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Case Report

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Sweet Syndrome in Infancy

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Abstract

Sweet syndrome is a rare inflammatory dermatosis in infants, characterized by atypical symptoms. We report a case of a 9-month-old infant presented with fever and migratory ascending erythematous plaques on the left foot and leg. Laboratory results and histology confirmed Sweet syndrome without underlying malignancies or infections. Treatment with ibuprofen and topical corticosteroids led to significant improvement.

Sweet syndrome in infancy is often linked to infections but can indicate underlying serious issues, but generally has a good prognosis with corticosteroids.

Keywords: Sweet Syndrome, Neutrophilic Dermatosis, Infant

Sweet Syndrome is an acute neutrophilic febrile dermatosis, first described by Robert Douglas Sweet in 1964, and characterized by its clinical polymorphism. In its classic form, it manifests in adult women aged 30 to 60 years [1,2]. It is rare in children and exceptional in infants. The diagnosis relies on a combination of clinical, biological, and histological findings, while the treatment depends on the severity of the lesions, the underlying etiology, the patient's medical history, and any associated diseases.

A 9-month-old infant with no significant medical history, presented with a warm, erythematous, circumscribed plaque that had developed over the past 12 days, initially located on the back of the left foot (Figure 1a). The condition progressed with an ascending and migratory extension to the leg, knee, and thigh (Figure1b, 1c), associated with a fever measured at 40 °C.

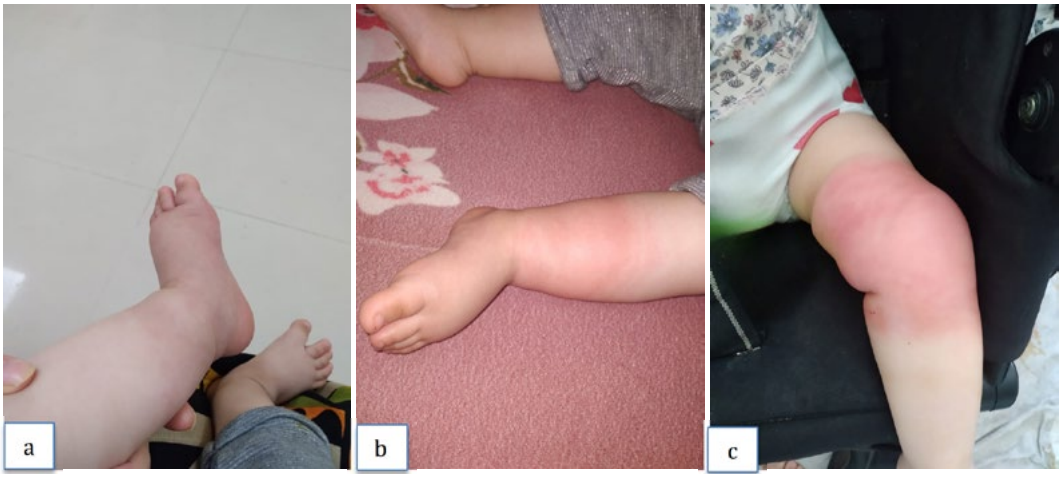

Figure 1: The Migratory and Ascending Pattern Initially Observed on the Foot (a), Then Migrated to the Leg (b), and Subsequently Involved the Knee (c).

Clinical examination revealed a slightly infiltrated, erythematous plaque that was slightly warm on the left thigh, with an interval of healthy skin and a livedoid appearance of the limb (Figure 2). The rest of the clinical examination was unremarkable, showing no signs of respiratory infection, diarrhea, lymphadenopathy or mucosal involvement.

