Secondary orbital meningioma

Represents 70-90% of orbital meningiomas direct extension of intracranial meningiomas into the orbit.

Secondary orbital meningiomas are considerably more common than primary orbital meningiomas.

Secondary orbital meningiomas usually arise from the inner and outer aspects of the sphenoid wing but not the middle sphenoid wing. They may infiltrate medially into the orbit, often with intraorbital, intracranial, and intraosseous portions. They often compress the optic nerve by narrowing the optic canal. They may infiltrate the contents of the superior orbital fissure and cavernous sinus or compress the frontal lobe and temporal lobe. There may also be cases of primary intraosseous meningiomas in which the tumor arises from within the bone. Tumors originating along the sphenoid wing have a relatively high incidence of bone involvement.

More difficult was the total removal of meningiomas of the inner third or of the entire sphenoid ridge [1].

see Meningioma en plaque of the sphenoid ridge

It is thought that nearly 30% of orbital meningiomas may involve bone (thus producing so-called hyperostosis), and 12% may originate from within the orbital bones [2].

Treatment

Resection is the primary treatment modality.

Transcranially the orbit can be reached via a pterional approach, frontotemporal, supraorbital ridge, or subfrontal approach.

A frontotemporal route can be used to approach primary orbital tumors that extended intracranially. This approach provides good exposure of the intraorbital contents, including the optic canal. This is achieved by excising the orbital roof and the lateral orbital wall. The optic nerve can be identified intradurally to facilitate the resection of the orbital roof.

The frontotemporal approach also provides good exposure of the anterior and middle cranial fossae. A pterional approach can be used to reach sphenoid wing meningiomas that invade the orbit; this approach permits radical resection of the greater and lesser wings of the sphenoid bone, as well as exposure of the lateral orbit, optic canal, and the supraorbital fissure, foramen rotundum, and foramen ovale.

Fraizer first advocated the removal of the orbital rim to obtain additional exposure of orbital contents [3].

Jane and colleagues modified this approach by removing the supraorbital bone flap in one piece [4] [5].

Colohan, et al.,20 introduced the concept of using the frontal sinus to access the anterior cranial fossa thereby providing better cosmesis.31

Jho56 has advocated a minimally invasive approach: though an eyebrow inci- sion, one can gain

access to the posterior orbit and anteri-

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