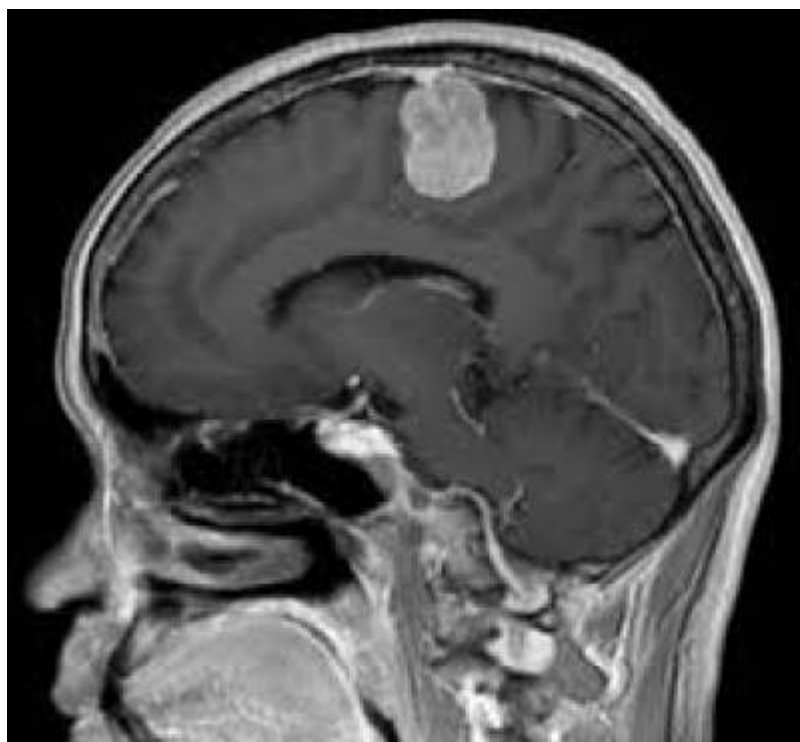


Falx meningioma of the middle third



The [Falcine meningioma](#) of the middle third arise from the [coronal suture](#) to the [lambdoid suture](#).

Clinical features

Those [falcine meningiomas](#) arising in the middle third of the [cranial vault](#) present a more difficult technical problem. Those located on the non dominant side usually compromise the motor and [sensory strip](#) at their posterior margin, whereas those on the dominant side involve the [supplementary motor area](#) as well.

Large tumors in the middle third of the cranial vault can be present with a progressive [hemiparesis](#) as well as [organic brain syndrome](#) and [seizures](#) that are often focal in the onset.

In addition, with lesions on the [dominant side](#), the [seizures](#) may be heralded by [speech arrest](#), a syndrome that derives from a compromise to the dominant supplementary motor area. They may be present as calcified mass attached to falx, being difficult to access without any damage to brain parenchyma.

Treatment

In treating lesions posterior to the coronal suture, the patent longitudinal sinus cannot be removed safely in the fashion just described and excision of lateral wall infiltrated with falcine parasagittal meningioma is difficult and complex. In the past, the lateral sinus wall was sutured successively as the tumor was excised.

Utilizing the shortest available trajectory is the norm for excision of meningiomas. However, such an approach for the mid-third/central falxine meningiomas risks the adjoining draining [veins](#) and [eloquent cortex](#). A larger size and bilaterality of such tumors adds to the surgical challenge.

Karthigeyan et al., report the surgical nuances of a modified unilateral approach in patients operated for giant bilateral symmetrical mid-third falxine meningiomas.

Five such patients were operated. The clinico-radiologic data was studied at presentation and at the follow-up. The meningiomas were subclassified into those that were located in the anterior and posterior half of the central falx, and their surgical trajectory was chosen accordingly. The tumor was excised through an oblique anterior or a posterior trajectory instead of directly working over the major draining veins and eloquent brain. The falx was incised to create a surgical window and access the tumor on the contralateral side.

Four patients had meningiomas in the anterior half and one in the posterior half of central falx. Simpson excision was grade II in four patients. One patient showed small residual tumor and underwent stereotactic radiosurgery. The overall mean follow-up of the patients was 9.2 months. All the patients had good clinical outcome.

Giant bifalxine meningiomas can be safely resected through a unilateral approach. Falx opening serves as a window to remove the tumor from the contralateral side. An oblique trajectory rather than an end-on access to these tumors minimizes the risk of venous and cortical injury ¹⁾.

Outcome

In the experience of Ricci et al., the greatest number of complications was observed in meningiomas of the middle third ²⁾.

Case series

Seventeen cases of middle third [parasagittal](#) and [falx meningioma](#) operated between 2010 and 2014 were retrospectively reviewed; [extent of resection](#) was expressed according to Simpson's classification. Medical Research Council Grading System was used for assessment and evaluation of motor power during preoperative, postoperative, and long-term follow-up, and patients were divided into two groups: group A, no preoperative motor deficit, and group B, patients with preoperative motor deficit. Based on this grading system, we classified motor function into three categories as follows: no disability, partial disability but independent, and complete disability. Follow-up period ranged between 14 and 48 months with mean period 32 months.

Total number of patients was 17, 10 females and 7 males. Age ranged between 38 and 63 with the mean age 47. Twelve cases were parasagittal meningioma and 5 cases were falx meningioma. All located at the middle one third. Family history was negative in all cases. Duration of presenting symptoms varied between 3 and 28 months; presenting symptoms were as follows: seizures 64.7% (11 patients), headache 52.9% (9 patients), motor weakness 47% (8 cases), and disturbed conscious level 5.9% (1 case). According to Simpson's classification, grade I resection was obtained in 4 patients

and grade II in 13 patients. Intraoperative sinus invasion was present in 3 patients. In early postoperative outcome regarding motor function, 9 cases (53%) showed deterioration of motor function in group A: 4 patients out of 9, and group B: 4 patients out of 8. On long-term follow-up of patients with deteriorated motor function, 6 patients out of 9 improved (66%).

Parasagittal and falx meningioma involving the middle third is associated with a higher incidence of motor function deterioration either as a presenting symptom or during postoperative period. Adopting the microsurgical techniques during surgical resection and preservation of integrity of the venous system and cerebral cortex, deterioration of motor function is transient in most of cases with a favorable outcome on long-term follow-up ³⁾.

1)

Karthigeyan M, Rajasekhar R, Salunke P, Singh A. Modified unilateral approach for mid-third giant bifalcine meningiomas: resection using an oblique surgical trajectory and falx window. *Acta Neurochir (Wien)*. 2019 Feb;161(2):327-332. doi: 10.1007/s00701-018-3770-y. Epub 2018 Dec 18. PubMed PMID: 30564881.

2)

Ricci A, Di Vitantonio H, De Paulis D, Del Maestro M, Gallieni M, Dehcordi SR, Marzi S, Galzio RJ. Parasagittal meningiomas: Our surgical experience and the reconstruction technique of the superior sagittal sinus. *Surg Neurol Int*. 2017 Jan 19;8:1. doi: 10.4103/2152-7806.198728. eCollection 2017. PubMed PMID: 28217380; PubMed Central PMCID: PMC5288983.

3)

Elzarief AA, Ibrahim MF. Long-term follow-up of motor function deterioration following microsurgical resection of middle third parasagittal and falx meningioma. *Egypt J Neurol Psychiatr Neurosurg*. 2018;54(1):9. doi: 10.1186/s41983-018-0013-3. Epub 2018 Apr 25. PubMed PMID: 29780229; PubMed Central PMCID: PMC5954784.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=falx_meningioma_of_the_middle_third

Last update: **2024/06/07 02:58**

