

A RETROSPECTIVE STUDY OF THE PATTERNS OF VIRAL DERMATOSES AMONG PATIENTS ATTENDING A TERTIARY CARE CENTRE IN JHARKHAND

Dermatology

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ABSTRACT

Background: Viral dermatoses constitute a significant proportion of dermatological consultations in tropical regions. Region-specific epidemiological data from eastern India, particularly Jharkhand, remain scarce. **Aim:** To study the prevalence, demographic profile, and clinical patterns of viral dermatoses at a tertiary care centre in Jharkhand. **Materials and Methods:** A retrospective observational study analysed all cases of viral dermatoses recorded in the Dermatology OPD register from March 2025 to February 2026 (n=786). Data on age, sex, diagnosis, season, residence, occupation, socioeconomic status, duration of illness, and associated symptoms were extracted and analysed using descriptive statistics. **Results:** Warts were most common (n=184, 23.4%), followed by pityriasis rosea (n=109, 13.9%), varicella (n=106, 13.5%), erythema multiforme (n=105, 13.4%), herpes simplex (n=87, 11.1%), and herpes zoster (n=79, 10.1%). Males predominated (416, 52.9%; M:F=1.17:1). The 19–45 year age group was most affected (52.9%). October–February season had the highest case load (n=304, 38.7%). Rural residence (56%) and lower-middle socioeconomic class were predominant. **Conclusion:** Warts and varicella dominate viral dermatoses in this Jharkhand tertiary centre. Rural residence and productive age-group predominance highlight region-specific epidemiological patterns requiring targeted public health interventions.

KEYWORDS

Viral Dermatoses, Warts, Varicella, Jharkhand, Retrospective Study, Epidemiology, Pityriasis Rosea, Herpes Zoster.

INTRODUCTION

Viral infections of the skin, caused by Herpesviridae, Poxviridae, and Papillomaviridae, are among the most commonly encountered conditions in dermatological practice worldwide, with clinical patterns ranging from self-limiting to life-threatening in immunocompromised individuals.^[1]

In India, viral skin diseases impose a significant burden on health services, particularly in states with limited healthcare infrastructure.^[2]

Jharkhand, located in eastern India, is a predominantly tribal and semi-urban state with a largely agrarian population. Environmental factors such as a warm and humid climate, overcrowding, poor sanitation, and nutritional deficiencies contribute to a high prevalence of infectious skin disorders including viral dermatoses.

Despite their clinical importance, very few region-specific studies have documented the pattern of viral dermatoses from Jharkhand.^[3]

Most published Indian studies on this topic have been from metropolitan or southern Indian centres, which may not fully reflect the disease burden and unique sociodemographic characteristics of eastern tribal regions. This study was therefore undertaken to identify the prevalence, clinical spectrum, age and sex distribution, seasonal variation, and associated risk factors of viral dermatoses at a tertiary care centre in Jharkhand, to generate region-specific data to guide clinical practice and health policy.

AIMS AND OBJECTIVES

To determine the prevalence, clinical spectrum, age and sex distribution, seasonal variation, and sociodemographic risk factors of viral dermatoses among patients attending the dermatology OPD of a tertiary care centre in Jharkhand.

MATERIALS AND METHODS

Study Design: Retrospective observational study.

Data Source: Dermatology OPD register and case records, Study

Period: March 2025 to February 2026 (12 months), Sample Size: 786 cases of viral dermatoses.

Inclusion Criteria

- (1) Patients of all age groups and both sexes presenting with clinical viral dermatoses.
- (2) Cases recorded in the Dermatology OPD register.
- (3) Patients with a clinical diagnosis of viral skin disease.

Exclusion Criteria

- (1) Non-viral dermatological conditions.
- (2) Patients with inconclusive diagnosis despite clinical and laboratory evaluation.

Variables Recorded: Age, sex, diagnosis, season of presentation, residence (rural/urban/semi-urban), occupation, religion, socioeconomic status (Modified Kuppuswamy scale), duration of illness, progression pattern, and associated symptoms.

