Abstract: Schwannoma is a benign nerve sheath tumour relatively rare in occurrence and even rarer in sites like mandible. There are only 45 reported cases of intraosseous schwannoma reported in literature. They represent less than 1 percent of benign tumours of jaw. Mandibular schwannomas usually arise from the inferior alveolar nerve or marginal mandibular branch of facial nerve. We report a rare case of left mandibular schwannoma in a 21 year old male patient. Patient had a complaints of left submandibular swelling. The diagnosis was made as submandibular sialadenitis and submandibular sialadenectomy was done 1 year back. The biopsy was proved to be adenoid cystic carcinoma. Patient again presented with left mandibular swelling. FNAC was not conclusive. CT shows multiloculated osteolytic lesion of the body of left mandible with erosion of roots of tooth. Incision biopsy - mandibular schwannoma. Using external approach through a cervical incision, tumour was removed and the defective mandibular segment is augmented using a titanium plate with preservation of inferior alveolar nerve.

Keyword: schwannoma, mandible, mandibular tumour, intraosseous schwannoma, nerve sheath tumour. Schwannoma also called as Neurilemmoma is a benign neoplasm of the Schwann cells surrounding the nerves.[1] The first reported literature of schwannoma was in the year 1910 by Verocay.[2] This benign lesion is frequently located in the soft tissues of head and neck region.[3,4] However, intraosseous schwannomas are extremely rare in jaw bones and represent less than 1% of benign primary tumors of the jaws. This article documents one case of schwannoma within the mandible originating from the inferior alveolar nerve.

CASE REPORT

A 20 year old male patient coming from Tanjore, Tamilnadu, a student presented with history of swelling in the left submandibular region for the past 2 years, insidious, gradually progressive, not tender. Patient has undergone FNAC in a nearby hospital and the FNAC came out to be submandibular sialadenitis. Hence a submandibular sialadenectomy was done. Biopsy came to be adenoid cystic carcinoma. Patient was then followed up and patient was referred to our OP with a history of progressive painless increase in swelling for past 2 years after the previous surgery. O/E patient had a swelling in the left submandibular region size 4 * 5 cm- firm to hard in consistency, warm, not tender, not mobile. Previous surgical scar present. Oral cavity - firm mass in floor of mouth left side, teeth were normal. Other ENT examination normal. CT neck – multi-loculated osteolytic lesion involving the left body of mandible extending to the submandibular region and floor of mouth.

Orthopantamogram – multiloculated osteolytic lesion involving the body of the mandible – left side with erosion of root of 1st and 2nd molar and 2nd premolar.

opg shows multi-loculated osteolytic lesion of left side of mandible.
opg shows multi loculated osteolytic lesion of left side of mandible
FNAC repeated presently – haemorrhagic aspirate (inconclusive)
Open incision biopsy – schwannoma
SURGICAL PLAN - Excision of mass with augmentation of mandible with TITANIUM plate

cervical incision made

mandible exposed

mandible skeletonised

tumour jutting out of mandible and extension to submandibular space

using blunt finger dissection mass detached from its attachments

tumour removed completely with inferior alveolar nerve preservation

augmentation of defective mandible using titanium plate
removed tumour along with tooth

wound closed in layers after complete hemostasis

picture taken 2 weeks post op

DISCUSSION
Schwann cells form the neurilemma around the axon in peripheral nerves. Schwannoma is a benign tumor, well-circumscribed, round or lobulated attached to the nerve of origin and cause a fusiform enlargement of the nerve. Histologically, two types of tissue are seen:

histological appearance of schwannoma showing Antoni A and Antoni B
1) Antoni A tissue—compact groups of spindle cells with nuclei that tend to show palisading;
2) Antoni B tissue— loose reticular tissue, sometimes cystic. A portion of the tumor usually has cells with an interlacing, fascicular pattern while in other areas there is palisading. The walls of blood vessels, often large, may show a characteristic hyalinization.
Also of note are Verocay bodies—whorled formations of palisading nuclei arranged in rows about the periphery of eosinophilic cytoplasm.
Schwannoma can involve bone by three mechanisms:
(1) secondary erosion of the bone by primary soft tissue tumour
(2) the tumour arises within the nutrient canal, producing enlargement of the canal;
(3) tumour arises centrally within the bone.
The first two mechanisms occur most frequently, but in this case schwannoma arose centrally within the bone, which is the rarest mechanism
Radiographic findings of intraosseous mandibular schwannoma showed a great variation, from unicocular to multilocular, with or without well-defined borders of the lesion, and cortical expansion.
The recommended treatment option for mandibular schwannoma is surgical removal, with recurrence after local excision being rare. In our case we have preserved the inferior alveolar nerve which is the probable origin of the tumour and the case has been followed for 1 year and showed no recurrence.
References
