

# Prevalence of Non - Infective Dermatoses in Genital Region in Children of 1-18 Years of Age.

Sreedevi L<sup>1</sup>, Balarami Reddy K<sup>1</sup>, Suryanarayana S<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of DVL, Govt. Medical College, Anantapuramu, Andhra Pradesh.

<sup>2</sup>Professor & HOD, Department of DVL, Govt. Medical College, Anantapuramu, Andhra Pradesh.

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## ABSTRACT

**Background:** Dermatoses is a term that refers to diseases of the integumentary system. The external genitalia are a common site for rashes, itching, and minor infections. This area is warm, moist, and occluded, and it is frequently exposed to irritating urine, feces, and vaginal secretions. We aimed at know the prevalence and patterns of genital region noninfectious dermatoses among children, with its epidemiological factors. **Methods:** In this hospital based cross sectional study children of either sex in the age group of 1-18 years presented with features of noninfectious dermatoses were included. Localized skin lesions were examined carefully and systemic features also observed. **Results:** Non Infective dermatoses were seen in 14.8% (63) of total dermatoses cases. Phrynoderma (36.5%) was the most common followed by Vitiligo Vulgaris (15.8%), Eczema (14.2%), P.alba (6.3%), Fordyce spots (4.7%) Lichen Planus (3.1%), Lichen Striatus (3.1%), Haemangioma (7.9%), Traumatic ulcer (4.7%) Phimosis (1.5%), and Burns (1.5%). **Conclusion:** Noninfectious dermatoses significantly involve genital region, with varied presentations making the diagnosis difficult. Precise clinical insight into exact diagnosis, helps to provide accurate treatment.

**Keywords:** Children, Genital region, NonInfectious dermatoses.

## INTRODUCTION

Dermatoses is a term that refers to diseases of the integumentary system. They are of two types based on the sexual transmission ability: venereal dermatoses and nonvenereal dermatoses. Noninfectious dermatoses can affect any body sites, express wide varied etiology.<sup>[1]</sup>

The external genitalia are a common site for rashes, itching, and minor infections. This area is warm, moist, and occluded, and it is frequently exposed to irritating urine, feces, and vaginal secretions.<sup>[2]</sup>

In our country 100-150 million children are of school going age. Children are more prone to develop skin disorders. Though these are not responsible for mortality they do cause significant morbidity. It is a useful tool to detect prevalence of various skin diseases and status of health and hygiene of society.

In developing countries 70% of people suffer from skin diseases in some part of their life. Skin diseases in children have been reported from 9-37% in various studies.<sup>[3]</sup>

Based on pathogenesis nonvenereal dermatoses classified into five groups: Inflammatory diseases (psoriasis, seborrheic dermatitis, lichen planus), infections and infestations (scabies, dermatophytosis), congenital disorders (median raphe cyst), benign abnormalities (angiokeratoma of Fordyce, sebaceous cyst), premalignant and malignant lesions (erythroplasia of Queyrat, Squamous cell carcinoma).<sup>[4]</sup>

We aimed at know the prevalence and patterns of genital region noninfectious dermatoses among children, with its epidemiological factors.

## MATERIALS AND METHODS

This study is about Non Infective Dermatoses in Genital region among children aged about 1-18 years. A prospective analysis during the period July 2015 to June 2016 done at the Department of Dermatology, Venereology and Leprology, Government Medical College/General Hospital, Anantapuramu.

In this hospital based cross sectional study children of either sex in the age group of 1-18 years presented with features of noninfectious dermatoses were included. Informed consent has taken from all the patients included in this study.

Details pertaining to history and examination were collected. Patient details such as name, age, sex, literacy, socioeconomic status, address, family

### Name & Address of Corresponding Author

Dr. Balarami Reddy K,  
Assistant Professor,  
Department of DVL,  
Govt. Medical College,  
Anantapuramu,  
Andhra Pradesh

history of skin diseases, detailed history regarding predisposing factors were noted. Localized skin lesions were examined carefully and systemic features also observed. Data is represented in the form of tables, bar diagrams & pie diagrams.

