Granulomatosis with polyangiitis presents with sinus changes and brainstem lesions

A 35-year-old man was referred to the neurology department with bilateral optic neuritis. Cerebral magnetic resonance imaging showed expansile pathological increased T2 signal intensities in the brainstem, periaqueductal area, mesencephalon and cerebral peduncles (*Figure 1a*). Intensive inflammatory changes in the paranasal sinuses, aeration loss in mastoid cells and bilateral middle ear effusion were other magnetic resonance imaging findings (*Figure 1b*). His clinical and radiological findings suggested granulomatosis with polyangiitis, which serology revealed to be classic anti-neutrophil cytoplasmic autoantibodies (c-ANCA) negative and perinuclear anti-neutrophil cytoplasmic autoantibodies (p-ANCA) positive. Middle-small vessel vasculitis was confirmed via full-thickness nasal biopsy.

Granulomatosis with polyangiitis is an uncommon autoimmune disease. The most common form of the disease is localized granulomatous inflammation of the upper respiratory tract (Armani et al, 2007). C-ANCA positivity is a fairly specific marker for the disease, while p-ANCA is detected in only 10% of patients (Armani et al, 2007). CNS involvement is seen in 2–8% of patients. **BJHM**

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Armani M, Spinazzi M, Andrigo C, Fassina A, Mantovan M, Tavolato B. Severe dysphagia in lower cranial nerve involvement as the initial symptom of Wegener's granulomatosis. J Neurol Sci. 2007 Dec 15;263(1-2):187–190. https://doi.org/10.1016/j.jns.2007.05.029

Figure 1. a. Coronal fluid-attenuated inversion recovery magnetic resonance imaging sequence shows expansile pathological increased signal intensities in the brainstem, periaqueductal area, mesencephalon and cerebral peduncles. **b.** Coronal T2-weighted magnetic resonance imaging sequence reveal intensive inflammatory changes in the paranasal sinuses and bilateral mastoid cells.