O_23 DOI: https://doi.org/10.5114/reum/219202

A missed pulse and recurrent stroke: delayed diagnosis of Takayasu arteritis in a young soldier

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Key words: Takayasu arteritis, large-vessel vasculitis, ischemic stroke, diagnostic delay, immunosuppression.

Introduction: Takayasu arteritis (TA) is a rare, chronic large-vessel vasculitis predominantly affecting young women at the threshold of their professional careers. Due to its non-specific clinical presentation and evolving symptoms, TA is frequently misidentified as other rheumatological conditions. The coexistence of common health issues – such as skin lesions, musculoskeletal strain or anatomical anomalies like patent foramen ovale (PFO) – can further complicate diagnosis. Delayed recognition leads to irreversible vascular damage and recurrent ischemic strokes.

Case description: A female soldier in her 20s presented with joint pain, headaches and visual disturbances. Despite early documentation of an elevated ESR and a significant inter-arm blood pressure difference (> 50 mmHg), and an initial suspicion of vasculitis, these findings were overlooked during a months-long diagnostic process across multiple facilities. Clinical focus shifted to a positive rheumatoid factor and bone lesions, suggesting SAPHO (Synovitis-Acne-Pustulosis-Hyperostosis-Osteitis) syndrome or rheumatoid arthritis. Carotid artery narrowing on CT was misinterpreted as fibromuscular dysplasia. Low-dose glucocorticosteroids (GCs) failed to halt disease progression. Within 16 days, the patient suffered two consecutive ischemic strokes. The first was attributed to a known PFO, delaying correct recognition. Only advanced imaging revealed critical inflammatory stenosis of the right common carotid artery and its branches. After unsuccessful thrombolysis, mechanical thrombectomy improved her neurological status. Intensive antithrombotic and GC therapy did not prevent a second stroke. High-dose GCs led to metabolic complications. After failing sulfasalazine, cyclophosphamide, and infliximab, tocilizumab (TCZ, later combined with methotrexate [MTX]) was introduced. Clinical stabilization and GC reduction were achieved.

Conclusions: Autoimmune markers and osteoarticular lesions can lead to premature diagnostic closure. In young stroke patients with systemic inflammation, a PFO should not preclude searching for vasculitis. Bilateral blood pressure measurement is a fundamental yet often neglected screening tool; effective inter-specialist communication is vital to integrate disparate symptoms. The combination of TCZ and MTX is an effective strategy for refractory TA, enabling disease control despite metabolic complications. Diagnostic delays drastically prolong social and professional exclusion, particularly severe and potentially irreversible for high-performance individuals.