**RESULTS**

During the study period a total of 425 children attending Outpatient department of Dermatology, Venereology & Leprology, diagnosed as Genital dermatosis were examined. Of these 425 children presented to the Department of DVL, noninfectious dermatoses in genital region were 63(14.8%). In this study a total of 63 Non Infectious dermatoses children were considered. Non Infective dermatoses were seen in 14.8% (63) of total dermatoses cases. Phrynoderma (36.5%) was the most common followed by Vitiligo Vulgaris (15.8%), Eczema (14.2%), P.alba (6.3%), Fordyce spots (4.7%) Lichen Planus (3.1%), Lichen Striatus (3.1%), Haemangioma (7.9%), Traumatic ulcer (4.7%) Phimosis (1.5%), and Burns (1.5%) [Table 1, Figure 1].

**Table 1: Non-Infective Genital Dermatoses**

Non Infective dermatoses	No. of cases	Percentage (%)
Phrynoderma	23	36.5
Vitiligo vulgaris	10	15.8
Eczema	9	14.2
P. alba	4	6.3
Fordyce spots	3	4.7
Burns	1	1.5
Lichen planus	2	3.1
Lichen Striatus	2	3.1
Haemangioma	5	7.9
Phimosis	1	1.5
Traumatic ulcer	3	4.7
Total	63	100%



**Figure 1: Segmental Vitiligo and traumatic ulcer in children**

In this present study, Phrynoderma and Genital vitiligo was the most common non infective

dermatoses in all age groups. Among 1-3 years children, P.alba and Haemangioma was most commonly observed. Phrynoderma is the most commonly observed noninfectious dermatoses which is predominantly observed in the age group of 6-9 years [Table 2].

**Table 2: Non Infective Dermatoses and Age**

Non-Infective Dermatoses	Age group in years								Total	%
	1-3	%	3-6	%	6-9	%	7-8	%		
P.alba	3	4.7	1	1.5	0	0	0	0	4	6.3
Burns	0	0	0	0	0	0	1	1.5	1	1.5
Eczema	0	0	5	7.9	3	4.7	1	1.5	9	14.2
Fordyce Spots	1	1.5	0	0	0	0	2	3.1	3	4.7
Haemangioma	3	4.7	1	1.5	0	0	1	1.5	5	7.9
Lichen planus	0	0	2	3.1	0	0	0	0	2	3.1
Lichen striatus	0	0	0	0	1	1.5	1	1.5	2	3.1
Phimosis	1	1.5	0	0	0	0	0	0	1	1.5
Phrynoderma	0	0	4	6.3	1	1.5	17	25.9	23	36.5
Traumatic ulcer	0	0	3	4.7	0	0	0	0	3	4.7
Vitiligo	0	0	3	4.7	3	4.7	4	6.3	10	15.8
Total	8	12.7	19	30.1	18	28.5	18	28.5	63	100

Phrynoderma(25.93%), Pityriasis alba (7.41%) and Eczema (%) were the most common non-infective dermatoses in male children. In female children, Phrynoderma(11.11%) , vitiligo(18.52%) and eczema (%) were most commonly seen [Table 3].

**Table 3: Non Infective Dermatoses and SEX.**

Non-Infective Dermatoses	SEX				Total	%
	Male	%	Female	%		
P.alba	4	6.3	0	0	4	6.3
Burns	1	1.5	0	0	1	1.5
Eczema	4	6.3	5	7.9	9	14.2
Fordyce Spots	2	3.1	1	1.5	3	4.7
Haemangioma	2	3.1	3	4.7	5	7.9
Lichen planus	1	1.5	1	1.5	2	3.1
Lichen striatus	1	1.5	1	1.5	2	3.1
Phimosis	1	1.5	0	0	1	1.5
Phrynoderma	16	25.3	7	11.1	23	36.5
Traumatic ulcer	3	4.7	0	0	3	4.7
Vitiligo	3	4.7	7	11.1	10	15.8
Total	38	60.3	25	39.6	63	100

Phrynoderma (31.7%) & Vitiligo (14.2%) were most common non-infective dermatoses in low socio-economic class children whereas Phrynoderma & Vitiligo were more common (12.6%) in middle socio-economic class.

