Cerebrospinal fluid rhinorrhoea and spontaneous pneumocephalus in a patient with inactive granulomatosis with polyangiitis

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Background

Spontaneous pneumocephalus is incredibly rare, representing only 0.6% of pneumocephalus(1). Pneumocephalus has been described in patients with active granulomatosis with polyangiitis (GPA), presenting as unexplained headaches(2,3).

An 80-year-old female patient with inactive GPA presented with spontaneous left unilateral rhinorrhoea and recurrent encephalitis. Magnetic resonance imaging (MRI) scanning confirmed encephalitis. The patient had undergone uncomplicated sinus surgery many years previously.

The fluid was confirmed to be CSF on β -2 transferrin assay. Computed tomography (CT) confirmed a large midline anterior cranial fossa defect with a small left-sided dural defect, both of which were not seen on MRI.

Method

The defect was approached endoscopically. A 2x2cm anterior skull base defect with two small dural breaches was identified. This was repaired using a multi-layered approach, including fascia lata graft.

Results

Recovery was complicated by acute confusional state and bilateral pulmonary emboli. Post-operative imaging on day 6 showed significant resolution of the pneumocephalus.

The patient eventually made a full recovery with resolution of the pneumocephalus. The patient was asymptomatic at follow-up 18 months later.

Conclusion

Spontaneous pneumocephalus presenting as otherwise asymptomatic CSF rhinorrhoea in a patient with inactive GPA is a previously unrecognised but interesting case.

This case highlights the importance of both MRI and CT scanning in cases of encephalitis.

References

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