

Original Article

Assessment of the Risk Factors Related to Seborrheic Dermatitis and Treatment Methods

DOI: dx.doi.org



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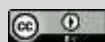
Received: 11 June 2023

Accepted: 25 June 2023

Published: 10 August 2023

Published by:

Sher-E-Bangla Medical College,
Barishal, Bangladesh



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ABSTRACT

Background: Common in clinical practice is a skin disorder known as seborrheic dermatitis (SD). There are several different names for this disorder, which illustrates its complexity: seborrheic dermatitis, seborrheic eczema, dandruff, and pityriasis capitis. The pathogenesis of SD is still highly debated despite the disease's prevalence. **Objective:** The primary objective of this research was to evaluate the prevalence of and exposure to risk factors for seborrheic dermatitis in Bangladesh. **Methods:** A total of 300 patients were included in the cross-sectional study that was carried out at the 250-bed general hospital in Jamalpur, Bangladesh. The research was carried out between January 2020 and December 2021. **Results:** In our investigation, maximum patients (21.3%) were between 20 to 29 years of age

group. Minimum number of patients (5.7%) were below 20 years of age group. 62% patients were male and 38% patients were female. Among them (40%) are child and (60%) are adult. Maximum patients involved sites (60%) of seborrheic dermatitis were scalp. 20% patients had seborrheic dermatitis in anterior hairline. 15% had seborrheic dermatitis in central chest. And only 5% patients had dermatitis on other sites (eyebrows, genital region, glabella region of forehead, ears, nasal alar creases). Maximum number of patients had concurrent acne (30%) and minimum number of patients (8%) had folliculitis in our study. **Conclusion:** SD patients have different clinical features depending on their age, sex

(The Planet 2022; 6(2): 393-399)

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or medical history, which can lead to severity changes or scalp involvement in the clinical setting.

Keywords: Risk Factors, Seborrheic Dermatitis, Bangladeshi Population.

INTRODUCTION

Erythematous plaques or patches are typical of seborrheic dermatitis, a common skin condition. This condition can range in severity from mild dandruff to a dense, diffuse, adherent scale affecting the scalp, anterior hairline, nasolabial folds, glabella region of the forehead, central chest, eyebrows, ears, and genital region. It is a chronic inflammatory illness of unknown origin; however, genetic, environmental, and general health factors, as well as lipophilic *Malassezia* yeasts, have all been linked to it [1]. There are many different symptoms associated with this illness. Seborrheic dermatitis is characterized by the appearance of oily, red, and flaky patches called plaques on the skin. Patients can have varying degrees of erythema and flaking. Seborrheic dermatitis, in its most common form, is a scalp condition. When fingers, hats, or other hair style equipment are used on the scalp, they create a warm, gloomy environment that is extremely inviting to diseases and infestations [2]. The most common sites are the hairy parts of the head (scalp, scalp margin, brows, eyelashes, beard, and mustache), but it can also be found in the nasolabial folds, the external ear canals, and the folds of the body (axillae, navel, groin, inframammary, and anogenital) [3]. Lesions tend to worsen in the winter, while it appears that time spent in the sun during the summer helps improve the condition's clinical appearance. The itching and emotional tension only make matters worse [4]. Patients with central nervous system anomalies have also been linked to a

higher risk of developing severe seborrheic dermatitis, which is notoriously difficult to treat [5]. We have witnessed this firsthand. It has been hypothesized that in some cases, the infection is caused by a buildup of sebum due to the patient's inactivity, which in turn fosters the rapid growth of yeasts [3]. Compromised immunity is another issue that can contribute to the development of seborrheic dermatitis and make it more challenging to control. Substances including buspirone hydrochloride, chlorpromazine, cimetidine, gold, griseofulvin, haloperidol, interferon alfa, lithium, methyl dopa, psoralen, and thiothixene can cause or exacerbate seborrheic dermatitis [6]. Because seborrheic dermatitis is a long-term condition, patients should be made aware of the risk of relapse, the factors that raise that risk, and the need for constant, meticulous cleanliness. Patients should be encouraged to wash their damaged skin with soap and water on a frequent basis to remove any built-up oils and promote better skin health. During the sunny summer months, patients should spend more time outside in an effort to improve their health by increasing their sun exposure; nevertheless, they should take precautions to avoid sunburn [3].

