RESEARCH

STUDY OF VARIOUS PAPULOSQUAMOUS DISORDERS AND THEIR DERMOSCOPY IN CHILDREN AT A TERTIARY HOSPITAL

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Abstract

Background: The distinctive features of the complex group of diseases known as papulosquamous dermatoses include scaly papules and plaques. Dermoscope on principal of "transillumination" of lesion and studying it with high magnification to visualize subtle features. The purpose of the current study was to examine different papulosquamous conditions and related dermoscopy in young patients at a tertiary hospital. **Materials and Methods:** The current study was a prospective, observational study that involved children between the ages of 2 and 14 who were referred from the paediatric department or who attended the OPD of the department of dermatology, venereology, and leprology and had papulosquamous disorders that had been clinically diagnosed. **Result:** The OPD of the Department of Dermatology, Venereology, and Leprology as well as children who were referred from the paediatric department totaled 114 throughout the study period. The majority (56.14%) were female and in the 6 to 9 year age range. Common anatomical locations affected by papulosquamous disorders and their dermoscopy in children included the upper limb (78.07%), lower limb (58.77%), back (50%), trunk (47.37%), scalp (23.68%), neck (7.89%), oral mucosa (5.26%), face (3.51%), and vaginal mucosa (1.75%), among others. Psoriasis (37.72%), Gianotti-Crosti syndrome (19.30%), lichen planus (16.67%), pityriasis rosea (11.40%), lichen nitidus (8.77%), lichen striatus (3.51%), and seborrheic dermatitis (2.63%) were the most frequent clinical diagnoses in the current study. **Conclusion:** Without invasive surgery, dermoscopic results serve to narrow the differential diagnosis. Nail dermoscopy should consequently be a frequent part of every patient's routine evaluation.

INTRODUCTION

Scaly papules and plaques are symptoms of a group of illnesses collectively referred to as papulosquamous dermatoses. The illnesses that fall into this category range from syphilis to self-resolving pityriasis rosea and from inflammatory skin conditions like psoriasis to treatment-resistant parapsoriasis.[1]

These illnesses exhibit acute to chronic patterns that can last for weeks, months, or even years. The spectrum ranges from inflammatory conditions with a relapsing-remitting pattern, like psoriasis, through self-limiting conditions, like pityriasis rosea, to conditions that are resistant to treatment, like parapsoriasis.[2,3]

Dermoscope has also been referred to as an episcope, a skin surface microscope, and an epiluminence microscope.[4] It operates on the "transillumination" principle, which entails analysing the lesion under a high magnification to see fine details. So creating a connection between microscopic dermatopathology and macroscopic clinical dermatology.[5] There are significant differences in clinical appearance, management, and prognosis between papulosquamous diseases in children and adult dermatoses. Clinical diagnosis of atypical variations results in time and expense savings as well as frequently avoiding the need for a biopsy. The purpose of the current study was to examine different papulosquamous conditions and related dermoscopy in young patients at a tertiary hospital.

MATERIALS AND METHODS

Study was carried out at Department of Dermatology, Venereology & leprology, Mamata Medical College, Khammam, India, the current study was carried out as a prospective observational study in the department of dermatology, venereology, and leprology. The study lasted two years (July 2018 to June 2019). The institutional ethical committee approved the study.

Inclusion Criteria

- Children between the ages of 2 and 14 who are referred from the paediatric department or who are presenting to the outpatient department of the department of dermatology, venereology, and leprology with papulosquamous disorders that have been clinically diagnosed, with parental consent to participate.

Exclusion Criteria

- Children with papulosquamous illnesses have been diagnosed and are receiving therapy for the condition.,
- Children whose parents did not give the consent.

Parents were informed about the study and given signed agreement to participate. A thorough medical history, including the duration, start, symptoms, and recurrence of the illness, as well as information on any prior medical conditions and drug use, was obtained. Information on prior fever, sore throat, and vaccination history was recorded.

For each instance, a clinical and dermatological examination was completed, including checks of the hair, nails, oral, and vaginal mucosa. Diagnoses of several papulosquamous disorders were determined based on the cases' clinical and morphological appearance. In cases where the clinical diagnosis was uncertain or there were unusual presentations, necessary investigations were performed. If necessary, a biopsy sample was collected from the skin lesions and sent for histological analysis.

