

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