Clinical outcomes of intracranial complications secondary to acute otitis media: The Alder Hey Experience

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Conclusion

A wide variation in management did not result in altered clinical outcomes. It was felt that there was no real consensus over anticoagulation for patients with sinus thrombosis. A prospective national study is required to be able to reach a consensus on managing these often complex patients.

Introduction

Acute mastoiditis is the most common intra-temporal complication of otitis media. Its management remains a challenge due to potential extracranial and intracranial complications. This study was designed to evaluate the recent experience of acute mastoiditis with intracranial complications at a tertiary paediatric centre.

Method

A retrospective case note review was carried out for patients admitted to Alder Hey Children's Hospital between January 2006 and December 2016. Patients were identified using ICD-10 codes H700, H701, H702, H708 and H709. Patients with intracranial complications were identified following review of notes.

Figure: Axial MRI head demonstrating left mastoiditis with an associated intracranial abscess

Presenting signs/symptoms

	Number of patients	% of total patients
Otalgia	19	63
Vomiting	19	63
Fever	17	57
Drowsiness	14	47
Headache	13	43
Otorrhoea	12	40
Mastoid swelling	8	27
Diplopia / Squint	8	27
Seizures	4	13
Mastoid tenderness	2	7
Facial weakness	2	7
Photophobia	2	7
Neck stiffness	1	3

Results

30 patients were identified with mastoiditis and associated intracranial complications, with 17 males and 12 females. The average age was 4 years and 2 months (range 2 months – 15 years). 53% of patients were investigated with a combination of CT and MRI scans. 73% were diagnosed with sinus thrombosis, 40% cerebral abscess and 33% subperiosteal abscess. 78% of the patients required surgical intervention. Of the 22 patients with sinus thrombosis, 9 received anticoagulation. 27 patients recovered fully with no significant long term sequelae following an average of 50 months follow-up.

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