Case report of isolated schwannoma a rare tumour of eyelid

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Abstract

Schwannoma (neurilemmoma) is a benign tumour of peripheral nerve arising from Schwann cells that form the neural sheath. Schwannoma of ophthalmic interest is rare. Although it has been reported in relation with the orbit, and less frequently with the uveal tract and conjunctiva but eyelid schwannoma is extremely uncommon. We report a case of an 18-year-old male who developed eyelid schwannoma. The mass was surgically removed by excisional biopsy. The histopathological examination showed schwannoma

Keywords: Benign tumour, eyelid, histopathology, schwannoma

Case Report

An 18-year-old male presented to us with a 6 month history of slowly enlarging, painless mass in his right upper lid resulting in progressive ptosis (Fig.1). Ocular examination was suggestive of a firm, non-tender nodule of size 2 × 1 × 1 cm on the right upper lid. The mass was non-adherent to the skin and was mobile on palpation (Fig.2). There were no clinical findings indicative of neurofibromatosis.

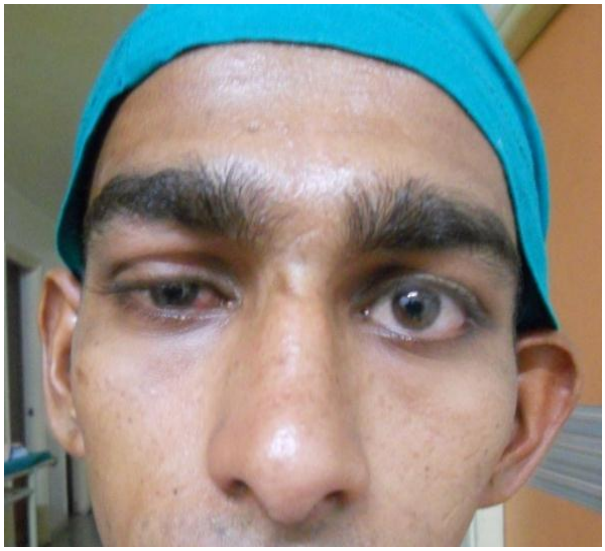

Fig 1.Pre-operative photograph of the patient showing ptosis of right upper lid

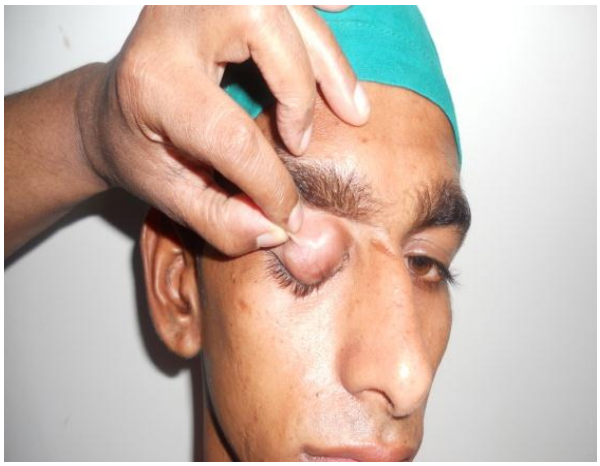

Fig. 2 demonstration firm non tender nodule with free mobile underlying skin.

The patient was operated under local anaesthesia. Two silk sutures were taken near lid margin to provide traction if required during surgery. Globe was secured with entropion plate. Lid crease incision was given superficial to tarsal plate. The lesion was isolated from the surrounding tissue by blunt dissection. Capsule was present over the lesion. Dissection was easily done in the extra capsular plane except for the lower portion of around 2 × 2 mm which was found adherent with tarsal plate. The lesion was excised completely along with some part of tarsal plate. No communication with the supraorbital nerve could be identified.

