

A clinical study of dermatoses in adolescents

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Abstract

Background Skin disorders are common in adolescents. The visibility of skin disorders in the psychologically and emotionally vulnerable age of adolescence has a major impact on their quality of life. This study was conducted to know the pattern of dermatoses in adolescents.

Methods Four hundred adolescents aged between 10 to 19 years of either sex attending Dermatology out patient department between July 2021 to June 2022 were included in the study.

Results Out of 400 adolescents, 189 were boys 211 were girls. Infectious dermatoses were most common (38.8%), followed by acne (22.5%), eczemas (12%), pigmentary disorders (5.5%), urticaria (5%), papulosquamous disorders (3.5%), insect bite reactions (3.3%), photodermatoses (2.8%), congenital dermatoses (1.5%), connective tissue disorders (0.5%) and others (4.7%).

Conclusion Infectious dermatoses, mainly Fungal and viral infections, acne and eczemas were common among adolescents in our study.

Key words

Adolescents; Dermatoses; Cutaneous infections; Acne; Dermatophyte.

Introduction

Adolescents are defined as the persons aged 10–19 years by The World Health Organization.¹ Adolescence is one of the psychologically vulnerable phase of life and the visibility of skin diseases will have a major impact on adolescents in several aspects including psychological, social, lifestyle, education and employment.^{2,3} Children and adolescents are more prone to developing skin diseases than

adults because they are more often exposed to climatic and social conditions that make them more likely to develop skin infections and to suffer minor skin injuries. The school environment makes students vulnerable to cross-transmission of communicable skin diseases, because they engage in activities that involve interpersonal contact, especially at the time of game or play.² Adolescents may also tend to depend on local remedies and commercially available products than seeking medical care.⁴ This study has been conducted to know the various pattern of dermatoses in adolescents.

Methods

After obtaining Institutional Ethical Committee clearance, a cross sectional study was done in

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which, 400 adolescents aged between 10 to 19 years of either sex attending Dermatology out patient department of our institute between June 2021 to May 2022 were included. After taking an informed consent, a detailed history, thorough clinical examination along with appropriate investigations whenever required, were done and entered in a predesigned proforma. The diseases were tabulated based on the etiology and analysed.

Results

Out of 400 adolescents, 189 were boys 211 were girls with a male to female ratio of 0.9:1.

The study group was further divided into Early adolescents (10-13 yrs.), Mid adolescents (14-16 yrs.) and late adolescents (17-19 yrs.). The age and sex distribution is shown in **Table 1**.

Infectious dermatoses were most common

Table 1 Age and sex distribution.

Age (Yrs.)	Boys	Girls	Total n (%)
10-13 (Early Adolescents)	45	49	94 (23.5)
14-16 (Mid adolescents)	36	52	88 (22)
17-19 (Late adolescents)	108	110	218 (54.5)
Total n(%)	189 (47.25)	211 (52.75)	400

Table 2 Pattern of various dermatoses in adolescents observed in our study.

Dermatoses	Number Diagnosed (n=400) (%)
Infections and Infestations	155 (38.8%)
Acne Vulgaris	90 (22.5%)
Eczemas	48 (12%)
Pigmentary disorders	22 (5.5%)
Urticaria	20 (5%)
Papulosquamous diseases	14 (3.5%)
Insect bite reactions	13 (3.3%)
Photodermatoses	11 (2.8%)
Congenital dermatoses	6 (1.5%)
Connective tissue disorders	2 (0.5%)
Miscellaneous	19 (4.7%)

Table 3 Pattern of cutaneous infections and infestations.

