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Cystic Meningioma: A Case Report

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Abstract **Case Report**

Meningiomas, the most common intracranial tumors. We report the case of a 54-year-old patient who consults for recurrent headaches with recent onset of vomiting. A cerebral CT scan showed a dual-component temporal-occipital lesion process: fleshy and cystic. An MRI performed for better characterization showed an extra-axial left temporo-occipital lesion process with meningeal implantation base and cystic component repressing healthy brain parenchyma. Cystic meningiomas, rare, are classified by Nauta into four categories according to the seat of the cystic cavity. Magnetic resonance imaging is highly sensitive in the diagnosis of this kind of tumor. Therapeutically, resection of the cyst wall reduces the risk of recurrence of this benign lesion.

Keywords: Cystic meningioma, imaging.

INTRODUCTION

Meningiomas, the most common intracranial tumors, originate from arachnoid cells. The cystic form is rare. MRI is the exam of choice for the diagnosis of the cystic form of meningiomas, allowing their calcification with therapeutic implications.

OBSERVATION

A 54-year-old patient with no prior history who consults for recurrent headaches with recent onset of vomiting, a cerebral CT scan showed a dual-component temporal-occipital lesion process: fleshy and cystic (Fig. 1).

An MRI performed for better characterization showed an extra-axial left temporal-occipital lesion process with base of meningeal implantation and cystic component displacing the healthy brain parenchyma in hyposignal T1, hypersignal T2 with multilocular cystic component and intense enhancement of the fleshy part after gadolinium injection.

The patient was operated on with complete excision of the tumor process and the histological study confirmed the diagnosis of meningioma.

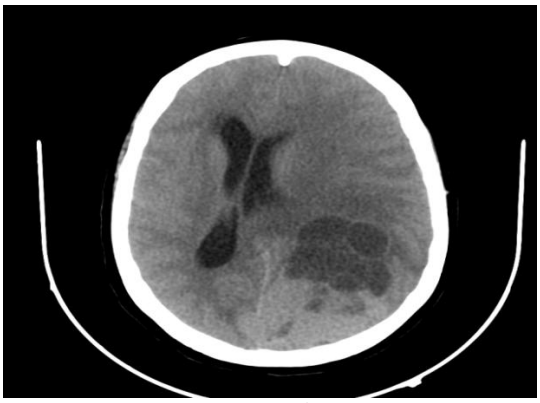

Fig-1: CT scan in axial section, left temporo-occipital lesion process with double component: tissue and cystic

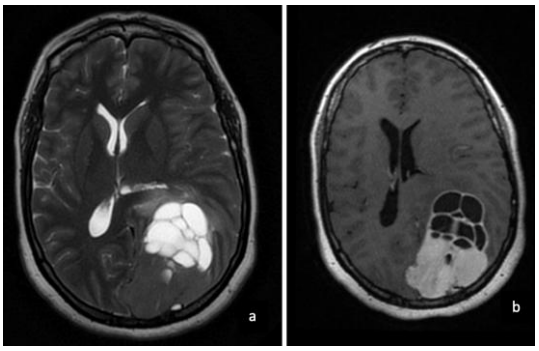

Fig-2: Brain MRI in axial section (a) T2-weighted sequence and (b) acquisition after Gadolinium injection, showing a left extra-axial left temporal occipital lesion process with meningeal implantation base and cystic component repressing healthy brain parenchyma

DISCUSSION

Meningiomas, the most common intracranial tumors, represent up to 35% of brain tumors in adults and originate from arachnoid cells, granulations, connective tissue of perivascular spaces and more rarely choroid plexuses, remain in the vast majority cases of benign tumors (95%) [1].

The cystic form is rare with an incidence of 10% of cases [2] and is frequently localized in convexity. [3]. Cystic meningiomas are classified by Nauta into four categories according to the seat of the cystic cavity: type I with central intratumoral cyst, type II with intratumoral cyst, but peripheral, type III the cyst is peritumoral in the adjacent cerebral parenchyma and type IV the cyst is located peritumorally between the tumor and the adjacent parenchyma [2].

Types I and II are rare, due to secretory or degenerative phenomena, ischemic necrosis, haemorrhage or demyelination due to a lack of white matter perfusion [3].

Types III and IV are usually large and unilocular with xanthochromic fluid content, and it is the result of the glial response to the presence of meningioma with fluid development by glial cells [4].

Magnetic resonance imaging is highly sensitive in the diagnosis of this kind of tumor as it allows to easily identify the dural attachment, the interface between the tumor cyst and normal cerebral parenchyma [3-5].

Currently, MRI is the test of choice for the diagnosis of these tumors with a diagnostic accuracy estimated at 86%. The injection of the contrast medium makes it possible to distinguish the type II of Nauta: wall made of tumor cells taking the contrast medium, type III: wall made of glial tissue, without tumor tissue, and not enhanced by the product of contrast, with its therapeutic implications [4].

Magnetic resonance spectroscopy shows an alanine peak associated with that of choline and lactate. [6]. Therapeutically, resection of the cyst wall reduces the risk of this benign lesion recurrence [2].

CONCLUSION

The cystic form of cerebral meningiomas is rare, MRI is the test of choice for positive diagnosis and classification of the lesion to guide surgical management. Complete resection of the lesion and especially of the cyst wall is essential to avoid recurrence.

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