CASE REPORT

INFRA ORBITAL NERVE SCHWANNOMA PRESENTING AS NASAL SWELLING: A RARE CASE

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ABSTRACT

Schwannomas of the nose and paranasal sinuses originating from the infraorbital nerve is extremely rare accounting for less than 4% of benign peripheral nerve sheath tumors of the head and neck region. We present the case of a 40-year old female who presented to our ENT outpatient department with 3 months history of swelling on the right nasomaxillary area and nasal obstruction on right side. On examination revealed a swelling which is of approximately 3x1.5 cm size, firm, circular and non tender. Pre operative computed tomography demonstrated soft tissue mass involving right lateral wall of nose without bony destruction. Tumor was resected via sub labial approach and on histopathological examination, it presented as a typical manifestation of schwannoma with Antoni A area with Verocay body. No recurrence was seen in the follow-up period of 1 year.

Key words: Infra orbital nerve, Schwannoma, Sub labial approach

INTRODUCTION

Schwannoma is a benign, encapsulated, slow-growing nerve sheath tumor composed of Schwann cells. Schwannomas of the head and neck are uncommon tumors and accounts for 25 to 45% of extra cranial schwannomas in the head and neck region[1]. The most common region for schwannoma in the head and neck is internal acoustic meatus in the form of vestibular schwannoma [2]. Schwannoma of the nose or paranasal sinuses arising from infra orbital nerve is rare, accounting for less than 4% of benign peripheral nerve sheath tumors of the head & neck[3, 4]. The treatment of choice for schwannoma is wide surgical excision.

The aim of reporting this case is because of nasal schwannomas arising from infra orbital nerve are very rare and considering its complete removal via sub labial approach.

CASE REPORT

A 40-year old female, who was referred to outpatient department of our tertiary care hospital with a 3months history of swelling on the right nasomaxillary area which is gradually progressing and nasal obstruction on right side. (Figure-1)

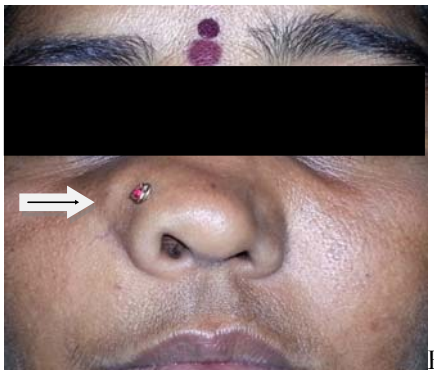
Fig 1.A


Fig 1.B

Figure 1: A 40 year old female patient with swelling on the right naso maxillary area

(A) Preoperative front views. (B) Preoperative lateral view.

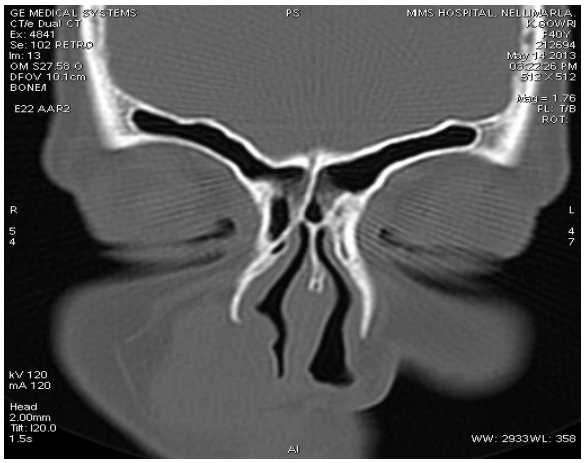

Figure 2: CT-Scan of Para nasal sinuses, coronal view showing soft tissue mass lesion involving right lateral wall of nose

