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Letter to the Editor

Treatment of Cholesteatoma-associated Sigmoid Sinus Thrombosis should be Performed Preoperatively

Josef Finsterer
Department of Neurology, Neurology & Neurophysiology Center, Vienna, Austria

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Corresponding Author: **Josef Finsterer**

We read with interest Fei *et al*'*s* article on a series of nine patients with sigmoid sinus thrombosis (SST) associated with middle ear cholesteatoma [1]. Mastoidectomy and tympanoplasty were performed in eight patients, brain abscess drainage was performed in the ninth patient, and a modified mastoidectomy was performed four months later [1]. At follow-up between six months and 7 years, three patients showed partial recanalisation of venous sinus thrombosis (VST) [1]. One patient developed peripheral facial palsy after surgery, which recovered after three months [1]. It was concluded that stable SST may persist for a long period of time after cholesteatoma removal and that a multidisciplinary decision is required to assess whether lateral sinusotomy to remove the thrombus or anticoagulation should be performed [1]. The study is impressive, but several points require discussion.

A classic symptom of VST is headache [2]. Surprisingly, only 5/9 patients reported headaches according to table 1 [1]. What is the explanation for this unexpected finding? Were the four patients without headache receiving analgesics at the time of onset of the SST? Is it conceivable that the SST in these four patients was not acute but was a chronic condition that began long before surgery? Headaches die to VST can be either acute and severe with a thunderclap character or chronic, pervasive and of lesser intensity [2].

A second surprising finding is that none of the nine included patients had developed epilepsy [1]. Seizures can occur either within the first 14 days after the onset of VST (acute, symptomatic seizures) or after 14 days (postcerebral VST) [3]. Acute, symptomatic seizures occur in up to three quarters of patients with VST, and seizures in the post-cerebral VST phase in up to 16% of patients [3]. How do the authors explain that none of the included patients developed seizures? Is it possible that seizures were missed because they occurred during the night or were unwitnessed by nurses, doctors, or nearby patients? Were EEG recordings performed on the nine included patients?

The treatment of choice for VST is intravenous heparin [4]. However, it is not mentioned whether any of the nine patients were given heparin. We should know whether antibiotics were really the only medications the included patients received for thrombosis. Did the patients not receive heparin because of recent surgery? Since VST was detected pre-operatively in seven patients, we should know why these patients did not receive heparin therapy preoperatively. Why did not all included patients undergo postoperative MRV?

In the patient with a brain abscess, how can the authors be sure that the SST was due to cholesteatoma but not due to the brain abscess? VST is a common complication of brain abscesses [5].

We disagree with the conclusion that SST can persist for a long period of time after cholesteatoma removal [1]. Only three patients had postoperative MRV. Such general conclusions cannot be drawn from three patients. Prospective, multicentre studies are needed to resolve these questions.

To sum up, the excellent study has limitations that should be addressed before final conclusions are drawn. Clarifying the weaknesses would strengthen the conclusions and improve the study. Treatment of cholesteatoma associated SST should be performed before surgery.

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