Statistical Analysis

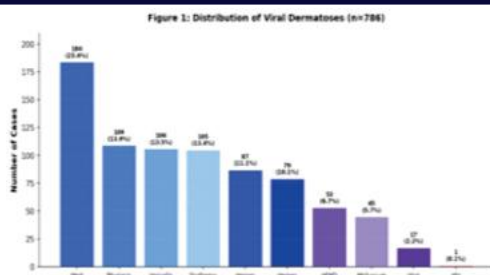
Data were entered and analysed using Microsoft Excel. Descriptive statistics were used. Proportions with 95% confidence intervals were calculated.^[9]

RESULTS

A total of 786 cases of viral dermatoses were analyzed over a 12-month period (March 2025–February 2026). Of these, 416 (52.9%) were male, 357 (45.4%) were female, and 13 (1.7%) had unrecorded sex details, giving a male-to-female ratio of 1.17:1.

1. Disease Distribution

The distribution of viral dermatoses is presented in Figure 1. Warts (*verruca vulgaris/plantaris/plana*) were the most common diagnosis (n=184, 23.4%), followed by pityriasis rosea (n=109, 13.9%), varicella (n=106, 13.5%), erythema multiforme (n=105, 13.4%), herpes simplex (n=87, 11.1%), and herpes zoster (n=79, 10.1%). HFMD contributed 53 cases (6.7%), molluscum contagiosum 45 cases (5.7%), viral exanthem 17 cases (2.2%), and a single case of HIV-associated dermatosis was noted.



Sex Distribution

Males predominated overall (M:F = 1.17:1). However, erythema multiforme (M:F=0.67:1) and pityriasis rosea (M:F=0.95:1) were relatively more common in females.[8] Herpes zoster (M:F=1.32:1), varicella (M:F=1.63:1), and HFMD (M:F=1.79:1) were more frequent in males. Sex distribution is illustrated in Figure 2.

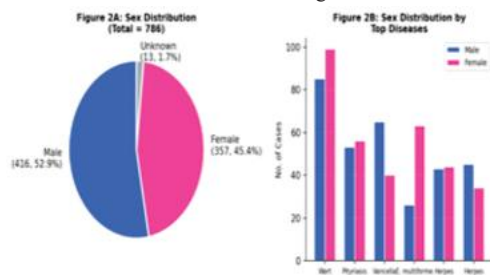


Figure 2: Sex Distribution-Overall (2A) and by Major Diseases (2B)

Seasonal Distribution

October–February was the peak season overall (n=304, 38.7%), followed by July–September (n=289, 36.8%) and March–June (n=193, 24.5%). Warts, varicella, herpes simplex, and herpes zoster peaked in October–February. Pityriasis rosea and HFMD peaked in July–September. The seasonal distribution is shown in Figure 3.

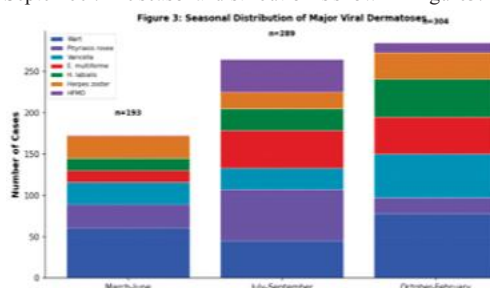


Figure 3: Stacked Bar Chart-Seasonal Distribution of Major Viral Dermatoses

Age Group Distribution

The 19–45 year age group was most affected with 416 cases (52.9%), followed by the >45 years group (n=114, 14.5%), and the 13–18 years group (n=91, 11.6%). Children aged 0–5 years and 6–12 years contributed 83 (10.6%) and 82 (10.4%) cases respectively. HFMD and molluscum contagiosum were disproportionately seen in children ≤12 years, while herpes zoster predominantly affected those above 45 years. Age group distribution is illustrated in Figure 4.