METHODS & MATERIALS

Study type: It was a cross sectional study.

Place of study: 250 Bedded General hospital, Jamalpur, Bangladesh.

Period of study: From January 2020 to December 2021.

Study sample: Total 300 patients were included in this study.

Sample technique: Purposive sampling was done.

Data analysis

The statistics software known as SPSS (statistical package for the social sciences) version 25 was utilized in order to analyse and evaluate the data. The data were analyzed using descriptive statistics such as mean, percentage, and standard deviation, amongst other metrics. A statistically significant p-value was determined to be lower than 0.05.

RESULTS

The age distribution of the patients is presented in **Table I**. The age group with the highest number of patients in our study was between 20 to 29 years, representing 21.3% of the total. A relatively small percentage (5.7%) of patients were in the age group below 20 years.

Table I: Patients Age Distribution

Age (years)	Number of patients (n)	Total n (%)
<20 years	17	5.7%
20-29 years	64	21.3%
30-39 years	49	16.3%
40-49 years	47	15.6%
50-59 years	56	18.7%
60-69 years	39	13%
≥70 years	28	9.4%
Total (n)	300	100%

Figure 1 is showing the gender distribution of patients in our study. Here, maximum patients (62%) were male and minimum patients (38%) were female. See the pie chart below-

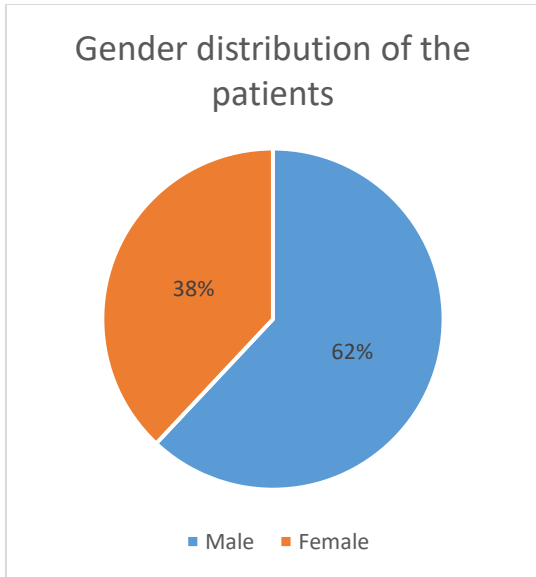


Figure 1: Gender distribution of patients in our study.

Here, **Figure 2** showing age involvement in our study. Among them (40%) are child and (60%) are adult.

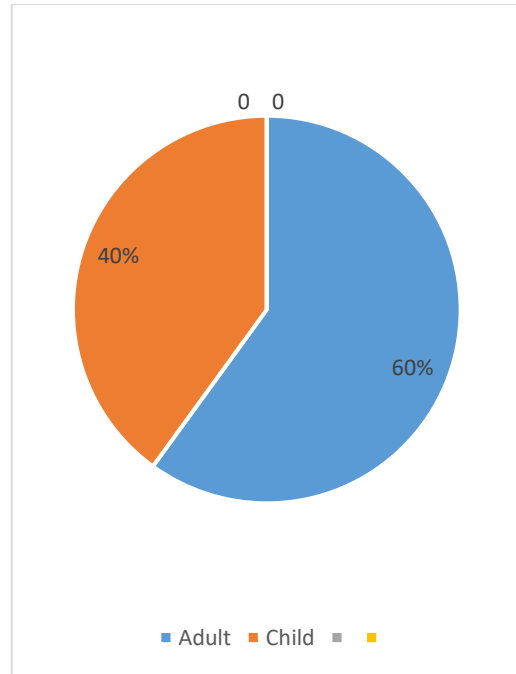


Figure 2: Age involvement of patients in our study.

