Falcotentorial meningiomas: Optimal surgical planning and intraoperative challenges - case report

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Introduction
Falcotentorial meningiomas (FTM) are a rare entity of tumors, corresponding to 2-8% of pineal tumors and 1% of all intracranial meningiomas and are more prevalent in women. These tumors originate from the posterior portion of the velum interpositum or falcotentorial union and can present different relationships with vital neuroanatomical structures. The surgical treatment is not well established in literature, due to the necessity of validating criteria for the surgical approach and the discussion of the risks to obtain radical resections.

Case description
It is a case report of a 41-year-old man with FTM, who was admitted with progressive paresis in the left lower limb for the last one year as the only neurological symptom. A computed tomography (CT) was realized, revealing a solid mass in the pineal region, causing hydrocephalus. After that, brain magnetic resonance imaging (MRI) showed a solid mass inside the third ventricle in contact with the falcotentorial dural junction. The patient was submitted to a subtotal tumor resection by an approach through occipito-transventorial access.

Comments
The clinical picture of FTM varies with headaches (the most common symptom), ataxia, personality changes and bradypsychia with homonymous hemianopsia. There exist four types of FTM tumors according to Boussioni classification, which is based on the location of the tumor and, in this case, the tumor is type I, which originated from the posterior cerebral falx and displaced the venous system inferiorly. This classification is important to guide the decision of the surgical approach. The surgical objective is to relieve or solve neurological/clinical symptoms and acquire a tissue sample for histological diagnosis. Some surgical approaches can be done for these tumors, but the transtentorial/transfalcine occipital approach is most frequently used for pineal meningiomas, especially in types I and IV FTM.

Conclusion
The choice of the surgical approach is essential for the effective treatment of a FTM tumor, and can be analyzed with the help of imaging tests. This case of a subtotal resection showed success on the reduction of neurological deficit of the patient.

Keywords: Falcotentorial meningiomas, Surgical approach, Neurosurgery.