Infections and infestations	Total number diagnosed(N=155)
Fungal infections	57 (36.7%)
Dermatophytoses	43 (27.7%)
Pityriasisversicolor	12 (7.7%)
Candidiasis	2 (1.3%)
Viral infections	42 (27.1%)
Chicken pox	27 (17.4%)
Wart	13 (8.4%)
Herpes zoster	2 (1.3%)
Bacterial Infections	21 (13.6%)
Impetigo	6 (3.9%)
Furuncle	5 (3.2%)
Folliculitis	3 (1.9%)
Secondary pyoderma	3 (1.9%)
Cellulitis	2 (1.3%)
Lupus vulgaris	1 (0.6%)
Pitted Keratolysis	1 (0.6%)
Parasitic Infestations	35 (22.6%)
Scabies	34 (2.9%)
Pediculosis	1 (0.6%)

(38.8%), followed by acne (22.5%), eczemas (12%), pigmentary disorders (5.5%), urticarial (5%), papulosquamous disorders (3.5%), insect bite reactions (3.3%), photodermatoses (2.8%) congenital dermatoses (1.5%), connective tissue disorders (0.5%) and others (4.7%). The various pattern of dermatoses is depicted in **Table 2**

Among infectious dermatoses, fungal infections were predominant (36.7%) followed by scabies (21.9%), viral (27.1%) and bacterial (13.6%) infections (**Table 3**).

Discussion

Dermatoses are common in adolescents, many of which are due to the physiological changes during puberty. They are also vulnerable to cutaneous infections and infestations as they commonly engage in games or play that involves interpersonal contact.

In our study, most common dermatoses were cutaneous infections and infestations which is similar to many Indian studies.⁴⁻⁸ Poverty,



Figure 1 Varicella with hemorrhagic vesicles in 19 year old boy.



Figure 2 Adenoma sebaceum in 15 old girl.



Figure 3- SLE in 18 year old girl.

overcrowding, poor hygiene, low socioeconomic status and lack of health education has possibly lead to increased incidence of infectious dermatoses.

Among various infections and infestations, fungal infections were most common (45%). Similar findings were seen in a study by Hmar *et al.*⁴ Satish *et al.*⁵ Sangamesgwara *et al.*⁹ Hot and humid climate of this region might be the reason for increase in fungal infections.

Among fungal infections, dermatophytosis was predominant and many adolescents presented with tinea incognito, which might suggest the tendency of adolescents using over the counter medications. Dermatophytosis was also a predominant fungal infection in studies done by Hmar *et al.*⁴ and Satish *et al.*⁵ where as Sangamesgwara *et al.*⁹ reported increased prevalence of pityriasisversicolor in their study.

Viral infections were also common in our study (27.1%), chicken pox was the most common viral infection, this could be explained by the clustering chickenpox cases in summer season during our study.

Scabies accounted for 8.75% of total dermatoses, consistent with a study by Satish *et al.*⁵ Pediculosiscapitis showed a very low

prevalence in our study, found in only one case (0.6%). Jose *et al.*¹⁰ in their study found pediculosis in 21% of students in a school based survey in Tamilnadu.

Acne was seen in 22.5% cases, comparable to study done by Hmar *et al.*⁴ who found 22.75% adolescents with acne in their study. Acne was more common among late adolescents, constituting 70.7% of total cases with acne, compared to mid adolescents (22.4%) and early adolescents (6.7%). Acne was also common presentation among in girls (61.8%) compared to boys (38.2%) which might explain more cosmetic concern among adolescent girls compared to boys.

Eczemas accounted for 12% of all dermatoses. Satish *et al.*⁵ in their study found eczema in 9.67% adolescents in their study. Contact dermatitis and seborrhoeic dermatitis were common eczematous dermatitis observed in our study.

Other less common dermatoses were pigmentary disorders, urticaria, papulosquamous disorders, photodermatoses, congenital disorders and connective tissue disorders.

Conclusion

Late adolescents (17-19 yrs.) commonly

presented with dermatoses. The burden of dermatoses among adolescents is infections and infestations followed by acne. Chickenpox showed an increased prevalence in our study. Around one fourth of dermatophytosis cases presented as tinea incognito. Health education and knowledge on skin care among adolescents can improve the quality of life and boost their confidence.

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