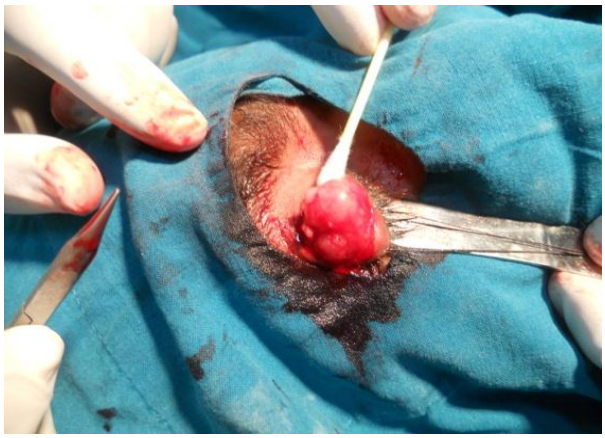

Fig. 3* Schwannoma *nodule after dissection.

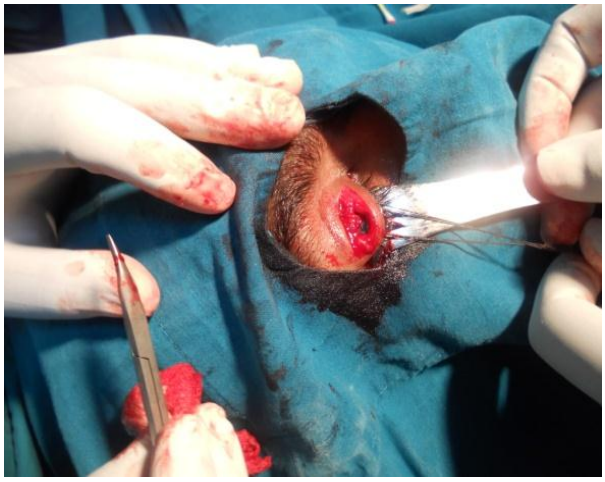

Fig. 4. Full thickness lid defect after excision of schwannoma.

The tarsal plate was sutured with 6-0 vicryl continuous sutures. Skin was sutured with interrupted 6-0 vicryl. Eyelid movements were present on table. Patient's ptosis was recovered on first post op day.

Fig.5 Improvement of the ptosis of the right upper lid on the first post-operative day.

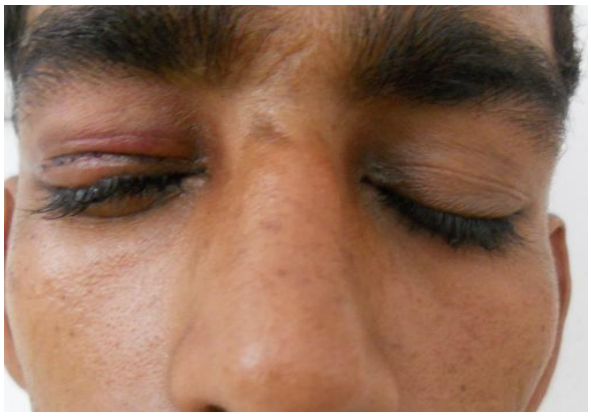

Fig.6 First post-operative day appearance of the patient showing no lid lag.

Gross Examination-

The tumour was encapsulated nodular lesion of size 2.4 X 1.7 X 1.5 cm. The consistency was firm with whitish appearance at cross section.

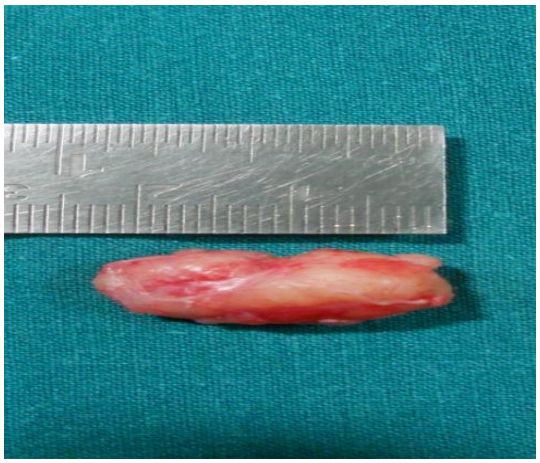

Fig.7 Specimen of the schwannoma.

