

Original Research

Clinical and histopathological findings of skin lesions in children

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ABSTRACT:

Background: Pediatric patients can present with a wide range of skin diseases. The present study was conducted to determine clinical and histopathological findings of skin lesion in children.

Materials & Methods: The present study was conducted on 82 child patients age ranged 1-14 years. For skin biopsy, 1% lignocaine was given subcutaneously for local anesthesia. Biopsies were taken and preserved in 10% formalin which sent to the pathology department for analysis.

Results: Out of 82 patients, male child were 38 and female child were 44. Age group 1-5 years had 21 patients, 6-10 years had 29 and 11-14 years had 32 patients. The difference was non- significant ($P > 0.05$). Histopathological diagnosis was vascular tumor in 2, nevi in 15, tumor and cysts of epidermis in 11, eczema in 27, neutrophilic dermatoses in 15 and papulosquamous lesion in 12 patients. The difference was significant ($P < 0.05$).

Conclusion: Authors found that most common histopathological findings in child patients were eczema and neutrophilic dermatoses. Biopsy is useful in diagnosis of lesions in children.

Key words: Eczema, Neutrophilic dermatoses, Histopathology.

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INTRODUCTION

Pediatric patients can present with a wide range of skin diseases. Pediatric dermatoses are infectious diseases, papulosquamous disorders, nevi, connective tissue disorders, vascular tumors and malformations, vesiculobullous disorders, etc. In many of these cases, a diagnosis can be made on clinical examination alone.¹ In the real world of clinical medicine, a histologic description and differential diagnosis for a difficult case is often more likely to be useful than a single "specific" diagnosis that may be correct in its own frame of reference but wrong or misleading in the total clinicopathologic context of a particular patient.² Histopathology is the gold standard for most of the dermatologic diagnosis. Skin biopsies are easy to

perform and can be carried out under direct visual control. It assists in the process of codifying patients into disease groups. Skin biopsy is also done for therapeutic, prognostic, and academic purpose.³ Various lesions afflicting the skin range from non-specific dermatoses and inflammatory diseases to neoplastic changes of various components of the skin. Cytology and skin biopsy form the basis of differential diagnosis in clinically similar dermatosis, thereby yielding important information to the pathologist and dermatologist. Though cytopathology was an excellent diagnostic tool in routine dermatologic practice, studies relating to histopathological and cytological correlation are few.⁴ The present study was conducted to determine

clinical and histopathological findings of skin lesion in children.

MATERIALS & METHODS

The present study was conducted in the department of Pediatrics. It comprised of 82 child patients age ranged 1-14 years of both genders. Parents were informed regarding the study and written consent was obtained. Ethical clearance was taken from institute ethical committee.

Data such as name, age, gender etc. was recorded. A through clinical examination was performed in all child patients. For skin biopsy, 1% lignocaine was given subcutaneously for local anesthesia. Biopsies were taken and preserved in 10% formalin which sent to the pathology department for analysis. All the sections were stained with hematoxylin and eosin stain. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 82		
Gender	Male child	Female child
Number	38	44

Table I, graph I shows that out of 82 patients, male child were 38 and female child were 44.