Figure 3: Surgical specimen of the tumor (3.5x1.5x1 cm.) resected

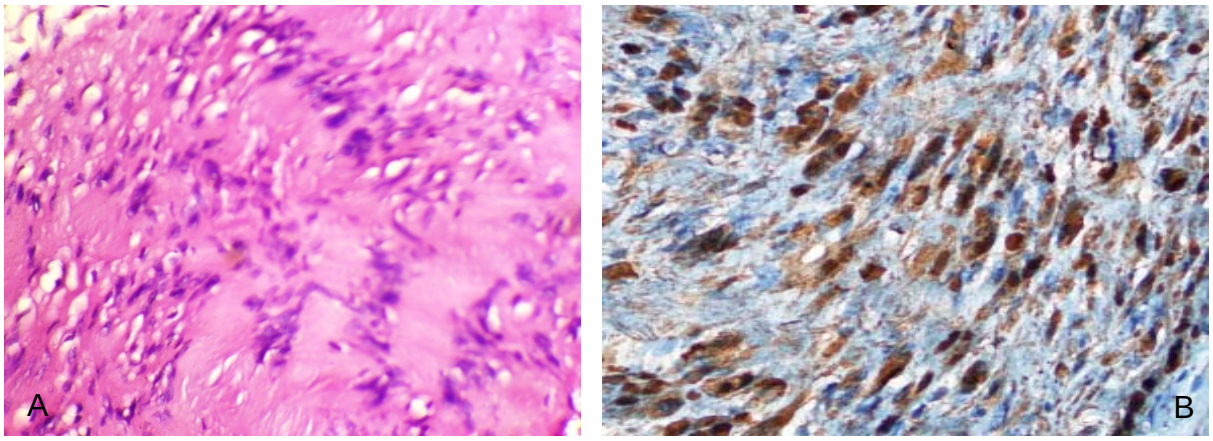

Figure 4: (A) Histopathology slide showing Antoni-A structure and Verocay bodies (H&E, 40 X)**, (B) Immuno histo chemistry showing diffuse S-100 positivity.**

Figure 5: Post operative appearance of the patient after 6 months

Examination revealed right-sided naso maxillary swelling which is 3x1.5 cm. sized firm, non tender and causing deformity of the nose. Diagnostic nasal endoscopy showed lateral wall of the nose which is pushed medially causing narrowing of the right nasal cavity. Rest of the ear, nose, throat and physical examinations were normal. Eye ball movements were normal. Non-contrast CT scan of the sino nasal region was performed which revealed a soft tissue mass lesion of size 3.0x1.5cm.involving inferior portion of right lateral wall of nose without evidence of bone destruction (figure-2).

Later via sub labial approach tumor was resected completely which was present between right upper and lower lateral cartilages distorting the nasal bridge. Tumor showed no extension in to surrounding structures. And specimen was sent for histopathological examination (Figure-3). Tissue on gross examination was encapsulated mass mea-

suring 3.5x1.5x2cm.size.Histological examination showed areas of hyper cellularity with palisading of the nuclei (Antony A) and characteristic Verocay bodies (Figure-4A).Immuno histochemistry showed diffuse S-100 positivity which is the marker for schwann cells(Figure-4B). Postoperatively the patient had no complications and deformity of nose is well corrected. There was no evidence of recurrence after 15 months period of follow-up (Figure-5).

DISCUSSION

Sino nasal Schwannomas arise from schwann cells associated with the ophthalmic and maxillary branches of the trigeminal nerve, as well as autonomic nerves to the septal vessels and mucosa [5]. Infra orbital nerve is continuation of maxillary branch of trigeminal nerve which emerges on to the face at the infra orbital foramen and supplies the skin and mucous membranes of the middle portion of the face. The infra orbital nerve produces four main branches, the inferior palpebral, internal nasal, external nasal, and superior labial branches [6]. The cause of schwannoma is unknown but sometimes occurs in neurofibromatosis type 2.

The presentation of the tumor depends on the location, size of the tumor and involvement of surrounding structures. Usually schwannomas exhibit slow, progressive growth and cause symptoms by pressure. The most common symptoms of schwannoma in the nose are unilateral nasal obstruction, epistaxis, pain, and occasional localized facial numbness. Schwannomas are diagnosed by imaging studies and histopathology which on H&E staining show characteristic palisading of nuclei, Verocay bodies (Antoni-A) and hypo cellular(Antoni B) patterns. Nasal Schwannomas usually have a benign course, but intracranial extension and malignant degeneration have been reported in the literature [7, 8]. Nasal schwannomas should be differentiated from chondroma, ossifying fibroma, dermoid cyst and nasolabial cyst.

For nasal schwannomas the preferred treatment is complete surgical excision [9].Sub labial approach either classical or mid facial degloving gives the best access for surgical removal if this benign lesion is confined to maxilla ethmoidal region [10]. So in this case we went through sub labial approach and could remove the tumor successfully. The advantages include no scar after surgery and also injury to lacrimal apparatus can be avoided.

CONCLUSION

Very few cases of infraorbital nerve schwannoma have been described in literature. So we describe a rare case of an extra cranial schwannoma arising from the infraorbital nerve that presented as a facial swelling. So in the differential diagnosis of nasal or facial swellings schwannoma should be considered as one. The use of a preoperative computed tomography scan helps in diagnosis, to know the extent of the lesion and also extension in to surrounding structures. Surgical approach via sub labial incision is preferable for this size which gives good visual access to the lesion and facilitates its complete removal without causing external scars.

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