

Ancient Schwannoma in the Floor of the Mouth: Report of a Case

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ABSTRACT

Background: Schwannoma, also known as neurilemoma, neuroma, neurinoma or Schwann cell tumor is a rare benign neural tumor that arises from the Schwann cells of the peripheral, cranial or autonomic nerves. These tumors can arise anywhere in the body but with greater predilection to the head and neck region. According to literature, only a few of them have occurred in the oral cavity. These lesions have little or no potential for malignant transformation or recurrence. In this case report we present a 65 year old female patient with schwannoma in the floor of the mouth along with its management.

Keywords: Antoni bodies, Schwann cells, Benign tumor, Neuroma.

INTRODUCTION

Schwannoma is a rare benign tumor arising in the head and neck region. Many schwannomas occurring in the oral cavity are relatively small, and nearly all reports have described tumors less than 20-30 mm in diameter. Schwannomas tend to undergo secondary changes such as cyst formation, hemorrhage, hyalinization, and mucoid deposition over a prolonged period. Some schwannomas display marked nuclear atypia and are referred to as ancient schwannomas. This case describes a 65 year old lady with a painless progressive swelling over the floor of the mouth region which was excised extra orally. No signs or symptoms of recurrence have been noted as of 2 years postoperatively.

CASE REPORT

A 65 year old female reported to the department of oral and maxillofacial surgery, Kannur Dental College with a chief complaint of a painless progressive swelling on left lower portion of the jaw since 2 years.(FIG 1) The swelling had progressed to the present size of 8*6 cm over this period of time.The dimensions of the swelling were

8x6 cm anteroposteriorly . The swelling was slow growing with difficulty in chewing and swallowing,restricted tongue movements. It was non tender as well.The patient reported with no relevant medical ,dental or family history. On extra oral examination it revealed a diffuse firm swelling present on left submandibular region.(FIG 2) Intraoral examination revealed a firm swelling extending from lower anterior to the second molar region on the left floor of the mouth.(FIG 3).

A magnetic resonance imaging (MRI) was done to assess the swelling. The report revealed a large, oval encapsulated mass measuring 7x5cm, below the tongue in the left submandibular region. (Fig 4 & 5)

Surgical Procedure

The surgical procedure to remove the lesion was planned to be done under general anaesthesia following standard protocols. A standard Risdon's incision was placed 2cm below the lower border of the mandible to protect the marginal mandibular nerve. The submandibular triangle was opened and the skin, superficial fascia

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Fig 1: Frontal view.



Fig 2: Lateral view.



Fig3: Intra oral view.

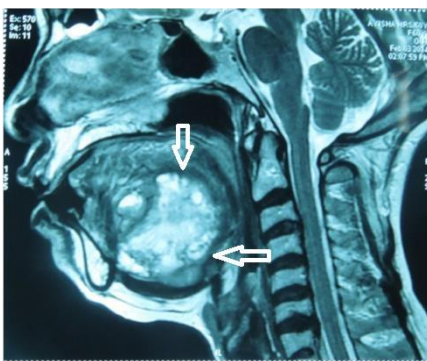


Fig 4: MRI showing the extend of the lesion.

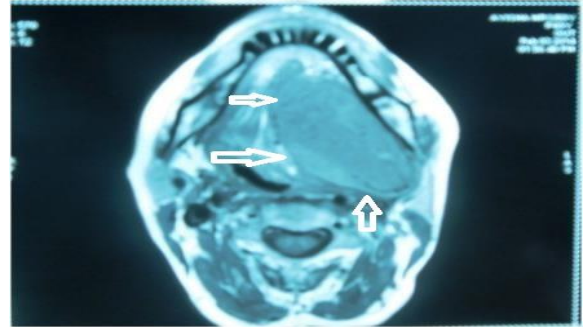


Fig 5: MRI showing coronal section.



Fig 6: Surgical incision.



Fig7: Surgical exposure to the lesion.



Fig 8: Lesion identified.



Fig 9: Resected specimen.



Fig 10: Cut section.

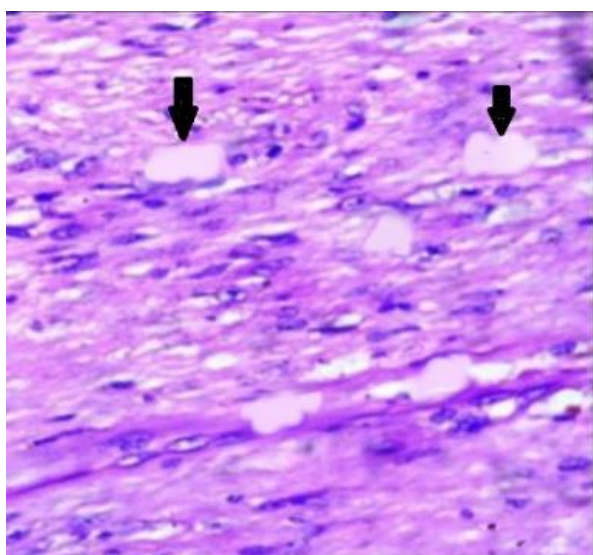


Fig 11: 45 x magnification with a H & E stain showing cystic spaces.