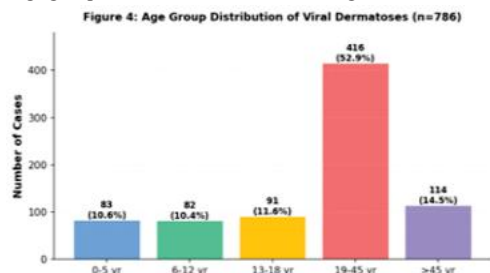


Figure 4: Age Group Distribution of Viral Dermatoses (n=786)

Sociodemographic Profile

Rural patients constituted 56.0% (n=440), followed by urban (n=188,

23.9%) and semi-urban (n=158, 20.1%) residents.^[7] Farmers and labourers were the most common occupational group (42.4%, n=333), reflecting Jharkhand's predominantly agrarian population. Hindus comprised 70.1% (n=551), consistent with state demographics. Lower-middle socioeconomic class (Modified Kuppuswamy scale) accounted for 24.0% (n=189) of patients.

Clinical Features

Duration of illness: 1–4 weeks was most common (45.2%, n=355). Gradual progression was noted in 35.1% (n=276). Itching was the most frequently associated symptom (28.4%, n=223), followed by pain/burning in 18.6% (n=146) and fever in 12.0% (n=94).

DISCUSSION

The findings of this retrospective study reveal a distinct epidemiological profile of viral dermatoses at a tertiary care center in Jharkhand, with warts emerging as the most common condition (23.4%, n=184). This prevalence aligns with Indian studies reporting warts at 25–35% among viral skin infections,^[1] attributed to HPV lesion persistence and frequent specialist referral due to treatment resistance and cosmetic concerns. In contrast to metropolitan centres such as Mumbai where herpes simplex may predominate,^[3] our higher varicella rates (13.5%) reflect Jharkhand's lower VZV vaccination coverage, estimated below 70% in rural eastern India,^[4] coupled with seasonal winter crowding facilitating airborne VZV transmission.

Pityriasis rosea (13.9%) and erythema multiforme showed a summer-monsoon peak (July–September), consistent with HHV-6/7 reactivation triggered by temperature and humidity changes in tropical cohorts.^[5] HFMD peaked in July–September and predominantly affected children below 5 years, highlighting the need for hygiene-based prevention in this age group. Agricultural season stress likely precipitates viral reactivation in the 19–45 year age group (52.9% of cases).

The rural predominance (56.0%) mirrors Jharkhand's 76% rural population (Census 2021),^[7] while the over-representation of farmers/labourers (42.4%) reflects occupation-related microtrauma facilitating HPV inoculation in warts. The male predominance (M:F=1.17:1) parallels national dermatology OPD data,^[8] likely reflecting higher outdoor occupational exposure and healthcare-seeking behaviour in working-age men. Notably, erythema multiforme showed a female predominance (M:F=0.67:1), which may reflect hormonal modulation of immune responses to viral triggers, particularly HSV, as reported in the literature.^[6]

The lower-middle socioeconomic class predominance (24.0%) highlights existing health inequities, as nutritional deficiencies impair cell-mediated immunity and prolong viral infections such as molluscum contagiosum and HPV.^[9] A similar retrospective analysis from Odisha (n=650) reported warts at 28.2% and varicella at 12.5%,^[10] reinforcing an eastern India HPV-VZV axis distinct from southern dermatological patterns where HSV tends to dominate.

These findings carry actionable public health implications: school-based HPV vaccination and cryotherapy outreach for warts; universal varicella vaccination scale-up; and HFMD hand hygiene campaigns during the monsoon season. Limitations include the retrospective design, potential underreporting of mild cases, and selection bias toward referred cases. Strengths include the large sample size (n=786) and comprehensive Jharkhand-specific epidemiological profiling.

CONCLUSION

Warts (23.4%) and varicella (13.5%) dominated viral dermatoses at this Jharkhand tertiary care centre over a 12-month period. The October–February season showed the highest overall burden, while pityriasis rosea and HFMD peaked during July–September. Male predominance, rural residence, productive age group (19–45 years), and lower-middle socioeconomic class were the salient demographic features. These region-specific findings highlight the need for HPV awareness campaigns, varicella vaccination scale-up, and HFMD hygiene promotion in Jharkhand's schools and rural communities. A prospective multicentre study would further strengthen regional epidemiological data.

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