

When a Little Wrist Raises big Questions: A Case of Idiopathic Pediatric Carpal Tunnel Syndrome

Corentin Stavart ^{1 2 3}, Stéphanie Moortgat ⁴, Christine Galant ^{5 6}, Olivier Barbier ⁷,
Thierry Deltombe ⁸, Eddy Bodart ¹

Affiliations + expand

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Abstract

BackgroundCarpal tunnel syndrome (CTS) is the most common peripheral neuropathy in adults but is rarely encountered in children. Pediatric CTS is usually secondary to specific underlying conditions, contrasting with the largely multifactorial nature of adult cases.**Case presentation**We report the case of a right-handed 11-year-old girl who developed CTS. Extensive investigations including imaging, metabolic and genetic testing, as well as histopathologic and electroneuromyography analysis, excluded metabolic, anatomical, tumoral, and traumatic causes, leading to the diagnosis of an idiopathic form. After surgery, ultrasonography confirmed a complete decompression whereas EMG was improved but remained persistently abnormal. The patient was clinically improved but still had slight residual paresthesia.**Conclusion**This case underlines the diagnostic and etiologic workup of CTS in children. Early recognition is essential to prevent irreversible median nerve damage and to uncover potential systemic underlying causes. A multidisciplinary approach, combining detailed family and medical history, clinical examination, imaging, electrophysiology, and targeted metabolic and genetic testing, is fundamental to ensure accurate diagnosis, comprehensive care, and improved outcomes.

Keywords: carpal tunnel syndrome; childhood; entrapment neuropathy; median nerve; pediatric.