Mystery behind red eyes: a case of granulomatosis with polyangiitis

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ABSTRACT

Granulomatosis with polyangiitis (GPA) is a multi-system necrotizing vasculitis that affects small to medium-sized vessels. We report a case of an atypical presentation of bilateral eye conjunctivitis and limbitis, which led to the diagnosis of GPA. A 53-year-old woman with recurrent chronic sinusitis and a history of functional endoscopic sinus surgery presented with bilateral eye redness, pain and tearing for one week. Her visual acuity was 6/9 OD and 6/12 OS. Her left eye showed subtle proptosis, periorbital swelling extending to the upper cheek and bilateral conjunctival injection with limbitis. Extra-ocular muscle movements were full. Fundus examination was normal. Imaging revealed left eye mild proptosis, enlarged left lacrimal gland, extraconal inferomedial collection, and mucosal thickening at sinuses. Intravenous antibiotic was initiated. However, there was no improvement, and extraconal collection drainage was done. Intraoperatively there was only extraconal necrotic tissue. Biopsy revealed chronic dacryoadenitis, negative for fungal stain and acid-fast bacilli, no malignancy seen. Further blood test showed a positive antineutrophil cytoplasmic antibody (C-ANCA), with an elevated C-reactive protein, a reducing haemoglobin level, with microscopic haematuria and proteinuria. She subsequently developed right foot drop and was diagnosed as GPA. She improved significantly with corticosteroid and cyclophosphamide therapy. This case poses a diagnostic challenge due to the unusual initial ophthalmic presentation and demonstrates the importance of timely clinical suspicion to reach the correct diagnosis and treatment.