Figure 3 is showing the involved sites of seborrheic dermatitis of the patients. Maximum patients involved sites (60%) of seborrheic dermatitis were scalp. 20% patients had seborrheic dermatitis in anterior hairline. 15% had seborrheic dermatitis in the central chest. And only 5% patients had dermatitis on other sites (eyebrows, genital region, glabella region of forehead, ears, nasal alar creases). See the figure 3 below-

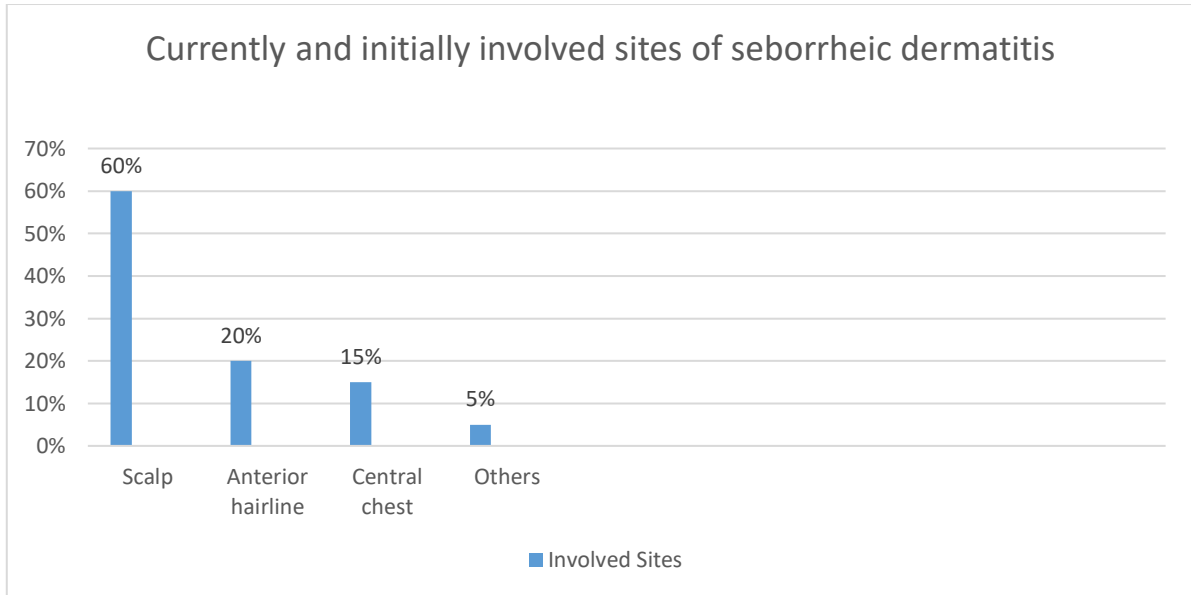


Figure 3: Currently and initially involved sites of seborrheic dermatitis

Figure 4 is showing the skin disorders concurrent with seborrheic dermatitis among the patients. Here, maximum number of patients had concurrent acne (30%) and the minimum number of patients (8%) had folliculitis. See the figure 4 below for detail information's-

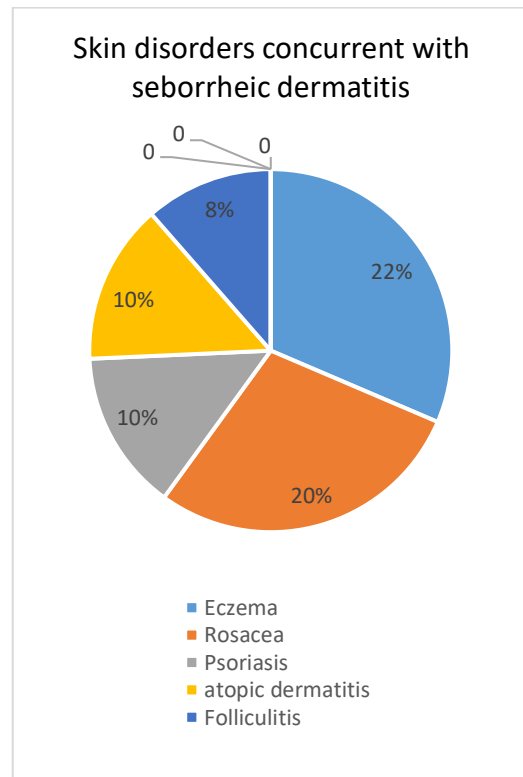


Figure 4: Skin disorders concurrent with seborrheic dermatitis.

