

Oral presentation

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Occult ventriculo -atrial shunt infection: a forgotten condition

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Background

For some time after introduction of the Holter valve, shunting for hydrocephalus was ventriculo – atrial (VA). Features of infection in ventriculoperitoneal (VP) and VA shunts differ considerably, and lack of familiarity of the latter has led to inappropriate referral and incorrect diagnosis and treatment. We present a recent illustrative case with new microbiological findings and re – emphasise the diagnostic criteria.

Materials and methods

Case report: F, 51 yrs, VA shunt following benign space – occupying lesion 1979. Discharged well from follow-up 1986. Generally well until referred September 2004 to the Respiratory Medicine unit c/o productive cough and tiredness 9 months. She also had generalized aches and pains, fever and night sweats. Differential diagnoses were tuberculosis, cardiac valvular disease or intracerebral abscess.

Results

She had haematuria. Blood cultures grew *S epidermidis* – "contaminant". Shunt infection was ruled out as "it was too long after insertion". Trans – oesophageal echocardiogram revealed no cardiac vegetations or thrombus on the catheter. Investigations for shunt infection (ASET) revealed an antibody titre of >40,000. When the shunt was eventually removed the ventricular CSF was normal with no growth. The removed shunt grew *S epidermidis* but in SCV form, ie easily missed. Details of relevant investigations will be presented in full. There was immediate improvement post – operatively and the patient was well at follow – up with no further shunting.

Conclusion

Features of VA shunt infection often mimic those of other conditions, and definitive treatment is often delayed

while various specialists investigate. This case is a recent example with a VA shunt inserted 27 yrs ago. Delay in treatment resulted from lack of familiarity with the features of VA, rather than VP, shunt infections. The lessons (people with VA shunts still present for diagnosis; VA shunts are still being inserted; it is important to recognize the symptoms of VA shunt infection promptly to avoid permanent damage from immune complex disease; and finally, though here are clinical pitfalls, there are well – established simple diagnostic tests for VA shunt infection. These lessons apply to all specialties, including neurosurgery and microbiology.