

General awareness about seborrheic dermatitis/dandruff among dental students – A questionnaire-based study

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ABSTRACT

Introduction: Seborrheic dermatitis (SD) is a chronic inflammatory disorder abundantly found in areas rich in sebaceous glands that are scalp, face, ears, and presternal region. The affected individuals are 1–3% of the immunocompetent adult population with higher prevalence in men than in women. Dandruff is a common problem faced by recent generation adults; this study is to determine the awareness of this disorder among dental students. **Aim and Objective:** This study aims to determine the awareness and factors such as fungus, hormone, and immune system causing dandruff problem among dental student. **Materials and Methods:** In this study, a questionnaire was prepared and circulated among the subjects to determine the reliable factors and general view of dandruff among dental college student. The study sample consists of totally 100 subjects. **Results:** According to our survey, 60% of students are aware of dandruff, 10–20% of students are partially aware of this dermatitis problem, 30–10% of students have no ideas about it. Many students have reported that fungus is the common cause of dandruff which leads to hair fall problem. **Conclusion:** The study concludes that most of the subjects have associated that fungus is the predominant cause of dandruff and also highlights that fungus *Malassezia* is the most common species. The survey also concludes that stress and hormonal changes do cause an increase in the incidence of dandruff and 75% of the students are suffering from the same. Hence, further studies have to be conducted to introduce a comprehensive mode of treatment planning to control of dandruff among the population.

KEY WORDS: Dandruff, Dermatologist, Fungus, Seborrheic dermatitis

INTRODUCTION

Seborrheic dermatitis (SD) is a chronic inflammatory dermatosis characterized by sharp borders of erythematous patches or thin plaques with yellowish-white or grayish-white scales. Abundantly found in areas rich in sebaceous glands, which are scalp, face, ears, and presternal region.^[1] The affected individuals are 1–3% of the immunocompetent adult population with higher prevalence in men than in women.^[2] Although its prevalence is observed in individuals aged 30–60 years, the actual highest prevalence in the first 3 months of life in the infantile form of the disease.^[3] The major textbooks of dermatology say that SD may be common, but their prevalence rate is still questionable, only approximate prevalence rate has been given in some studies.^[4] *Pityriasis capitis* is

a fungal disease which is suggested to be mildest form of SD.^[2]

The visual perception of individually distinguishable flakes on the scalp, in the hair, or on the clothing is considered an abnormal condition frequently referred to as dandruff, SD, or multiple other names.^[5,6] >50% of adults may be affected by these conditions, which suggest a high socioeconomic impact. The relationship between dandruff and SD has at times been controversial. While most investigators regard SD of the scalp as severe dandruff, others believe that dandruff should be used to describe any flaking of the scalp.^[7,8] The key differentials in diagnosis of dandruff versus SD are visible redness or erythema and the presence of flakes and irritation beyond the scalp.^[6] Based on the most recent evidence, the etiology of dandruff and SD appears to be dependent on three factors: Sebaceous gland secretions, microfloral metabolism, and individual susceptibility.^[9,10] The role of sebum in dandruff is implied by the strong

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temporal correlation with sebaceous gland activity. This correlation includes increased incidence during infancy (cradle cap), low incidence from infancy to puberty, an increase in adolescence and young adulthood, and a decrease later in life.^[11-13] This survey describes the recent advances in understanding of these factors, especially the role of the yeast *Malassezia*.

SD is one of the inflammatory skin disorders that are known to be triggered or aggravated by stress. Stress is defined as a physical, mental, or emotional response to events that cause bodily or mental tension. Every organ in the human body is affected by various types of diseases such as infection caused by microbes, immunological, metabolic, and endocrinal disturbances.^[14] There are scientific evidence exists to prove that stress causes dandruff problem. People with SD have complex about their appearance, emotionally disturbed which leading to emotional dysregulation such as alexithymia and concurrent psychiatric disorders. Some studies have shown that anxiety levels were significantly higher in patients with SD compared with healthy controls, but there was no significant association with alexithymia, depression, or obsessive-compulsive symptom levels.^[15] Hence, the present study was conducted to analyze the knowledge about seborrheic dermatitis/dandruff among dental students and also assess the cause and treatment options for the same.

MATERIALS AND METHODS

In this study, a questionnaire was formulated which focus on general awareness about dandruff among dental students. The sample includes about 100 subjects. The questionnaire contained information such as age, gender, and other questions such as area of occurrence, cause, treatment planning, and its side effects of dandruff. The questions are referred from PubMed review articles and subjected to statistical analysis. The questionnaire was circulated among 100 subjects between the age group of 18 and 23 and the results were tabulated.