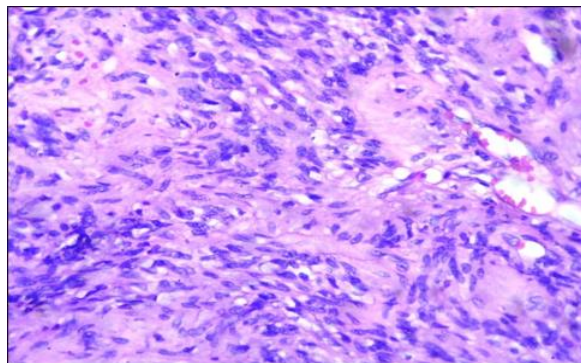


Fig 12: Antoni A and Antoni B bodies.

and platysma were dissected in stepwise fashion. The deep cervical fascia was incised, marginal mandibular nerve identified and retracted to protect it. The facial vein and facial artery were identified and ligated. The submandibular gland along with a deep lymph node was carefully dissected out and the lesion was identified. The solid mass was carefully released from the surrounding structures and dissected out in toto. (Fig 6,7&8) Hemostasis was achieved by using electrocautery and the surgical site was closed in layers using 3-0 vicryl. The resected mass was sent for histopathologic examination to the Dept. of General Pathology, Kannur Medical College (FIG 9). Cut surface of the resected mass showed a well encapsulated tumour mass containing both solid and cystic areas (Fig.10)

In our case the patient reported with deviation of tongue 3 months post operatively suggesting paresthesia of the hypoglossal nerve.

Histopathologic examination

Cellular areas composed of spindle cells with verocay bodies from ANTONI A type of cells were identified in the prepared slide. Hypocellular areas showing loosely arranged cells in collagenous background (ANTONI B) with cystic change along with few cells with atypical nuclei were also identified (FIG 11& 12). From the above mentioned histopathological findings final diagnosis of ancient schwannoma in the submandibular region was arrived at.

DISCUSSION

Ancient schwannomas do not show age predilection but it is more common between the

second and fifth decade of life and more often affecting women. Approximately 25–40% of schwannomas are encountered in the head and neck region but ancient schwannoma is very rarely found in the head and neck region, especially the oral cavity. Ancient schwannoma is clinically indistinguishable from other types of schwannoma. Review of literature revealed that intra-oral ancient schwannomas were frequently located in the floor of the mouth[2,3]. According to the literature ancient schwannoma has no reported recurrence. In addition, malignant transformation of the lesion has also not been reported till date[4,5]. This finding suggests that ancient schwannoma is not an aggressive neoplasm. Ancient schwannoma from locations other than the oral cavity have shown malignant transformation[11]. Ancient schwannomas clinically can have varied consistency ranging from firm solid masses to fluctuant cysts.

Computed tomography and magnetic resonance imaging are helpful for the differential diagnosis of schwannomas wherein magnetic resonance imaging is superior to other imaging modalities for diagnosing intraoral lesions.

Ancient Schwannoma is a long-standing tumour which undergoes degenerative 'ancient' changes predominated by large cystic, myxoid areas with variable bizarre spindle cells and occasional mitoses, together with Antoni A bodies and Antoni B bodies (Verocay Bodies)[7,12]. In the case described here, the lesion was a slow growing, long-standing tumor which was well encapsulated, and consisted of both solid and cystic areas. Such lesions of schwannomas presenting with the above mentioned degenerative changes, especially nuclear changes mimicking malignant counterparts are termed as ancient or degenerating schwannoma compatible[12]. Intraoral ancient schwannomas do not differ much from ordinary schwannomas[10].

The treatment of choice is surgical excision of the lesion. The encapsulated form is enucleated without much difficulty but non-encapsulated lesions require inclusion of normal tissue margins surrounding the lesion to avoid recurrence[13]. If the nerve associated with the origin of the lesion is identified, surgical excision of the lesion must be aimed at preserving its function, which may be impossible sometimes. The surgical excision of the

lesion shows very good prognosis owing to the low recurrence rate. Ancient schwannoma of the oral cavity was first reported by Eversole and Howell in 1971[1].

Clinically, the absence of symptoms and the long standing nature of the lesion results in the transformation of the lesion to an ancient histological variant[8,9]. Histopathological examination findings are mandatory for a correct final diagnosis of the lesion.

CONCLUSION

Any nodular swelling in the head and neck region must include the differential diagnosis of schwannoma also. The slow growing and long standing nature of the lesion points to a provisional diagnosis of ancient schwannoma. The definitive diagnosis can be made only after biopsy and histopathological examination which will present the above mentioned unique characteristics histologically. Once the final diagnosis of ancient schwannoma has been made treatment of choice is surgical excision.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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