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Letter to Editor

Supracerebellar Approach to Epidermoid Tumors

Sir,

I read the article by Altay and Akkurt with interest.[1] The authors discuss retrosigmoid, paramedian, supracerebellar, and transtentorial approach to epidermoid tumor located in the region of tentorial hiatus. It is unfortunate that the authors present such an approach as a "novel" or original surgical technique. We first described such a surgical approach for epidermoid tumors in the year 2006.[2] We have detailed all the surgical steps discussed in the article in several publications and are of the belief that the authors should have carried out an elaborate literature search on the subject and referred to our contribution.[2-5] I strongly feel that such articles that do not honor published work have a negative impact on future publications on the subject.

In the year 2006, we reported our experience with 96 cases of epidermoid tumors in the location discussed by the authors.[2] Our current experience with epidermoid tumors in this location exceeds 250 cases. We preferred to name this more frequently encountered location of the epidermoid tumor as "tentorium based" epidermoid tumors. This is because the tumors are in proximity of tentorium, often both above and below it, and frequently insinuate into cerebellopontine angle, cerebello-midbrain, and cerebellomedullary fissures in the posterior cranial fossa and in the basal middle cranial fossa. These slow-growing tumors occupy the cisternal space in the tentorial hiatus and grow by displacement and encasement of neural and vascular structures. Due to the location and the nature of growth pattern, these tumors achieve a large size and result in wide displacement of neural and vascular structures before becoming symptomatic. Despite their large size, the brain is seldom or never tense and is soft and lax at the time of surgery. Despite their usually encountered large size and infiltrative nature, the presenting symptoms are relatively subtle. Philosophical understanding of the nature of these tumors is essential to achieve surgical success.[6]

The nomenclature "tentorium based" for these tumors has surgical relevance and determined the strategy of the surgical approach.[2] The lateral infratentorial supracerebellar approach to the tumor was along the tentorium and exposed the maximal bulk of the tumor early in operation. The relatively large retromastoid craniotomy exposed the sigmoid sinus and the lateral third of the transverse sinus. In general, the tumors were resected in three surgical stages or steps. The first stage comprised exposure of the tumor through a lateral supracerebellar infratentorial route. The petrosal vein traversing over the superior surface of the cerebellum and joining the superior petrosal sinus is coagulated early in the operation and transected, easing the retraction of the cerebellum. The tumor along the tentorium, along the lateral and anterolateral surface of the midbrain and pons, in the region of the petrous apex and clivus, in relationship to the basilar artery and the third cranial nerve is resected. In the second stage, a tentorial incision is taken from the under surface of the tentorium posterior to the site of dural entry of the fourth cranial nerve. This procedure exposes the supratentorial part of the tumor in relationship to the medial temporal lobe structures, suprasellar region, and the region of the circle of Willis. The tumor in the supratentorial compartment is then resected keeping the anatomical structures widely in clear surgical view. Endoscope or an angled mirror is used, whenever necessary, to locate and resect the tumor in the corners. The tumor in the cerebellopontine angle region is resected in the third stage of the operation and is carried out after the surgical field is relaxed following the first two stages of tumor resection. Retracting the cerebellum away from the petrous bone exposed the cerebellopontine angle. The cranial nerves of the cerebellopontine angle are generally displaced laterally by the medially placed tumor. The tumor is dissected by working between the nerves. The stages of removal of the tumor are changed according to the local anatomical situation, and also the stages are repeated depending on the extent of excision at each occasion. The surgery on epidermoid tumor necessarily requires special dissection techniques.

Our familiarity with supracerebellar infratentorial and transtentorial surgical approach and with epidermoid tumors led us to expose tumors located entirely in the middle cranial fossa by this surgical route. Our article was the first in literature discussing a posterior cranial fossa route for an entirely middle cranial fossa tumor.[3]

We also published a supracerebellar approach to petroclival meningiomas.[4,5] Tentorium was cut to expose the tumor extension in the supratentorial compartment.

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Conflicts of interest

There are no conflicts of interest.

Atul Goel

Department of Neurosurgery, KEM Hospital and Seth GS Medical College, Mumbai, Maharashtra, India

Address for correspondence:
Prof. Atul Goel,
Department of Neurosurgery, KEM Hospital and Seth GS Medical College, Parel, Mumbai, Maharashtra, India.
E-mail: atulgoel62@hotmail.com

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