Questionnaire

1. Do you have any idea about SD?
2. Does dandruff occur in any other area, than scalp? If so mention
3. Do you have dandruff problem
4. Is dandruff a cause of hair fall?
5. Is it essential to consult dermatologist for dandruff problem?
6. Do you feel conventionally treating dandruff is better?
7. Does *Malassezia* are the common cause of dandruff
8. Does hormone, neurodegeneration, and immune system have effects on dandruff?
9. Have you underwent antidandruff treatment? Mention the medication

10. Does antidandruff shampoo reduce dandruff?
11. Does antidandruff shampoo causes side effects?
12. Do you face, acne problems due to dandruff
13. Does oily skin plays a role in dandruff problem?
14. Is it essential to use separate comb or accessories?
15. Does dandruff leads to psoriasis.
16. Women are more prone to dandruff than men, do you agree?
17. Do you think it can be prevented?
18. Do you think stress causes dandruff
19. Does seasonal change influence dandruff? If so mention the season?
20. Do your hair spa reduces dandruff?

RESULTS

From the survey, it was analyzed that nearly 60% of students are aware of dandruff, 10–20% of students are partially aware of this dermatitis problem, and 30–10% of students have no ideas about it. 40% of students have no idea about SD. 60% of students know that dandruff occurs at any area, other than scalp. 66% of students suffer from dandruff problem. 86% has hair fall due to it. 71% visits dermatologist for treatment. In our study 61% of students preferred treatment using conventional natural methods due to side effects of antidandruff shampoos and other medications. 66% says that oily skin plays major role in cause of dandruff. 64% of affected students use separate accessories (comb and pillow). 69% says that dandruff can be prevented. Dandruff has seasonal effects, in summer dandruff is more? (Table 1).

DISCUSSION

The hormonal changes around the time of puberty may be responsible for dandruff in adults, some of these changes are due to growth and development

Table 1: The results obtained from the questionnaire (%)

Question no	Option A	Option B	Option C
1	25	44	31
2	27	47	26
3	66	38	6
4	86	9	5
5	71	15	14
6	61	18	21
7	50	41	9
8	44	15	51
9	15	64	21
10	51	27	22
11	37	19	44
12	48	32	20
13	66	19	25
14	64	10	16
15	24	12	64
16	57	19	24
17	69	16	15
18	46	20	34
19	52	12	36
20	41	19	40

Option A: Yes, Option B: No, Option C: I do not know

of sebaceous glands resulting in increased sebum production, growth of apocrine glands, growth of pubic and axillary hair, appearance of hair in male pattern, seborrhea, dandruff, and thinning of scalp hair.^[16] About 75% of the dental students complain about dandruff problems. Its prevalence in general population is high, mostly it was moderate in severity.^[17] Seasonal variations also influence this condition, increased in severity of dandruff during autumn and winter season was reported by many subjects. *Propionibacterium acnes* play etiological role in all these disorders such as dandruff associated with hair fall, acne, SD, and pityriasis versicolor.^[18,19] The present survey shows 50% of students feel antidandruff shampoo controls dandruff. 63% says antidandruff shampoo causes no side effects. Treatment of D/SD requires controlling scalp flaking and itching at the lowest possible cost and inconvenience.^[20,21] Since the 1960s, shampoos, conditioners, and treatments have been marketed as over-the-counter or prescription products for the treatment of dandruff. Many of these products not only treat the scalp but also provide the hair grooming needs of cleansing and conditioning.^[22] The importance of antidandruff hair care products with no trade-offs in esthetics is extremely important for effective therapy because they can be incorporated into a routine hair care regimen and lead to high consumer compliance.^[23,6]

The role of commensal fungi in dandruff causes it to be a refractory condition. As *Malassezia* are commensals, cessations of antifungal therapy result in a relapse of the condition.^[24] 50% of students say that the common cause is fungus (*Malassezia*). This survey says that 66% of youngsters are suffering by dandruff. The role of sebaceous secretion also underlies the impact of stress and hormones on dandruff, as it is well known that these are effectors of sebum secretion and show dandruff incidence and severity.^[24,25]

CONCLUSION

The research concludes that >65% of dental students have dandruff problem, caused mainly due to fungal infection, and they use antidandruff shampoos to cure it and most of them are oily skinned student, especially girls. There is a scope of treatment by improving the formulation of cosmetic shampoo products, especially designed for this type of skin with antifungal therapy.^[26]

The study concludes that most of the subjects have associated that fungus is the predominant cause of dandruff and also highlights that fungus *Malassezia* is the most common species. The survey also concludes that stress and hormonal changes do cause an increase in the incidence of dandruff and 75% of the students are suffering from the same. Hence, further studies

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