Reviewer’s report

Title: Pyogenic brain abscess, a 15 year survey

Version: 2 Date: 10 August 2012

Reviewer: Venkatesh S Madhugiri

Reviewer’s report:

The authors present data pertaining to a large cohort of patients with brain abscesses treated over a period of 15 years in a single institution. Taken in conjunction with the fact that they have an almost 100% follow-up rate, this data is unique and valuable. Analysis of the data confirms facts that are by now well known. The authors identify GCS at presentation and co-morbid illnesses as factors that predict poor outcomes. These factors, as the authors themselves mention, have already been established.

1. MAJOR COMPULSORY

a. The main area of controversy/study vis a vis management of brain abscess is the issue of – repeated aspiration or excision.

i. There are data to strongly support each surgical option and the authors should attempt to analyze this aspect of their data in greater detail.

ii. They mention that “In 33 (33%) patients, the primary surgical intervention was followed by repeated aspiration, craniotomy or the insertion of external ventricular drainage.” They also state – “The re-operation rate was significantly higher in patients managed by burr-hole aspiration; 43% underwent a repeat procedure compared to 19% with craniotomy, p=0.05, 95% CI: There was, however, no significant difference between patients managed by burr hole aspiration compared to craniotomy, in the duration of antibiotics or in outcome according to GOS at discharge.” This is difficult to comprehend – would patients who have undergone craniotomy and excision of the abscess with no subsequent recurrence receive antibiotics for the same duration as those who have had multiple sittings of aspiration?

iii. The authors would also need to mention what their cut-off was with respect to conversion to craniotomy. Would patients who underwent burr hole aspiration and developed recurrence undergo repeated aspirations or would they undergo craniotomy if the lesion recurred after a certain number of aspirations?

iv. Although the outcome and complication rates in these two groups (aspiration and craniotomy) may not have been statistically different in this series, the need to undergo repeated procedures is in itself an undesirable necessity. An analysis of length of hospital stay and costs incurred per patient might have shown some difference between the two groups.

2. DISCRETIONARY

a. The authors are in the unique position of having access to 100% follow-up
data. It would have been interesting had they analyzed the long term cognitive outcomes of these patients and compared the patients’ GCS at presentation and the choice of surgical procedure with the long term outcome. This analysis would yield valuable data.

3. MINOR ESSENTIAL –

a. The authors should also review and include the latest published data about the subject. Some of these references are –


**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests