



Parvovirus B19 Infection Presenting with a Vasculitis-Like Rash

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Abstract

We report a case of an 8-year-old previously healthy girl presenting with a vasculitis-like cutaneous eruption secondary to acute Parvovirus B19 infection. The case highlights diagnostic challenges and reinforces that this uncommon presentation is benign and self-limited. Timely recognition can prevent unnecessary investigations and guide appropriate clinical management.

Keywords: Parvovirus B19; Human; Vasculitis; Exanthema; Pediatrics

Introduction

Human Parvovirus B19 is associated with a spectrum of clinical presentations in children, ranging from asymptomatic infection to classic erythema infectiosum. Atypical manifestations, including purpuric or vasculitis-like eruptions, are less common and may mimic small-vessel vasculitis, prompting extensive diagnostic evaluation [1]. Awareness of these presentations is essential to avoid unnecessary testing and to reassure families regarding the generally benign evolution. We describe a paediatric case of vasculitis-like rash associated with recent Parvovirus B19 infection.

Case Presentation

An 8-year-old previously healthy girl presented to the emergency department with a 4-day history of a generalized rash. The eruption consisted of petechiae and annular erythematous plaques on the abdomen and thorax (Figure 1), and coalescent palpable purpuric lesions on the back (Figure 2) and inner thighs. She denied fever, recent infections, systemic symptoms, or recent vaccinations.

Initial laboratory work-up, including complete blood count and coagulation studies, was normal. Oral prednisolone and topical corticosteroids were started, but there was no clinical improvement. Given the persistence and morphology of the lesions, a small-vessel vasculitis was suspected, and the study was extended to include immunological tests and viral serologies.

The immunological work-up (antinuclear antibodies, complement levels, immunoglobulins) was negative. Of all viral serologies performed, only human parvovirus B19 (PVB19) IgM was positive, consistent with a recent infection.

The skin lesions gradually regressed over two months, leaving residual hyperpigmentation (Figure 3) that resolved completely within an additional two months. Based on these findings and

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Figure 1: Petechiae and annular erythematous plaques on the abdomen and thorax.



Figure 2: Coalescent palpable purpuric lesions on the back.



Figure 3: Residual post-inflammatory hyperpigmentation after two months.

the overall clinical course, the diagnosis of cutaneous small-vessel vasculitis secondary to parvovirus B19 infection was established.

Discussion

Parvovirus B19 is known to trigger immune-mediated phenomena, including purpuric eruptions and vasculitis-like presentations [2]. These manifestations are thought to result from viral immune complex deposition leading to vascular inflammation. Clinically, this and other atypical patterns can resemble IgA vasculitis or other small-vessel vasculitides, often resulting in unnecessary diagnostic tests. However, Parvovirus B19 associated vasculitis is typically self-limited, and management is supportive. Recognizing this pattern helps clinicians provide appropriate reassurance and avoid excessive interventions.

Parvovirus B19 infection may present with vasculitis-like skin lesions in children. Recognition of this rare but benign and self-limited parvovirus-associated vasculitis is essential to avoid unnecessary investigations and ensure appropriate reassurance and symptomatic care.

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