

# Endoscopic third ventriculostomy in tuberculous meningitis needs more evidence

Sir,

We thank the authors for their interest in "cerebral malaria and bacterial meningitis" by Misra *et al.*<sup>[1]</sup> The authors highlight the importance of endoscopic third ventriculostomy (ETV) in the management of tuberculous meningitis (TBM) associated hydrocephalus. They suggest that ventriculoperitoneal (VP) shunt is no longer the treatment of choice; instead ETV should be preferred for the management of hydrocephalus even in the early stage of TBM as it precludes many shunt related problems such as infection and block.

Endoscopic techniques are a welcome change and have simplified the management of several disorders including hydrocephalus. Very little data is available on the management of hydrocephalus in the patients with TBM using ETV; therefore, individual or institutional preferences are common.<sup>[2]</sup> Hydrocephalus in TBM has certain special features; the floor of third ventricle is often thick and the subarachnoid space is often obliterated by basal exudates which may obscure the anatomical landmarks especially the vertebrobasilar artery and its branches. Rajshekhar in his experience of ETV in the early stage of TBM reported that the floor of third ventricle was thick and covered by granulation tissue or tuberculoma which bleed even on touch with a blunt probe. Bleeding during ETV obscures the endoscopic view and renders the surgery difficult.<sup>[3]</sup> ETV therefore requires skilled and experienced surgeon who are available in only a few centers in our country.

The available experience on ETV in TBM related hydrocephalus is based on small series of 17-59 patients and the success rates have ranged between 41% and 81%.<sup>[4-7]</sup> The difficulty in ETV was highlighted in a study from South Africa, in which success was achieved in 7 out of 17 patients, ETV failed in 5 and had to be abandoned in another 5 patients.<sup>[6]</sup> The results of ETV in TBM related hydrocephalus are better in the patients who have received anti tubercular treatment for at least 4 weeks, or if the hydrocephalus has developed late.<sup>[5,8]</sup> When the exudates has organized and the floor of third ventricle is thin. I would respectfully disagree with the authors' statement that "A sincere attempt to establish CSF pathway by an endoscopic method should be done before placing a shunt" it seems prudent that ETV should be avoided in the early stage of TBM especially in untreated patients. ETV may have some role in the patients who have shunt failure or have received anti-tubercular treatment for at least 4 weeks.

New techniques should be rigorously evaluated and compared with the standard treatment before being recommended for general use or being included in the national guidelines. We hope that soon high quality data will be generated so that the proper place of ETV in the management of TBM associated hydrocephalus could be determined. In our opinion, the evidence at the moment is not sufficient to recommend ETV

in the routine management of TBM related hydrocephalus especially in the early stage.

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