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JUVENILE SPRING ERUPTIONS WITH A TROPICAL TWIST

Dermatology

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ABSTRACT

Juvenile Spring Eruption (JSE) is a photodermatosis typically seen in temperate climates during spring, affecting boys and young men on sun-exposed areas of the ears. We report the case of a 7-year-old boy from southern India who developed recurrent erythematous papules and papulo-vesicles on the helices of both ears during October, coinciding with the rainy season. This atypical presentation highlights how tropical climates, with year-round high ultraviolet (UV) exposure, can alter the classic seasonal pattern of JSE. The diagnosis was supported by clinical morphology and the absence of systemic features. The patient was treated with topical corticosteroids, emollients, and strict sun protection, with favourable resolution. This case underscores the importance of recognizing JSE beyond temperate regions, where continuous UV exposure increases recurrence risk. Year-round sun safety education and early management remain critical to reducing morbidity and improving the quality of life for affected children in tropical settings.

KEYWORDS

Juvenile Spring Eruption (JSE), Photodermatosis in children, Tropical dermatology, Ultraviolet (UV) induced skin disorders, Pediatric photodermatoses, Recurrent erythematous papules, Sun protection in children, Climate impact on skin diseases

INTRODUCTION

Juvenile Spring Eruptions (JSE) are light-induced dermatoses that primarily affect boys and young men during springtime in temperate climate zones. The helices of the ears are the most common site for JSE to appear, as the condition manifests through erythematous papules, papulo-vesicles, vesicles, or crusted lesions. The condition typically resolves on its own within two weeks; however, in severe cases, treatment with topical and oral corticosteroids may be necessary to reduce inflammation and pain. (1)
Historical records show JSE primarily occurs in areas with marked seasonal changes because springtime ultraviolet radiation intensifies in these regions. However, its occurrence in the tropical areas raises intriguing considerations. Tropical climates maintain steady sun exposure throughout the year, which could modify the traditional seasonal patterns and duration of this condition. The study demonstrates the necessity of understanding JSE behaviour in equatorial populations, as their continuous ultraviolet exposure may affect both the frequency and clinical pattern of eruptions.

A young boy from southern India, which falls under the tropical belt, developed recurring skin lesions during the winter season in his region. The case demonstrates how JSE appears beyond its traditional springtime pattern in tropical areas, which results in yearly recurring skin discomfort. The study investigates these cases to expand knowledge about JSE epidemiology and clinical manifestations in tropical dermatology, while promoting specific prevention and management approaches for these geographic areas. (2)

Case Report

Fig (a) & (b) - shows multiple, erythematous papules and papulo-vesicles over the helices of both ears.

A 7-year-old boy visited the outpatient department of a tertiary care centre situated in the southern rural region of India. The boy described raised, red lesions that appeared on both ears over the past two months. The recurrent skin lesions caused mild itching but produced no significant oozing or crusting.

The patient had no significant family medical history. The onset of this episode occurred during October, marking the beginning of the rainy season in this geographic area.

Upon examination, multiple erythematous papules and some papulo-vesicles were observed on the helices of both ears. The clinical assessment confirmed that the patient had juvenile spring eruption (JSE). The diagnosis became clear through the specific pattern of skin lesions, combined with no signs of systemic illness.

The patient received topical corticosteroids to decrease inflammation while using emollients for skin hydration maintenance. The treatment plan included proper sun protection methods to prevent further occurrences.

DISCUSSION

The name of Juvenile Spring Eruption (JSE) indicates its typical light-induced dermatosis, which predominantly happens during early spring and summer months. (1) JSE stands as a polymorphic light eruption variant because it shows a preference for sun-exposed areas, especially the ear helices. This predilection is especially apparent among boys and young men, likely due to shorter hair lengths and more prominent, unprotected ears, making them more susceptible to ultraviolet (UV) damage. (2)

The majority of JSE cases occur among children at school age within the 5–18-year age group. The sun-exposed regions affected by JSE receive predominantly UVA rays rather than UVB rays. (3) The clinical manifestations of JSE consist of papular, papulovesicular, vesicular, and crusted lesions, which appear in various forms. The immune system responds to UV exposure through delayed-type hypersensitivity mechanisms that lead to these manifestations. The condition known as JSE typically resolves itself automatically within one to two weeks because it remains self-limiting. (4)

In JSE, the rash is assessed using a four-point severity scale, which ranges from slight cases with erythema and scaling to severe cases characterized by vesicles and bullae. Grade 4 marks the most severe point on the grading scale, but such severe involvement occurs rarely in JSE cases. The condition tends to repeat itself frequently among people who do not adequately protect themselves from the sun. In tropical regions, this risk is compounded by the year-round high UV index and extended durations of sun exposure, regardless of traditional

seasonal variations. (4) People who live in tropical areas encounter enduring sunlight and high humidity, which supports different types of skin reactions, including JSE, despite cooler temperatures.

The case presented here is particularly notable, as it involves a child from a tropical region of southern India who exhibited recurrent lesions beginning in October, coinciding with the onset of the local rainy season rather than the classic spring period typically observed in temperate climates. JSE in tropical settings deviates from its traditional seasonal pattern because of the continuous sunlight exposure throughout the year. Prolonged exposure to intense sunlight throughout all months creates an environment that can lead to recurring or abnormal flare-ups of the condition.

The prevention of JSE becomes essential because the condition produces physical discomfort and appearance issues that particularly affect young male patients. People should protect themselves from sun exposure through hat-wearing and sunscreen application with a suitable SPF, and they should stay out of direct sunlight during peak hours. Such measures are significantly crucial for children in tropical zones who are inherently at greater risk due to environmental factors. (5)

Topical corticosteroids prove effective for treating mild to moderate JSE cases, and oral antihistamines become necessary for treating severe pruritus. Early recognition of lesions, combined with prompt treatment and ongoing preventive measures, helps prevent future occurrences and their long-term consequences. (1), (2)

JSE poses a year-round dermatological challenge to clinicians in tropical areas because it does not conform to typical seasonal patterns. Public health education about sun protection needs customization to decrease the preventable impact of this condition.

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