A portable polarised Heine's Delta 20 dermoscope was used for dermoscopic evaluation, and a Canon 1200D DSLR camera was used to capture digital dermoscopic images. Microsoft Excel was used to collect and compile the data, and SPSS 23.0 was used to analyse it. Descriptive statistics were used in the statistical analysis.

RESULTS

The OPD of the Department of Dermatology, Venereology, and Leprology, as well as children who were referred from the paediatric department, totaled 114 children during the study period. Majority were from 6-9 years age group (40.35 %) & were female (56.14 %).

For papulosquamous disorders and their dermoscopy in children Common anatomical sites involved were upper limb (78.07 %), lower limb (58.77 %), back (50 %), trunk (47.37 %), scalp (23.68 %), neck (7.89 %), oral mucosa (5.26 %), face (3.51 %) & genital mucosa (1.75 %).

In present study, common clinical diagnosis was psoriasis (37.72 %), Gianotti-Crosti syndrome (19.30 %), lichen planus (16.67 %), pityriasis rosea (11.40 %), lichen nitidus (8.77 %), lichen striatus (3.51 %) & seborrheic dermatitis (2.63 %).

Table 1: General characteristics

Characteristic	No. of cases	Percentages
Age in years		
2-5	25	21.93%
6-9	46	40.35%
10-14	43	37.72%
Gender		0.00%
Male (%)	50	43.86%
Female (%)	64	56.14%

Table 2: Anatomical site involved

Lesion side	Frequency	Percentage (%)
Upper limb	89	78.07%
Lower limb	67	58.77%
Back	57	50.00%
Trunk	54	47.37%
Scalp	27	23.68%
Neck	9	7.89%
Oral mucosa	6	5.26%
Face	4	3.51%
Genital mucosa	2	1.75%

Table 3: Clinical diagnosis.

Clinical diagnosis	Number of patients	Percentage
Psoriasis	43	37.72%
Gianotti-Crosti syndrome	22	19.30%
Lichen planus	19	16.67%
Pityriasis rosea	13	11.40%
Lichen nitidus	10	8.77%
Lichen striatus	4	3.51%
Seborrheic dermatitis	3	2.63%

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DISCUSSION

In general practice, skin disease accounts for a substantial part of morbidity in children and adolescents, and often poses a diagnostic dilemma for pediatrician and hence they are referred to dermatologist for expert opinion. Psoriasis and lichen planus are two chronic dermatoses that have a severe morbidity and psychological toll. The socioeconomic position, dietary practises, climate, and external environment all have a significant impact on the pattern of skin problems in children.[6]

Many different skin conditions are encountered in children, and their presentation and prevalence vary according to climatic, cultural, and socioeconomic factors. Clinical signs in children with papulosquamous illnesses might vary greatly. These include syphilis and skin inflammations in children like lichen planus.

A dermoscope is a non-invasive diagnostic tool that shows subtle clinical patterns of skin lesions and subsurface skin structures that are typically hidden from the naked eye. The basic function of a dermoscope is similar to that of a magnifying lens, but it also has the ability to take pictures and has an internal illumination system that can analyse structures as deep as the reticular dermis.

Papulosquamous diseases made up 2.9% of all paediatric (2–14 years old) dermatoses in the study by Gandhi J et al. Psoriasis (31.6 percent prevalence) was the most prevalent papulosquamous disorder, followed by lichen planus (18.9 percent) and Gianotti-Crosti syndrome (18.9 percent). The age group from 11 to 14 years old had the highest frequency of papulosquamous illnesses, and there were 1.48 times more boys than females overall.

The eight different papulosquamous conditions examined by Smita P et al. included Lichen planus (28.14 percent), Pityriasis rosea (25.49 percent), Seborrheic dermatitis (19.61 percent), Psoriasis vulgaris (16.67 percent), Lichen striatus (3.92 percent), Pityriasis rubra pilaris (3.92 percent), and Lichen nitidus Pityriasis lichenoides chronica, acrodermatitis enteropathica, and erythroderma were not present.

In a study of papulosquamous dermatoses in adults,[1] the total male to female ratio was 1.54:1. There were 139 (60.7%) males and 90(39.3%) females. The age range that was most frequently impacted by papulosquamous dermatoses was 31 to 50. The clinical pattern identified was psoriasis 49.3 percent, lichen planus 24.5 percent followed by pityriasis rosea 10.5 percent. Lichen nitidus (1.3%) and pityriasis rubra pilaris (1.3%) were the least frequent papulosquamous illnesses (1.3 percent). The most prevalent types of psoriasis and lichen planus were, respectively, chronic plaque and classical.

