

Jornal Memorial da Medicina

DOI: 10.37085/jmm.2022.ac.an7

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

Otávio da Cunha Ferreira Neto¹, Pedro Lukas do Rêgo Aquino², Marcelo Diniz de Menezes³, Nilson Batista Lemos⁴, Bianca Domiciano Vieira Costa Cabral⁵, João Ricardo Caldas Pinheiro Pessôa¹, Andrey Maia Silva Diniz⁵, Artêmio José Araruna Dias⁴, Luís Felipe Gonçalves de Lima⁴, Maria Carolina Paiva de Lima¹, Luiz Euripides Almondes Santana Lemos⁶, Luiz Severo Bem Junior^{4,6}, Nivaldo Sena de Almeida⁶, Hildo Rocha Cirne Azevedo Filho⁶

¹Catholic University of Pernambuco , Recife, Pernambuco, Brazil.

²University of Pernambuco, Recife, Pernambuco, Brazil.

³Faculdade Pernambucana de Saúde, Recife, Pernambuco, Brazil.

⁴College of Medical Sciences, Unifacisa University Center, Campina Grande, Paraiba, Brazil.

⁵Federal University of Paraiba, João Pessoa, Paraiba, Brazil.

⁶Department of Neurosurgery, Hospital da Restauração, Recife, Pernambuco, Brazil.

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 prevalente in womens. These tumors originate from 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 ventricule in contact with the falcotentorial dural junction. The patient was submited of a subtotal tumor resection by an approach throught occipito-transtentorial acess.

Comments

The clinic of the FTMs varies with headaches (the most common symptom), ataxia, personality changes and bradpsychia with homonymous hemianopsia. There exists four types of FMTs 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 posterior cerebral falx and displaced the venous system inferiorly. This classification it's 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 FTMs.

Conclusion

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

Keywords: Falcotentorial meningiomas, Surgical approach, Neurosurgery.

