Eosinophilic Granulomatosis with Polyangiitis: A Case Series Highlighting the Complexity of this rare form of vasculitis

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Autors : Guillaume Versmissen [1], Isabelle Scheers [2], Lelotte Julie [3], Christophe Goubau [1].

[1] Department of Pediatrics, specialized pediatrics unit, Cliniques Universitaires Saint-Luc, UCLouvain, Avenue Hippocrate 10, Woluwé-Saint-Lambert 1200, Belgium.

[2] Department of pediatrics, Pediatric gastroenterology and hepatology unit, Cliniques Universitaires Saint-Luc, Université Catholique de Louvain, Avenue Hippocrate 10, Woluwé-Saint-Lambert 1200, Belgium.

[3] Department of Pathology, Genetic and Pathology Institut (IPG), Av. Georges Lemaître 25, Charleroi 6041, Belgium.

Background: Hypereosinophilia is a common biological anomaly observed in children, however its etiology might be diverse and its consequences severe. Here, we describe three cases of hypereosinophilia that led to the diagnosis of eosinophilic granulomatosis with polyangiitis (EGPA), also previously known as Churg-Strauss syndrome. EGPA is a rare systemic vasculitis that mainly affects adults. This case series aims to describe the clinical presentation, diagnosis, treatment, and outcomes of EGPA in pediatric patients, as well as provide a straightforward approach to navigating hypereosinophilia.

Method : We retrospectively reviewed the medical records of three children diagnosed with EGPA in our institution for clinical features, laboratory findings, imaging, pathology, treatment modalities, and outcomes.

Results: Three pediatric patients aged between 10 and 14 years old presented with the disease over the past 6 months in our institution. All three complained about dyspnea and nasal congestion. Bloodwork-up evidenced peripheral eosinophilia (>1500/mm^3). Further fibroscopy showed nasal polyps and chest CT-scan showed pulmonary infiltrates; and patholoy of nasal polyps evidenced eosinophilic perivasculitis. All patients met the criteria for EGPA according to the MIRRA Study and ACR/EULAR classification. Treatment regimen varied across the three patients but focused on glucocorticoids and mepolizumab, with variable therapeutic response.

Conclusion : This case series underscores the wide clinical presentations of EGPA in the pediatric population and emphasizes the significance of prompt identification, differential and proper management following the demonstration of peripheral hypereosinophilia.