Phrynoderma (34.9%) & Vitiligo (14.2%) were most common non-infective dermatoses in rural children. Phrynoderma & Vitiligo were (11.1%) in semi urban children.

Out of 63 children with non-infective dermatoses, 90.4% were wearing under garments and 9.5% were not using under garments.

All children with non-infective dermatoses were non-residents of hostel.

## DISCUSSION

The pattern of skin diseases varies from one country to another and across different parts within the same country in particular in India where customs, religions, languages, climate and socio-economic conditions vary across different parts of the country. Due to lack of education, patients may not report for treatment unless compelled by the severity of the symptoms. Up to 80% of the populace suffering from skin problems may not seek medical help.<sup>[5]</sup>

An epidemiologic study from Garhwal, a hilly area of Uttar Pradesh in children <14 years showed that pediculosis capitis (22.6%) was the most common dermatoses, being three times more common in girls, followed by pyoderma (15.4%), pityriasis alba (10.4%) and eczema (8.1%).<sup>[6]</sup> Nutritional deficiency dermatoses (17.5%) were also common in this region [common manifestations included sparse hair (6.2%) and pigmented skin (7%).<sup>[7]</sup>

A retrospective study from a large pediatric hospital in Delhi documented as the most common skin diseases as a group were infections and infestations (47.15%), dermatitis (26.95%), hypersensitivity/drug reactions (9.42%), physical factor-induced dermatoses (6.50%), noninfective and autoimmune dermatoses (4.27%), and birthmarks and other common genetic disorders (2.13%).<sup>[8]</sup>

In our study, 55.5% of children with genital dermatoses belonged to medium socio economic status & 44.4% to low socio-economic status. None were from high socio-economic status. This is probably due to not attending of the high socio-economic status children to Government Hospitals and because of affordability to consult a private doctor, and not able to wait for prolonged waiting hours or due to increased standard of living and personal hygiene in high socio-economic status. Poor standard of living in low socio-economic status may be a reason for increased dermatoses in low socio-economic status and because of more number of children of middle and low socio-economic status attending to Government hospitals.

Out of 63 children with non-infective dermatoses, 90.4% were wearing under garments and 9.5% were

not using under garments. Lack of education and poor hygiene in rural areas contribute to this increased prevalence.

Karthikeyan K et al,<sup>[9]</sup> found in his study the overall prevalence, reported as 14.1 per 10000. Out of 25 non venereal dermatoses patients, most common disorder was Genital vitiligo, sebaceous cyst of scrotum followed by scabies, ariboflavinosis.

Negi KS et al,<sup>[7]</sup> in his study found that pityriasis alba (10.4%) and eczema (8.1%) which is not correlating with our study.

Saraswat PK et al,<sup>[10]</sup> did a study at Gwalior on Non venereal genital dermatoses of males, most common disorders were vitiligo (18%), pearly penile papule (16%), fixed drug eruptions (12%), scabies (10%), scrotal dermatitis (9%) and lichen planus (9%).

Skin conditions are difficult to diagnose need dermatologist opinion for appropriate treatment. Nonvenereal dermatoses is one such condition need of expertise will help to differentiate venereal and nonvenereal dermatoses.

## CONCLUSION

Nonvenereal dermatoses diagnosis is a quite challenging task, as it has wide different etiologies. Lesions over genital region create more mental stress and lack of concentration on works. Overanxious about the future consequences due to genital skin lesions leads individuals to get depress. Noninfectious dermatoses significantly involve genital region, with varied presentations making the diagnosis difficult. Precise clinical insight into exact diagnosis, helps to provide accurate treatment.

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