Orbital meningioma

Meningiomas of the orbit are uncommon.

Classification

They can be divided into two broad categories:

Primary orbital meningioma

Secondary orbital meningioma

Orbital meningiomas can be classified as primary optic nerve sheath meningiomas, primary intraorbital ectopic (Ob) meningiomas and sphenoorbital meningiomas (Sph-Ob) based on anatomic site.

There are genomic alterations in 68% (13 of 19) of orbital meningiomas. Sph-Ob tumors frequently exhibited monosomy 22/22q loss (70%; 7/10) and deletion of chromosome 1p, 6q and 19p (50% each; 5/10). Among genetic alterations, loss of chromosome 1p and 6q were more frequent in clinically progressive tumors. Chromosome 22q loss also was detected in the majority of Ob meningiomas (75%; 3/4) but was infrequent in ON meningiomas (20%; 1/5). In general, Ob tumors had fewer chromosome alterations than Sph-Ob and ON tumors. Unlike Sph-Ob meningiomas, most of the Ob and ON meningiomas did not progress even after incomplete excision, although follow-up was limited in some cases. A study suggests that ON, Ob and Sph-Ob meningiomas are three molecularly distinct entities. The results also suggest that molecular subclassification may have prognostic implications [1)].

1)
Ho CY, Mosier S, Safneck J, Salomao DR, Miller NR, Eberhart CG, Gocke CD, Batista DA, Rodriguez FJ. Genetic profiling by single-nucleotide polymorphism-based array analysis defines three distinct subtypes of orbital meningioma. Brain Pathol. 2015 Mar;25(2):193-201. doi: 10.1111/bpa.12150. Epub 2014 May 21. PubMed PMID: 24773246; PubMed Central PMCID: PMC4324373.