Graph I Distribution of patients

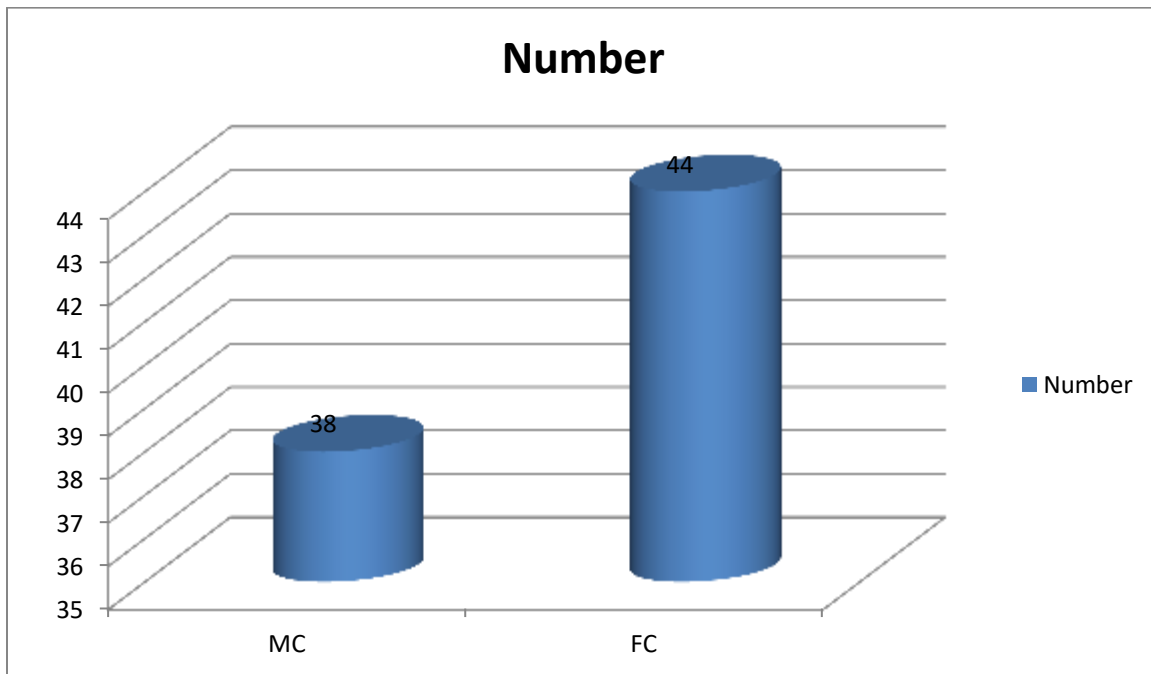


Table II Age wise distribution

Age group (Years)	Number	P value
1-5	21	0.12
6-10	29	
11-14	32	

Table II, graph II shows that age group 1-5 years had 21 patients, 6-10 years had 29 and 11-14 years had 32 patients. The difference was non- significant (P> 0.05).

Graph II Age wise distribution

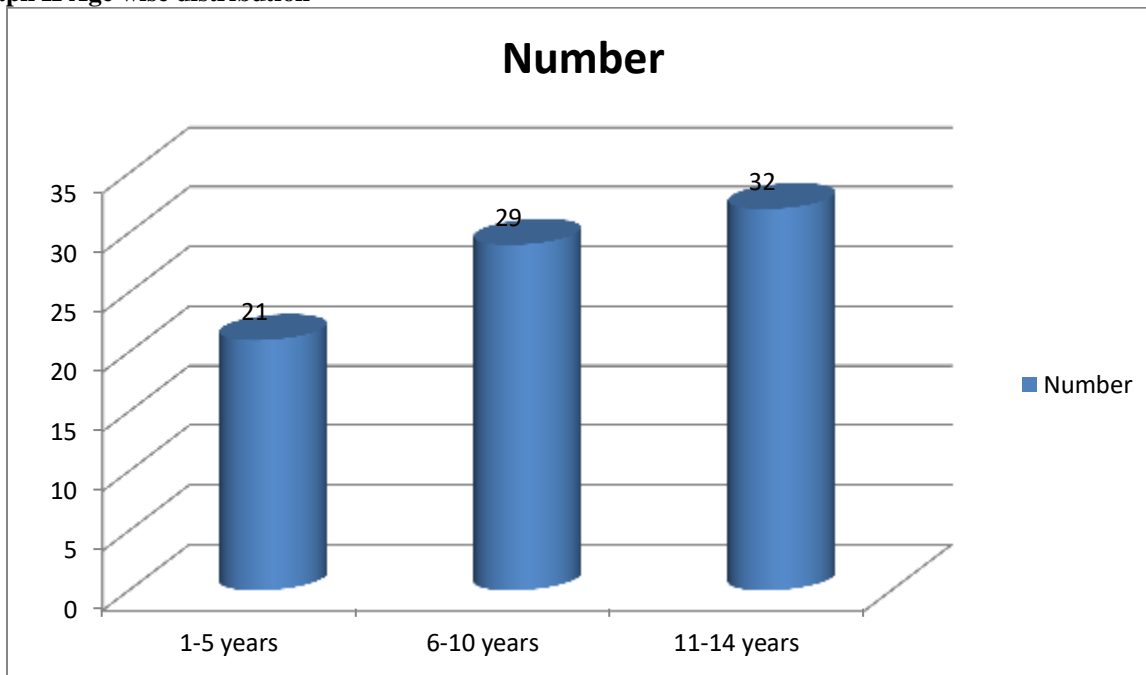


Table III Histopathological diagnosis

Diagnosis	Number	P value
Vascular tumor	2	0.02
Nevi	15	
Tumor and cysts of epidermis	11	
Eczema	27	
Neutrophilic dermatoses	15	
Papulosquamous lesion	12	

