

Endoscopic Aspiration of Brain Abscess: A Case Report

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Abstract Treatment of brain abscess is still a subject of controversy. Simple therapeutic approaches like twist drill/burr hole aspiration with or without insertion of a drain are also quite effective. There are reports of encouraging results following endoscopic treatment. We are reporting our case treated by this endoscopic approach.

Keywords: brain abscess

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1. Introduction

Brain abscesses often occur in the developed world, and they are even more common in developing countries. In spite of the advent of modern neurosurgical techniques, including stereotactic brain biopsy and aspiration, better culturing techniques to identify the infectious agent, new antibiotics, and modern noninvasive neuroimaging procedures, brain abscess still poses a public health challenge, especially in developing countries. There are enormous diagnostic and therapeutic challenges and controversies in the management of brain abscess.

2. Material and Methods

A 46 yr old male was admitted in our hospital with sudden onset of deterioration in sensorium. GCS was 12/15 initially managed conservatively but later deriorated hence was intubated ventilated. A CT brain was done which revealed intraventricular haematoma owing to basal ganglionic bleed right sided. Patient was treated with external ventricular drain placement only in view of ventricular dilatation and ganglionic bleed being small as showed in [Figure 1](#) and [Figure 2](#). Patient was started on weaning mode from ventilator once scans were satisfactory. Patient got extubated and could come to ward. However gradually patient became febrile and ESR and CRP started shooting up and patient started becoming drowsy. CT and MRI with contrast revealed haematoma cavity transformation into a abscess as per [Figure 3](#).

3. Results

Patient was planned for drainage of abscess endoscopically. A small right frontal craniotomy was done

and via small corticotomy endoscope was introduced into abscess cavity. Pus was aspirated and sent for investigations. A thorough inspection of the whole abscess cavity was done and evacuation of the pus and irrigation of the cavity with antibiotics was performed and a EVD catheter was left in situ and wound was closed after replacing the bone flap. Postoperative scan as per [Figure 4](#) was satisfactory. Klebsella pneumoniae was isolated. Patient improved gradually and received 6 weeks antibiotics as per sensivity.

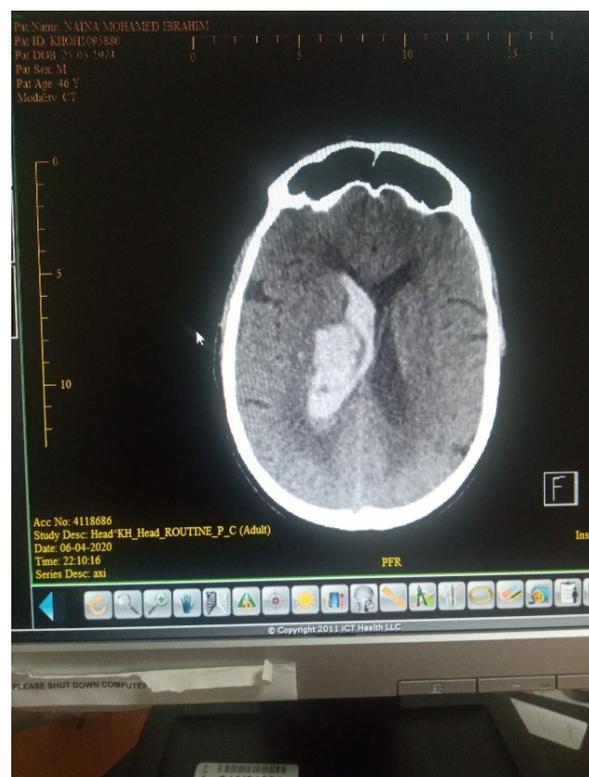


Figure 1. CT scan at presentation

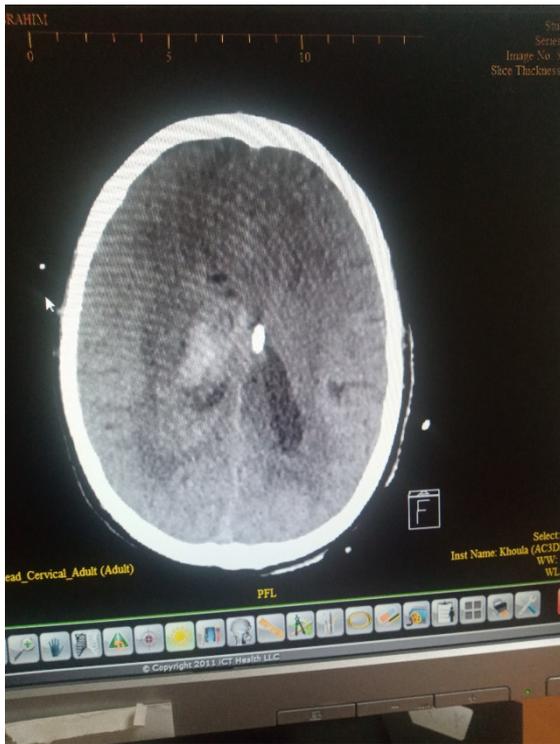


Figure 2. CT scan after external ventricular drain placement



Figure 3. MRI brain showing formation of an abscess in the hematoma cavity

4. Discussion

Yadav et al in 2008 described their series of patients of brain abscesses treated endoscopically. [1] Gajadhar et al in 2005 described their patient of thalamic abscess treated endoscopically. [2] Lutz et al in 1994 described in detail the abscesses in basal ganglionic region and ways to manage it. [3] Nakajima et al in 1999 described

stereotactic aspiration if brain stem abscesses. [4] Rajsekhar et al in 1994 described stereotactic aspiration of cardiogenic abscess. [5] Nauta et al in 1987 further described their series of stereotactic aspiration of brain stem abscesses. [6]



Figure 4. CT scan after endoscopic evacuation of brain abscess and an EVD catheter in situ

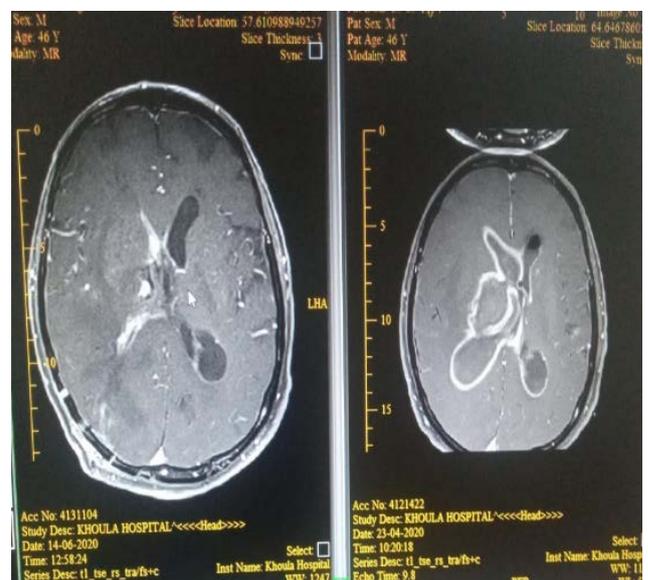


Figure 5. Pre and post operative MRI brain after endoscopic evacuation of the abscess

5. Conclusion

Endoscopic aspiration of brain abscess appears to be a safe and effective alternative method of treatment. There is direct visualization of abscess cavity, completeness of aspiration can be assessed, and perioperative bleeding can be controlled.

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