

The Spectrum Of Infectious Dermatoses In Children: A Clinical Study Of 120 Cases

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Abstract: Background & Objective: Skin diseases are significant health problems in the paediatric age group, affecting not only the growth and development of children but also causing considerable morbidity. Bacteria, fungi, and viruses are responsible for many of these infections, with Fungal playing a major role. The aim is to assess the prevalence and clinical features of various infectious paediatric dermatoses in rural tertiary care center. Material and Method: Study was conducted on 120 children with infectious dermatoses aged below 14 years attending the Department of D.V.L. Bhavsinhji General hospital (GMERS) Porbandar. Result and Conclusion: A total of 120 cases were studied, showing a male preponderance (61.67%) and M: F 1.60:1 ratio. The most common infections observed in the present study were Fungal infection followed by Bacterial infections and Viral infections. The majority of infectious skin conditions were fungal infections (56.67%), with the most common being dermatophytosis (52.94% of fungal infections). Bacterial infections comprised 36.66% of all infections, with the most common being Impetigo (27.27%). Viral infections accounted for 37% of all infections, with Molluscum contagiosum being the most common (39.1%). The findings indicated an upward trend in fungal infections.

Keywords: Paediatric, Infectious, Dermatoses

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Introduction: Skin diseases are significant health problems in the paediatric age group, affecting not only the growth and development of children but also causing considerable morbidity. These conditions present a substantial challenge to dermatologists, paediatricians, and primary care physicians. Paediatric infectious dermatoses are distinct group of disorders, comprising of skin problems encountered during childhood and adolescence.

Skin infections constitute a large percentage of skin diseases in India. Bacteria, fungi, and viruses are responsible for many of these infections, with Fungal playing a major role.

As the age advances, the skin matures, immune response of the body develops and a child receives vaccination for various infectious diseases. If there's a dysfunction at any of these, the child gets more prone to infections. Various epidemiological studies have been undertaken across the world including India to study the pattern of paediatric dermatoses.

Material and Methods: Study was conducted on 120 children with infectious dermatoses aged below 14 years attending the Department of D.V.L. Bhavsinhji General hospital (GMERS) Porbandar.

Inclusion criteria: All clinically diagnosed cases of infectious dermatoses aged below 14 years of age attending outpatient department were included. Data collection: Informed and valid written consent was obtained from the parents, and clinical data was recorded as per the proforma.

A detailed history was taken, and a complete clinical examination was conducted. All patients underwent routine investigations, and special investigations were performed whenever necessary. The patients were divided into three groups: < 1 month (neonate), 1 month–5 years (toddler), and 5 years–14 years (school-going). This was a hospital-based cross-sectional and clinical observational study conducted from September 2024 to November 2024.

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Result: A total of 120 cases were studied, showing a male preponderance (Table 1) and M: F 1.60:1 ratio. The most common infections observed in the present study were Fungal infection followed by Bacterial infections and Viral infections. The majority of infectious skin conditions were fungal infections, with the most common being dermatophytosis followed by Pityriasis versicolor. Dermatophyte infections were observed in 52.92% of total cases, with the highest incidence found among school going children.

Table No.-1: Sex distribution.

AGE	NUMBERS	PERCENTAGE (%)
Neonate-1 month	2	1.66%
1 month-5 years	24	20%
5 years-14 years	94	78.33%

Bacterial infections comprised 36.66% of all infections, with the most common being Impetigo followed by Ecthyma and furunculosis. The age distribution of cases is shown in Table 2.

Table No.-2: Age distribution.

AGE	NUMBERS	PERCENTAGE (%)
Neonate-1 month	2	1.66%
1 month-5 years	24	20%
5 years-14 years	94	78.33%

Viral infections accounted for 37% of all infections, with Molluscum contagiosum being the most common, followed by viral warts and Pityriasis rosea. Fungal infections predominantly affecting age group of 5-14 years, who comprised the majority of affected patients. The prevalence of Bacterial infections was 36.66% with male children predominance.

In the study, fungal infections were most common, comprising 56.67% of all the infectious dermatoses. Bacterial infections and Viral infections comprised of 36.66 % and 6.67% respectively (Table 3).

Table-3: Spectrum of diseases.

Category	Number	Percentage (%)
Fungal infections	68	56.67%
Bacterial infections	44	36.66%
Viral infections	8	6.67%

Among the fungal infections, dermatophyte infection was the most common followed by Pityriasis versicolor and Candidiasis (Table 4).

Table-4: Distribution of fungal infections.

Fungal infections	Number	Percentage (%)
Tinea corporis	23	33.82%
Tinea cruris	10	14.70%
Tinea faciei	2	2.94%
Tinea capitis	1	1.47%
Pityriasis versicolor	29	42.64%
Candidiasis	3	4.41%
Total	68	

Impetigo was the most common bacterial infection followed by Ecthyma and furunculosis (Table-5).

Table-5: Distribution of Bacterial disease.

Bacterial infections	Number	Percentage (%)
Impetigo	12	27.27%
Ecthyma	10	22.72%
Furunculosis	9	20.45%
Folliculitis	9	20.45%
Intertrigo	4	9.09%
Total	44	

Among the viral infections, most common infection was Molluscum contagiosum, followed by Chicken pox and pityriasis rosea (Table 6)

Table-6: Distribution of viral infections.

Viral infections	Number	Percentage (%)
Molluscum contagiosum	3	37.5%
Chicken pox	2	25%
Pityriasis rosea	2	25%
Warts	1	12.5%
Total	8	

Discussion: Skin diseases are a significant health concern in the pediatric population, contributing to considerable morbidity. These conditions can be either transient or chronic, with some being recurrent. Cutaneous infections are particularly prevalent among children during the school-age years. Skin issues that arise during the first few weeks of life can often be alarming, even for experienced neonatologists and paediatric

dermatologists. Early recognition and management are essential to prevent complications and ensure the well-being of the child.

Figure-1: Tinea corporis



Figure-2: Impetigo



Figure-3: Molluscum Contagiosum



Figure-4: Chicken Pox



Newborn skin differs from adult skin in several key ways, making infants more vulnerable to thermal instability, skin damage, percutaneous infections, and toxicity from topical agents. In developing nations, the hot and humid climate further increases the risk of infectious dermatoses. Additionally, poor sanitation and low socioeconomic status are significant factors that contribute to the higher prevalence of paediatric infectious skin conditions.

The prevalence of infectious dermatoses varied across different age groups in the present study. Fungal infections were most commonly observed in both the neonatal age group and the 5-14 years age group (school-aged children). In contrast, bacterial infections were the most prevalent in the >1 month-5 years age group (toddlers), followed by fungal infections.

Fungal infections of the skin constituted 56.67% of the total infections. Dermatophyte infections were the most common among these infections making up to 52.94%. Tinea corporis was found in a significant number of children forming 63.89% of dermatophyte infections and 29.3% of all fungal infections followed by Tinea cruris. These findings supported by other studies Patel et al. (7.81%).¹ Thappa et al (8.49%)², Sharma et al³ and Ben Saif and Al Shehab et al.⁴

Overall in the study, bacterial infections constituted 36.66 % of the total infections compared to other study like Patel et al. (24.90%)¹ and Thappa et al (25.64%).² Impetigo was the most common bacterial infection with 27.27% of total bacterial infections, followed by Ecthyma with 22.72%.

Pyoderma was the single most common dermatoses found out by Bhatia et al⁵ and Ghosh et al.⁶

The viral infections constituted 6.67% of the total infections. Molluscum contagiosum was the most common viral disease constituting 37.5% of these infections. Karthikeyan et al.⁷ in their study observed that incidence of molluscum contagiosum was 2.5% in children aged 1 to 15.⁷

Second most common viral infection in the present study was Chicken Pox, which constituted 25% of viral infections. Pityriasis rosea was the

next common viral infection with 25% of viral infections.

Conclusion: The present study aimed to examine the spectrum of infectious dermatoses in the paediatric population within a rural healthcare setting. The findings indicated an upward trend in fungal infections, likely influenced by host-related factors and transmission through direct contact. Conversely, bacterial infections showed a downward trend, which aligns with broader societal trends, possibly due to improved access to antibiotics and better healthcare facilities in rural areas. However, further large-scale, population-based studies are needed to obtain more accurate and comprehensive findings.

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Conflict of interest: None
Funding: None
Cite this Article as: Pandit R, Mona R, Purohit, Chavda N, Patel B, Bhuptani N. The Spectrum Of Infectious Dermatoses In Children: A Clinical Study Of 120 Cases. <i>Natl J Integr Res Med</i> 2026; Vol.17(2): 5-8