DISCUSSION

Our research shows that SD is a chronic skin condition that primarily affects men and is characterized by seborrheic patches. Diagnosis is made clinically. Most patients' initial lesions manifested on the scalp, making it the most common site of involvement. Aside from the scalp, SD patients had a significant amount of involvement in (eyebrows, genital region, glabella region of forehead, ears, nasal alar creases). The scalp was the most commonly involved site (60%) in patients with seborrheic dermatitis, 20% patients had seborrheic dermatitis in anterior hairline, 15% had seborrheic dermatitis in the central chest. And only 5% patients had dermatitis on other sites (eyebrows, genital region, glabella region of forehead, ears, nasal alar creases). Maximum number of patients had concurrent acne (30%) and the minimum number of patients (8%) had folliculitis in our study. Psychological stress is thought to aggravate SD [7]. It was also identified as a significant aggravating factor of SD in our study. There is mounting evidence that emotional stress affects the hypothalamic-pituitary-adrenal axis and the release of chemical mediators from nerve endings, all of which contribute to inflammation [8]. Sleep deprivation and overwork can both increase psychological stress and potentially exacerbate SD. SD is frequently linked to further skin issues such as rosacea, acne, blepharitis, Malassezia folliculitis, and tinea versicolor [9,10]. Our findings also revealed that SD patients had a high prevalence of acne, rosacea, and steroid-induced rosacea. These findings suggest that SD and pilosebaceous diseases, such as excessive seborrhea, may share

pathological processes. In addition, we were able to confirm that long-term use of a topical steroid for the treatment of SD can result in concurrent steroid-induced rosacea.

SD severity decreased with age, and clinical features and severity differed between age groups. Patients over the age of 65 had a lower face involvement that was less common (cheek, perioral area and chin). Patients between the ages of 20 and 29 made up the largest age group in our study (21.3%). 5.7% of the patients were younger than 20. Acne history, being male, and having acne for at least 7 years all increased the odds significantly for scalp involvement in our study; however, high BMI was not associated with an increased risk. SD patients who have these risk factors and only have facial lesions may require a scalp examination and appropriate treatment for scalp lesions. The objective and subjective severity of SD patients with scalp involvement was higher. This is due to the fact that the objective severity scores include a large proportion of scalp assessment as well as facial assessment.

The reason for this could be that patients with scalp lesions are more sensitive to itching and scales presenting as dandruff, as evidenced by higher itching and scaling scores. One large Chinese study on the relationship between sebaceous gland diseases and a variety of factors discovered that frequent consumption of sweets, chili, and a family history of acne were risk factors for sebaceous gland diseases [11]. Our investigation did not find a statistically significant link between these variables and SD severity. One of our study's limitations was the small number of patients and the patients were all from the same ethnic group.

Furthermore, because this was a clinic-based cross-sectional study, there may have been selection bias, and the chronological course of SD for each patient could not be tracked. Usually treatment modalities of Seborrheic dermatitis are local and systemic antifungals, corticosteroids and immunomodulators.

CONCLUSION

We obtained recent epidemiological data, and clinical features and severity were found to differ between age groups and based on the presence of scalp involvement. In the clinical setting, physicians can expect severity changes or scalp involvement in SD patients based on their age, gender, or medical history. We believe that additional research will confirm the findings of this study and reveal other factors related to the severity of SD. A large-scale nationwide study is needed.

Conflict of Interest

Regarding this study, no potential conflicts of interest exist.

Financial Disclosure

There was no designated budget for this study.

Patient Consent

In this research, participants gave their informed consent directly.

The Author's Contributions The author helped with the manuscript in several ways, including writing and editing. All authors have finished working on the book and given their stamp of approval for it to be submitted and published.

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