Dermatology Practical & Conceptual

# Petechiae and Limb Weakness in a 12-Year-Old Boy

Eline Vandersteen[1], Katrien Smets[1], Sophie Bravo[2], Valerie Reynaert[1], Sherief R. Janmohammed[1], Dirk Van Gysel[1,3]

**1** Department of Dermatology, Interdisciplinary Unit of Pediatric Dermatology, Vrije Universiteit Brussel (VUB), Universitair Ziekenhuis Brussel (UZ Brussel), Brussels, Belgium

**2** Department of Pediatrics, Vrije Universiteit Brussel (VUB), Universitair Ziekenhuis Brussel (UZ Brussel), Brussels, Belgium

**3** Department of Pediatrics, O.L. Vrouw Hospital Aalst, Aalst, Belgium

**Citation:** Vandersteen E, Smets K, Bravo S, Reynaert V, Janmohammed SR, Van Gysel D. Petechiae and Limb Weakness in a 12-Year-Old Boy. *Dermatol Pract Concept*. 2025;15(1):4738. DOI: https://doi.org/10.5826/dpc.1501a4738

**Accepted:** August 19, 2024; **Published:** January 2025



**Funding:** None.

**Competing Interests:** None.

**Authorship:** All authors have contributed significantly to this publication.

**Corresponding Author:** Dirk Van Gysel, M.D, Ph.D., Department of Pediatrics, O.L. Vrouw Hospital, Moorselbaan 164, B-9300 Aalst, Belgium. E-mail: dirk.van.gysel@olvz-aalst.be

## Case Presentation

A 12-year-old boy presented to the Emergency Department with a skin rash and weakness in the limbs. History revealed fever for one day, followed by redness and edema of the legs two days later. Clinical examination showed petechiae on the distal lower legs (Figure 1) and on pressure points of buttocks and neck. Lower limb muscle strength was normal (Medical Research Council (MRC) Scale for Muscle Strength Grade 5). He had bathed in a cold water stream the day before onset of skin symptoms.

Laboratory tests demonstrated low hemoglobin (12.3 g/dl), low red blood cell count ($4.2 \times 10^6/mm^3$), low platelet count ($138 \times 10^3/mm^3$), and normal white blood cell count and C-reactive protein. Urinalysis showed hemoglobinuria +++.

Based on history and clinical picture, which resembled papular-purpuric "gloves and socks" syndrome [1], parvovirus B19 serology was performed, revealing a positive IgM (>48.00) and IgG (4 UI/ml). This finding, combined with the presence of transient hemoglobinuria, led to the diagnosis of parvovirus B19-induced paroxysmal cold hemoglobinuria (PCH).

## Teaching Point

PCH is an uncommon autoimmune hemolytic anemia, generally afflicting children after an acute infection; it is caused by autoantibodies directed against red blood cells, triggered by cold exposure, and causes intravascular hemolysis. Patients classically present with hemoglobinuria, fever, jaundice, pallor, and fatigue. Diagnosis can be confirmed by Donath-Landsteiner autoantibody detection [2]. Although this was not performed in our case, the clinical presentation and laboratory findings were highly indicative of PCH following parvovirus B19 infection. While severe anemia necessitating blood transfusion can occur, our patient received supportive care and experienced spontaneous resolution of hemoglobinuria.

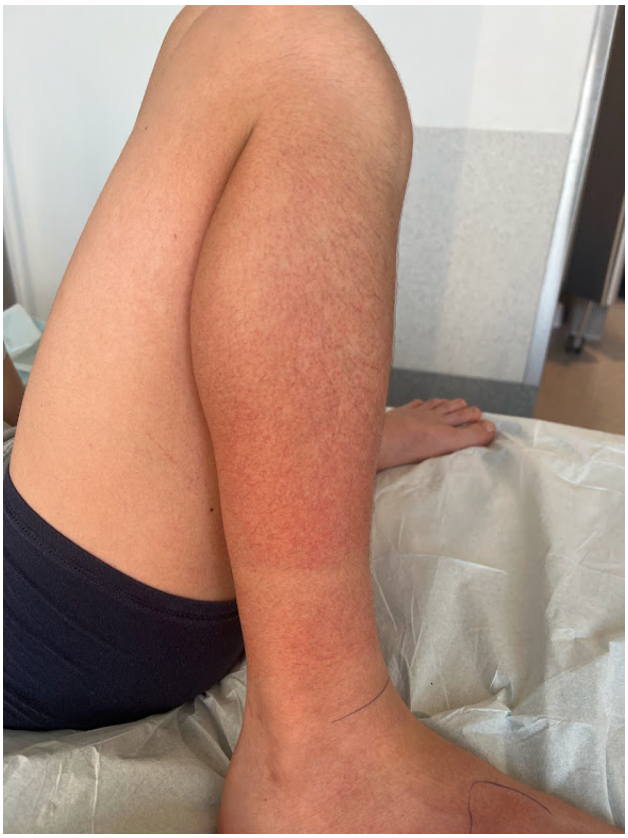

**Figure 1.** Clinical picture of a 12-year-old boy presenting with petechiae on the lower legs and feet.

## References


1. Gutermuth J, Nadas K, Zirbs M, et al. Papular-purpuric gloves and socks syndrome. *Lancet*. 2011;378(9786):198. DOI:10.1016/S0140-6736(11)60554-0.
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