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Orbital Meningioma Revealed by Papilledema: Case Report and Review of the Literature

Ricardo Mendes[1*], Soukaina Belfaiza[1], Taoufik Abdellaoui[1], Aissam Fiqhi[1], Yassine Mouzari[1], Abdelbarre Oubaaz[1]

[1]Ophthalmology Service of the Mohamed V Military Instruction Hospital (HMIMV), Rabat, Morocco

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***Corresponding author:** Ricardo Mendes
Ophthalmology Service of the Mohamed V Military Instruction Hospital (HMIMV), Rabat, Morocco

Abstract **Case Report**

Orbital meningioma is a rare benign tumor, it develops from the dura mater and can invade the opposite bone and invade the orbital contents through the superior orbital fissure or optic canal, or more frequently after bone invasion. It frequently occurs in the spheno-orbital region, rarely in the frontal location, as in our case. This is a 58-year-old woman with no pathological antecedents. She consulted with our ophthalmology service with progressively installing low visual acuity with binocular diplopia. Examination of the right eye reveals exophthalmos axial, painless, non-reducible and non-pulsatile, as well as limitation of ocular motility in lateral gaze. Fundus examination showed grade 1 papilledema. Orbitocerebral scanner was favorable for frontal meningioma with grade 1 exophthalmos. Pariente was referred to neurosurgery for possible surgical excision.

Keywords: Low visual acuity, exophthalmos, diplopia, Orbitocerebral scanner, Case report.

INTRODUCTION

Orbital meningioma is a rare benign tumor that develops from the dura mater and can invade the opposite bone and invade the orbital contents through the superior orbital fissure or optic canal, or more often after bone invasion. These abnormalities provide compelling evidence that specialized frontal brain structures such as orbitofrontal cortex and medial prefrontal cortex underlie various cognitive and emotional functions with an implication in mood control, such as regulation of responses to aversive emotional experiences and interpretation of social and emotional cues. Disturbance in the function of these areas can lead to mood disorders [1]. The frontal lobes of the brain are notoriously "silent": Benign tumors such as meningioma's that compress the frontal lobes from the outside may not produce any symptoms other than progressive change of personality and intellect until they are large. Patients with such tumors are often referred first to psychiatrists, and the correct diagnosis may emerge only when the tumor has grown large and has begun to displace the brain [2-9]. It frequently occurs in the spheno-orbital region, rarely in the frontal location, as in our case.

CASE REPORT

This is a 58-year-old white woman, domestic worker, from a rural area, with no pathological antecedents. She presented at our ophthalmology service of the Mohamed V Military Instruction Hospital (HMIMV) Rabat, according to her, for more than a week with progressively installing low visual acuity with binocular diplopia. She mentioned that she had consulted in the private office without improvement, but with the progression of the condition, the ophthalmologist decided to evacuate her to our hospital center. On ocular examination, visual acuity of 4/10 in the right eye and 8/10 in the left eye, examination of the right eye found axial, painless, non-reducible and non-pulsating exophthalmos, as well as limitation of ocular motility in lateral gaze, pressure intraocular pressure of 20 mmhg in the right eye and 15 mmhg in the left eye. Fundus examination of the right eye showed grade I papilledema, examination of the left eye showed no change. Retinography revealed papillary edema in the right eye and an orbitocerebral scanner was favorable for the diagnosis of frontal meningioma with grade I exophthalmos. Finally, the patient was transferred to the neurosurgery service for a better study and possible surgical excision.

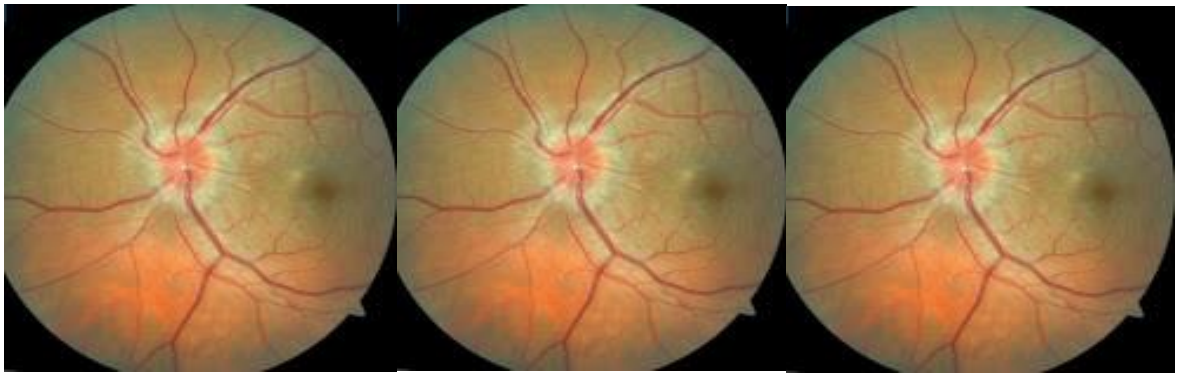

Figure 1: Right eye retinography revealed grade I papillary edema

DISCUSSION

Orbital meningioma is a rare benign tumor, it can be diagnosed in men as well as in women without gender predominance, it usually occurs during the last decade of life. It is often spheno-orbital, rarely frontal as in our case. Clinically, exophthalmos is the most common sign, often associated with a decrease in visual acuity that can lead to blindness. Diplopia due to oculomotor (III or VI) or trigeminal impairment is possible. Finally, the tumor can be revealed by a palpable mass in the temporal region, but it is rarely revealed by papilledema as in our case. Orbital meningioma is a benign tumor that requires early surgery. Fronto-temporosphenoidal craniectomy with resection of all invaded tissues, namely the dura, muscle and intra-orbital tissues, with dural and parietal reconstruction is the treatment of choice.

Adjuvant radiation therapy is recommended in patients with symptomatic residual lesions. Improvement is usually visible immediately after the procedure. Reduction of exophthalmos is achieved in most cases if resection of the superior and lateral orbital walls is performed well. In case of postoperative tumor residue, additional radiation therapy is necessary. Finally, an annual control by orbitocerebral MRI is necessary to search for recurrences.

CONCLUSION

Orbital meningioma is very rare, it is often confused preoperatively with primary bone tumors. It presents major therapeutic problems, due to the initial difficulty of certain locations, which explains its high rate of recurrence and postoperative morbidity.

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