Microscopic Examination

H & E stained Sections show alternating areas of highly cellular (Antoni A) and hypocellular (Antoni B). Antoni A cells- spindle cells, containing elongated nuclei arranged in fascicles, nuclei tend to palisade.

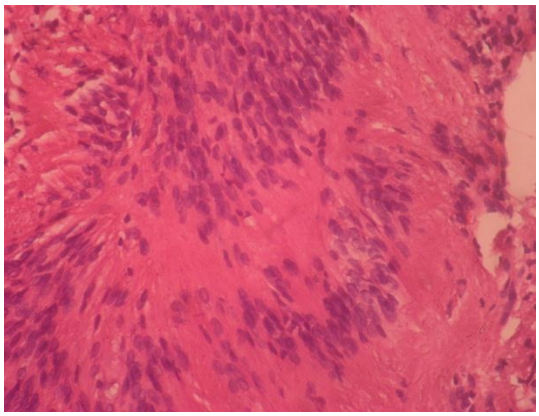

Fig.8 H & E stained Sections H & E stained Sections show alternating areas of highly cellular (Antoni A) and hypocellular (Antoni B).

Antoni B area- homogenous acellular material, in which the cells were more oval, and had rounded nuclei, clear cytoplasm and less basement

membrane, and were loosely entwined within a clear myxoid matrix

Discussion

Schwannoma is rare benign neurogenic tumour made up of proliferating Schwann cells of peripheral nerve. It is a neoplasm which occurs wherever Schwann cells are present, that is, in any myelinated peripheral nerve. In most cases, while Schwannoma is sporadically manifested as a single benign neoplasm, the presence of multiple Schwannoma is usually indicative of neurofibromatosis-2. Our patient had isolated eyelid Schwannoma with no family history or clinical findings of neurofibromatosis-1 or neurofibromatosis-2.

Clinically, the tumour is a solid, slowly progressive and painless mass. Due to its rarity and unusual location, eyelid Schwannoma is frequently confused with other diagnosis like chalazion or inclusion cyst. In our case, patient presented with solid slowly enlarging, painless mass of 6 month duration. Literature suggests that the tumour, though rare, can be present in both upper and the lower eyelids. Macroscopically, they appear to be well demarcated; they usually grow very slowly and are asymptomatic. Microscopically, they may demonstrate a biphasic pattern with areas of highly cellular (Antoni type A) and myxoid matrix (Antoni type B) [6]. . The cells tend to align themselves into compact parallel rows, with intermittent dense anucleate zones. In other locations, a poor prognosis has been described if the cells are fusiform, contain melanin granules, or if epithelioid cells are present [1]. Nevertheless, malignant transformation has not been reported in eyelid schwannomas.

The most important feature in its diagnosis remains the strong reactivity to S100 protein by immunohistochemistry, particularly in Antoni type A areas. Despite sometimes striking cytologic atypia, mitotic figures are rare. It is postulated that degenerative changes occur due to the long period of time over which large schwannomas develop [7].

The age range in the adult group of published cases (in 40 years) was between 19 and 63.The size of the tumour ranges from few millimeters to 3.5 cm. [2]

Management of Schwannoma of the eyelid is complete excision with clear margin to establish the histopathological diagnosis and prevent recurrence. Incomplete removal is associated with eventual recurrence and more aggressive behaviour. There have been anecdotal reports of malignant changes in a previously incompletely excised benign Schwannoma. The swelling also tends to transgress tissue planes and grow rapidly on incomplete excision. [4, 5] An attempt to preserve continuity of nerve should be made, but this is not always possible and does not appear to have any major consequences at this site.

References

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