Table III, graph III shows that histopathological diagnosis was vascular tumor in 2, nevi in 15, tumor and cysts of epidermis in 11, eczema in 27, neutrophilic dermatoses in 15 and papulosquamous lesion in 12 patients. The difference was significant ($P < 0.05$).

DISCUSSION

Skin biopsy is a common procedure in practice. The cost-benefit ratio, though, can be unfavorable if attention is not paid to specific details in performing a skin biopsy. For example, proper selection of anatomical site and best lesion to perform a biopsy are very important.⁵ Punch biopsy with 3 or 4 mm are ideal for inflammatory and infectious diseases that are manifested by rash, spots, papules, plaques, points, vesicles, blisters, purpura, exulceration and ulcers. Some authors recommend 2 mm punch for the diagnosis of any skin lesion, because they do not find statistical difference when compared to clinical pathology results obtained by elliptical biopsy.⁶ However, we should bear in mind that 2 mm lesion sampling is too small and a skin fragment of this size may cause problems for the histology processing. In the case of more palpable than visible inflammatory

lesions, we recommend 5 mm punch or greater, or biopsy with knife, including deep reticular dermis and hypodermis, especially for the diagnosis of panniculitis.⁷ The present study was conducted to determine clinical and histopathological findings of skin lesion in children.

In present study, out of 82 patients, male child were 38 and female child were 44. Age group 1-5 years had 21 patients, 6-10 years had 29 and 11-14 years had 32 patients. The difference was non-significant ($P > 0.05$). Sabir et al⁸ evaluated cytopathology as a quick non-invasive method for early diagnosis of bullous lesions, neoplastic and preneoplastic skin lesions and to correlate the clinical, cytological and histopathological findings of various skin lesions. Eighty five patients of skin lesions were included in the study. Skin scraping, Tzanck smears, slit smears and fine needle aspiration cytology (FNAC) were done to obtain material for

cytological examination. Excisional biopsy, incisional biopsy and punch biopsy were done to obtain tissue for histopathological examination. The slides were stained with routine stains and special stains as and when required. Of the 85 patients, 45 were males and 40 females. The most common non-neoplastic lesions observed were vesicobullous lesions which comprised of 41 cases followed by neoplastic lesions which consisted of 24 cases, of which six were benign and 18 malignant. Concordant results between cytology and histopathology was seen in majority (91.7%) of lesions studied. Cytology (scrape/imprint/slit smears and FNAC), performed skillfully and with perfection, leads to an early diagnosis in majority of the lesions, as the observed cytomorphological features of various skin lesions were fairly distinctive making cytology a fairly sensitive 'patient compliant' technique for rapid diagnosis of skin lesions.

We found that histopathological diagnosis was vascular tumor in 2, nevi in 15, tumor and cysts of epidermis in 11, eczema in 27, neutrophilic dermatoses in 15 and papulosquamous lesion in 12 patients. Powell et al⁹ recognized clinical and histopathological relevance in different pediatric dermatoses and to compare the results. A total of 85 skin biopsies were taken. Of these, female were 48 (56.47%). Main diseases diagnosed during the study were bacterial diseases – 20 (23.52%), noninfectious papulosquamous lesions – 13 (15.29%); nevi, vascular tumors and malformations, and viral diseases were 6 (7.05%) each. In a study by Jindal et al¹⁰ 33.12% of cases had lepromatous leprosy and 5.52% of cases had tuberculoid leprosy.

CONCLUSION

Authors found that most common histopathological findings in child patients was eczema and neutrophilic dermatoses. Biopsy is useful in diagnosis of lesions in children.

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