

Letter to the Editor

Trans-mastoid needle aspiration for otogenic brain abscesses

Dear Sirs,

It is well known that modern antibacterial therapy has reduced the incidence of otitic intracranial complications, however they are still frequently encountered in rural areas. Brain abscess is the second most common intracranial complication of otitis media with high mortality.¹

Neurosurgery is the treatment of choice for these patients. However, this option is useless for the patients presenting in rural centres like ours where neurosurgical facilities are not available and patients can not attend higher centres due to monetary constraints. Sometimes patients present in critical condition when it is not advisable to refer them to these centres situated at distance.

In these circumstances we treated eight patients with otogenic brain abscesses by the transmastoid route as described by Shambaugh² during January 1999 to March 2002. These patients underwent exploratory mastoidectomy under antibiotic cover. Depending on the site of abscess the dural or sinus plate were removed.

An abscess was searched directly through dural defect or through dura medial to sigmoid sinus between sinus and labyrinth (cerebellar abscess) or directly above the lesion (cerebral abscess).² The cavity was kept open. Daily dressing was done in the Operation Theatre. Keeping the cavity open gave immediate and easy access to the sinodural angle and dura in case of repeat aspiration. In addition, it decreased the operative time in these instances. The wound was closed after performing an appropriate open cavity procedure when the condition of the

patient settled and there was evidence of resolution of the abscess on CT scan whenever repeat scan was possible (Figures 1 and 2).

Out of eight patients five had cerebral and three had cerebellar abscesses. Two patients had bilocular abscesses. The mortality in our study was 12.5 per cent, comparable with studies where neurosurgical facilities were availed.³ Karamistos reported mortality of 21.4 per cent among cases of brain abscess treated by transmastoid route.⁴

Three patients in our study required repeat aspirations, however it was simple and quick as the mastoid cavity was kept open. Repeat aspiration is needed in neurosurgical aspiration as well.⁵ In one patient the abscess recurred despite repeat aspirations and patient decided to go to a higher centre which was labelled as a failure in our study.

In the present study none of the patients had post-operative epileptic fit or recurrence at mean follow-up of 1.92 years despite the fact that prophylactic antiepileptic medications were not given. However after neurosurgical treatment the incidence of post-operative epileptic fit is between 95¹ and 70 per cent⁵ and recurrence rate is eight per cent.⁵

The trans-mastoid approach for treatment of otogenic brain abscess is easy, based on sound scientific base, inexpensive and feasible in a rural setup also. It has the advantage of eradication of the primary source of infection and identifications of the infected dural site. The two-stage method employed by us gave results comparable to neurosurgical methods with a decrease in the incidence of post-operative epilepsy and recurrence. Furthermore with modern day otosurgery methods, diagnostic tools like CT scan and availability of antibiotics, drainage



FIG. 1

Preoperative CT showing cerebellar abscess.

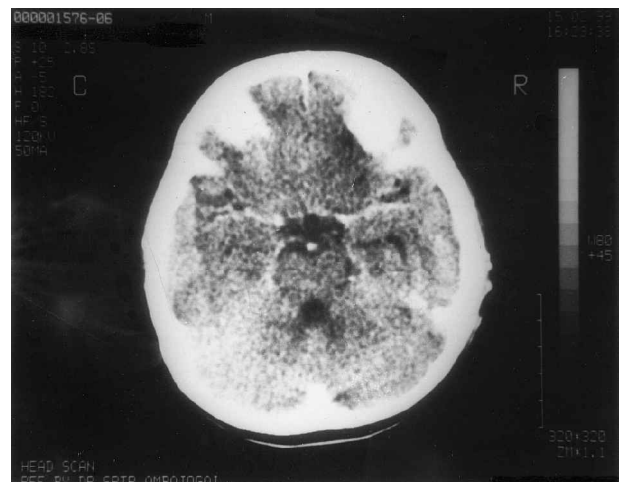


FIG. 2

Postoperative CT scan of same patient showing resolution of abscess.

through mastoidectomy today is not as risky a procedure as it was in pre antibiotic era. We think this technique can be a good alternative for treatment of otogenic intracranial abscesses especially at centres situated in remote areas lacking in facilities.

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