In the study by Prachita Singh et al,[9] on pityriasis rosea in youngsters, they found that males were more likely to get the condition than females and that those between the ages of 11 and 20 were most commonly affected. The lesions, which ranged in size from 2 to 5 cm and affected the trunk, abdomen, back, and arm, were more frequent during the winter and rainy season. The heraldic patches, which varied in shape from oval to round and had a periphery collarette of scales, were distributed symmetrically in the shape of a Christmas tree.

In their analysis of the major role that backdrop colour, vessel type, vessel pattern, scale colour, scale distribution, and wikhams striae had in the diagnosis, Praneet A et al. Psoriasis was diagnosed by dermoscopic examination in 87 cases (87.7%), eczema in 48 cases (84.2%), lichen planus in 56 cases (93.3%), and pityriasis rosea in 21 cases (84%) An overall 88.3 percent favourable clinico-histopathological and dermoscopic association was found.[10]

Dermoscopic findings must obviously be interpreted in light of the patient's complete clinical history (personal/family history, number, location, morphology, and distribution of lesions, etc.), as only the combination of such data can significantly increase the diagnostic accuracy in the field of general dermatological disorders.[11]

There are very few studies that describe the clinical patterns of this group of disorders in children. Further investigation in this area is therefore required to accurately diagnose and treat juvenile papulosquamous diseases, thereby reducing the disease burden and enhancing patient care.

CONCLUSION

The treatment of papulosquamous illnesses in children must differ from the treatment of dermatoses in adults due to significant changes in clinical presentation, prognosis, and treatment. Without invasive surgery, dermoscopic results serve to narrow the differential diagnosis. Nail dermoscopy should consequently be a frequent part of every patient's routine evaluation.

REFERENCES

1. Varma K, Kumar U, Kumar V. Clinical pattern of papulosquamous dermatoses: an observational study conducted at tertiary care center, Ujjain, Madhya Pradesh, India. Int J Res Dermatol 2020;6:230-6.
2. Feig JL, Cohen BA: Papulosquamous eruptions. Paediatric Dermatology, 5th edn. Cohen BA (ed): Elsevier, Philadelphia; 2022. 68-107.
3. Dhar S, Banerjee R, Agrawal N, Chatterjee S, Malakar R: Psoriasis in children: an insight. Indian J Dermatol. 2011, 56:262-5. 10.4103
4. D' Costa G, Bharambe BM; Spectrum of noninfectious erythematous, papular and squamous lesions of the skin. Indian J Dermatol 2010;55(3): 225-8.
5. James WD, Berger TG, Elston DM. Pityriasisrosea. In: Andrews' Diseases of the Skin: Clinical Dermatology, 10th edn. Philadelphia: Elsevier Saunders, 2006; 208–9.
6. Karthikeyan K, Thappa DM, Jeevankumar B. Pattern of pediatric dermatoses in a referral center in South India. Indian Pediatr 2004;41(4):373-7
7. Gandhi J, Agrawal S, Gupta S, et al. (January 13, 2022) Pattern of Papulosquamous Disorders in Children: A Clinico-

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Epidemiological Study. Cureus 14(1): e21194. DOI 10.7759/cureus.21194
8. Smita Prasad, Pankaj Tiwari, Anupama Singh, A Cross Sectional Descriptive Study of Various Papulosquamous Disorders and their Dermoscopy in Children, European Journal of Molecular & Clinical Medicine (EJMCM), 09 (03), 2022
9. Prachita Singh., et al. "The Clinico-Pathological and Dermascopic Study on Pityriasis Rosea". Acta Scientific Dermatology and Venereology 1.1 (2021): 01-13.
10. Zalaudek I, Lallas A, Moscarella E, Longo C, Soyer HP, Argenziano G. The dermatologist's stethoscope-traditional and new applications of dermoscopy. Dermatol Pract Concept. 2013;3:67–71.
11. Praneet Awake, Shruti Dewang, P.L. Chandravathi, Mir Mubbashir Al, Clinical, pathological and dermoscopic correlation of non-infectious papulosquamous disorders (psoriasis, eczema, lichen planus and pityriasis rosea) of skin-A cross-sectional study, Journal of Pakistan Association of Dermatologists. 2020; 30(4): 563-573.

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