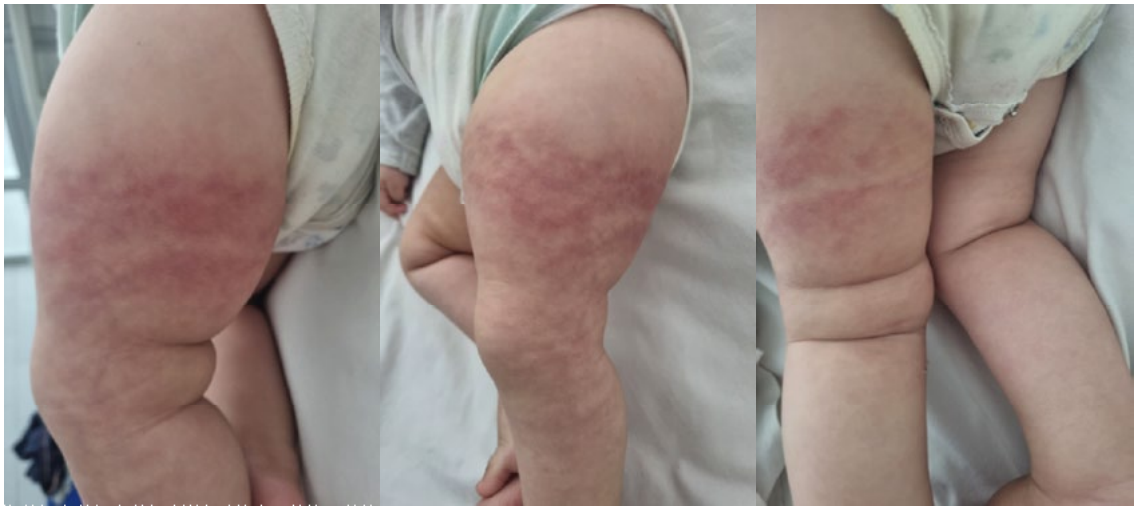

Figure 2: Erythematous and Circumscribed Plaque with Livedoid Appearance

The laboratory results showed leukocytosis at 29.050, with significant neutrophil counts at 12.898, and a raised CRP level at 61. The Blood culture and urine culture were negative, and the chest X-ray was normal. Histological examination revealed a papillomatous epidermis with slight hyperkeratosis and deep parakeratosis containing aggregates of neutrophils. The reticular dermis exhibited moderate perivascular interstitial inflammatory infiltrate, primarily composed of neutrophils. The diagnosis of Sweet's syndrome was established, and investigations for an associated hematologic malignancy were negative. The patient was treated with ibuprofen and a strong topical corticosteroid, leading to significant improvement. Regular follow-up every 6 months is currently recommended.

The originality of this observation lies in the rarity of Sweet syndrome in infants and its atypical clinical presentation characterized by an ascending and migratory extension.

Pediatric Sweet syndrome account for only 5 to 8% of cases (fewer than 100 cases are reported). The average age of onset is five years with a male predominance under age of three [3].

The clinical presentation remains atypical in the pediatric population. Vesicles, pustules, bullae, ulcerations, and pseudovesicles may be found, preferentially localized on the limbs, head, and trunk; however, to our knowledge, no ascending or migratory pattern has been reported.

The underlying etiology differs between adult and pediatric populations. In adults, Sweet's syndrome is most often idiopathic but can also be parainflammatory, paraneoplastic, pregnancy-related, or drug-induced [4]. In pediatric patients, neonatal Sweet's syndrome, occurring in infants under 3 months old, is primarily related to immunosuppression, genetic syndromes, and neonatal lupus erythematosus. Infants aged 3 months to 3 years with Sweet syndrome are primarily parainfectious following respiratory and gastrointestinal infections [5]. Sweet syndrome in children over 3 years old shows similarities to adults. It is important to remember that Sweet syndrome may either reveal, accompany, or precede neoplasms. Therefore, careful and long-term monitoring is recommended.

In our case, Sweet syndrome was probably parainfectious, following an undetected previous infection, either respiratory or gastrointestinal. However, we preferred a regular follow-up to avoid missing a malignant tumor.

Treatment depends on the severity of the lesions, the etiology, and the patient's condition. First-line treatments include oral corticosteroids (prednisone 0.5–1 mg/kg), topical corticosteroids (Class IV), or intralesional corticosteroids for less extensive lesions, as well as potassium iodide and colchicine [6,7].

The evolution of the disease is spontaneously favorable in the idiopathic form, with a good response to corticosteroids. However, there are more recurrences in the pediatric population, documented in one-third of patients. In paraneoplastic forms, recurrence is more frequent, observed in two-thirds of cases.

Sweet syndrome is rare in infancy, and its unusual clinical presentation makes diagnosis difficult; therefore, more biological and histological evidence is necessary. The goal is to identify any underlying cancer or hematological malignancy by conducting a paraneoplastic workup at the time of diagnosis and ensuring long-term follow-up.

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