Chiasmal germinoma

Intracranial germinomas are typically present in the suprasellar or pineal location, and their origin within the optic nerve or optic chiasm is extremely rare.

Case reports

2015

A 25-year-old woman with an exophytic primary optic chiasm germinoma who underwent partial resection followed by radiation and had no detectable tumor on magnetic resonance imaging at 1-year follow-up. [1)]

2009

A 15-year-old boy presented with visual acuity of 20/200 OD and no light perception OS. The anterior segment of the left eye showed a relative afferent pupillary defect. A large (4.5 x 4.5 x 2.0 mm) infiltrative optic nerve head lesion with dilated vessels was seen OS with disc pallor OD. MRI of the brain and orbit revealed lobulated optic nerve thickening and chiasm. A biopsy revealed features consistent with germinoma and was positive for marker placental alkaline phosphatase. Systemic examination, chest x-ray, abdominal ultrasound, cerebrospinal fluid, and serology were normal. He received 27 Gy to the craniospinal region followed by a boost of 27 Gy to the left optic nerve. Eight months postirradiation, vision stabilization was achieved with 20/200 OD and light perception with inaccurate projection of rays OS [2)].

1990

A case is presented in which an adult man with painless progressive loss of vision subsequently was found to have a primary suprasellar/perichiasmal germinoma (ectopic pinealoma). A review of the literature revealed 93 similar cases of germinoma occurring in the perichiasmal region and these are tabulated. The diagnosis and management of this lesion are discussed, including the recognition of the characteristic neuroendocrinologic triad of diabetes insipidus, visual changes, and hypopituitarism. Of 64 cases from the literature wherein presenting symptoms were reported, 56 (87.5%) had diabetes insipidus, 53 (82.8%) visual changes, and 36 (56%) hypopituitarism. A review of the literature suggests that diabetes insipidus is usually the initial symptom in suprasellar germinoma. However, we wish to emphasize the ophthalmologic presentation of this entity, because of ophthalmologic presentation of this entity, because patients in the age group most affected (adolescents) will often not recognize symptoms of diabetes insipidus, but will first seek medical attention for painless progressive loss of vision suggestive of chiasmal compression. The radiosensitivity of this lesion is also discussed. Of 61 patients receiving irradiation therapy, 42 (68%) were surviving at the time of their individual case report. No patient in the review survived without irradiation therapy [3)].

1977

A 22-year-old man with a hypothalamic-chiasmal germinoma causing bitemporal hemianopic scotomas had minor disc colobomas bilaterally. Careful study of the optic discs and posterior fundus, as well as evaluation of the characteristics of the temporal field defects, should distinguish chiasmal compression in the occasional case where suprasellar tumor and anomalous optic discs coincide [4].

1)
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3)
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