Images in Nephrology
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Pituitary involvement in Wegener’s granulomatosis

Rafel Tappouni and Aine Burns
Department of Nephrology and Transplantation and Department of Radiology, Royal Free Hospital, London, UK

A 57-year-old woman presented with tiredness, thirst, polyuria, and a bitemporal hemianopia. Magnetic resonance imaging (MRI) showed a pituitary mass, which was removed surgically. The mass recurred 10 months later (Figure 1) and a second resection was performed. Histology showed granulomatous inflammation. The patient received cyclophosphamide 50 mg daily and dexamethasone 4 mg t.d.s. for 3 weeks. A repeat MRI showed reduction in the size of the mass (Figure 2). Six months later the patient was re-admitted with lethargy, fever, vasculitic rash, new deafness, and sinusitis. She had a high C-reactive protein, positive antineutrophil cytoplasmic antibodies (having been negative before) with PR3 titre of 4.7 (normal range 0–2), neutrophilia, thrombocytosis, and impaired renal function (creatinine 102 μmol/l, creatinine clearance 60 ml/min, and urinary protein 0.7 g/24 h). A diagnosis of Wegener’s granulomatosis was made and oral cyclophosphamide was started. The patient became progressively short of breath and hypoxic. Her haemoglobin decreased to 5 g/dl and a chest X-ray was consistent with pulmonary haemorrhage (Figure 3). She was ventilated in the intensive care unit and received plasma exchange.

The patient made a good recovery and was discharged 4 weeks later with creatinine of 82 μmol/l, creatinine clearance 62.7 ml/min, and urinary protein 0.51 g/24 h.

Wegener’s granulomatosis is a systemic necrotizing vasculitis that usually affects the respiratory tract and the kidneys. Associated neurological manifestations have been described in 22–54% of cases and most commonly involve the peripheral nerves [1]. Involvement of the CNS has been documented in up to 12% of cases. Pituitary involvement has been described in only a small proportion and has predominantly affected posterior pituitary, invariably in association with other systemic manifestation of the disease [2, 3]. Systemic vasculitis is a rare cause of granulomatous pituitary destruction and can be controlled with aggressive immunosuppression.

References
Fig. 1. Gadolinium-enhanced MRI scan of the brain showing ring mass occupying the pituitary fossa with low-intensity necrotic centre (arrow).

Fig. 2. Repeat MRI showing significant reduction in the size of the pituitary mass (arrow).

Fig. 3. Chest X-ray showing bilateral pulmonary haemorrhages.