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Case Report

An unusual case of lateral neck swelling: schwannoma revisited

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ABSTRACT

Lateral neck masses can pose a diagnostic challenge with clinicians across the globe. An algorithmic approach with definite investigations usually leads to diagnosing common etiopathogenesis. However, in rare instances it can pose a major challenge and an excision biopsy is both the investigation as well and the therapeutic option. Neurilemmomas are a group of benign nerve sheath tumours and have a pre ponderance for occurrence in head and neck areas. This case report was one such account of unusual neck mass and along with its review of literature.

Keywords: Neck mass, Benign, Schwannoma

INTRODUCTION

A wide range of soft tissue tumors may arise in the head and neck region. Although most of these tumors are benign, malignant and locally aggressive soft tissue tumors do occur and can lead to substantial morbidity and mortality.[1] Ranging from benign masses like sebaceous cysts (epidermoid cysts), cervical lymphadenopathy, benign lipomas, tumors from various nonepithelial, extra-skeletal elements (adipose tissue, smooth and skeletal muscle, tendon, cartilage, fibrous tissue, blood vessels, and lymphatic structure) can present as lateral neck masses. Most common ones are thyroid, lymph nodes and various malignancies.[2]

There is one rare variety of benign tumors arising from nerve sheath also known as neurilemmoma or schwannoma. It arises from any nerve covered with a Schwann cell sheath, which includes the cranial nerves (except for optic and olfactory), the spinal nerves, and autonomic nervous system. Amongst itself, schwannomas occur more commonly in head and neck region, with 25-45% of all reported schwannomas being found in this region.[3]

We presented one such case of swelling in the neck of a middle aged lady.

CASE REPORT

A 35 year old lady presented with complaints of a progressively growing swelling in her left neck region for last 1 year. It was painless and not associated with any constitutional symptoms, trauma or features of thoracic outlet syndrome. On examination there was an 8 cm globular swelling in left supraclavicular region with restricted mobility. It was non pulsatile, away from thyroid, had smooth surface with diffuse boundaries. There were no features of neurovascular impairment associated with it. She was thoroughly investigated and worked up. Lab investigations and initial X-ray were unremarkable. The MRI neck was suggestive of a well encapsulated mass posterior to sternomastoid muscle and splaying it with no vascular communication (Figure 1 a and b). FNAC was inconclusive and a provisional diagnosis of benign mass of unknown origin with mixed cellularity was made.

She was operated under GA with a transverse skin crease incision over left side of neck. With gradual dissection,

the mass was identified to be arising from cervical spinal nerve and mobilised from all sides. Extra capsular extraction was done. There was no bleeding, and the wound was closed in layers (Figure 2).

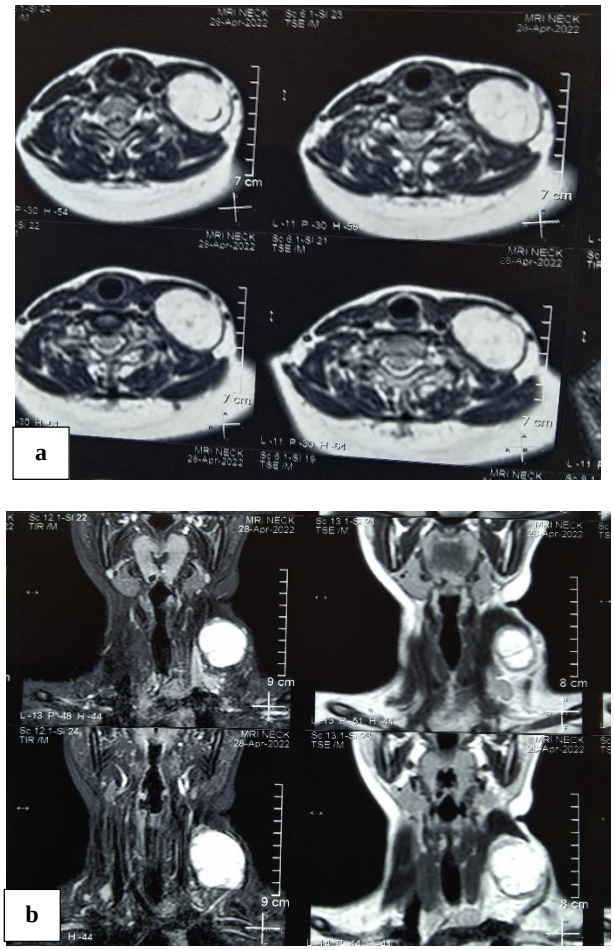

Figure 1 (a and b): MRI images of the neck in coronal and axial cuts showing well encapsulated mass with no vascular communication.

Figure 2: Gross image of the mass excised 4×4 cm showing complete lesion.

Post operatively patient recovered uneventfully. She returned to her daily activities from 3rd post op day and wound healed well. There was no functional deficit.

On histopathology there were cellular Antony A and hypocellular Antony B areas and other features which suggested the diagnosis of the swelling, being a benign nerve sheath tumor-schwannoma.

DISCUSSION

Proper diagnosis of the neck swellings can prove to be a challenge in underdeveloped and developing countries. If properly evaluated, timely diagnosis of neck swellings can help in reducing significant morbidity. Various imaging modalities like Ultrasonography, CT scan, MRI can prove to be useful in the effective, non-invasive evaluation of neck swellings and ascertain its relationship to adjacent soft tissue and bony structure.[4] The WHO classified schwannoma as a grade I benign tumor. Schwannomas are solitary in 90% of the cases.[5]

MR imaging is the study of choice to delineate the margins of the tumor from surrounding tissues with greatest contrast. Importantly, however, MR imaging is currently unable to differentiate between schwannoma and neurofibroma.[3]

Pre op FNAC is not very popular due to low sensitivity and inability to distinguish between benign and malignant tumors of neck.[7]

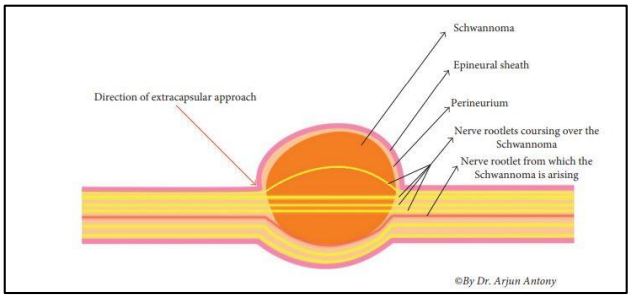

Figure 3: Extra capsular approach of excision of the schwannoma.

The choice of surgical approach was dictated by the size of the tumor, its location, its relationship to the great vessels, and the suspicion of malignancy. Complete extracapsular excision preserving the nerve of origin should be attempted when feasible, but for extensive schwannomas, nerve sacrifice with reconstruction and rehabilitation are important considerations. Conventional extracapsular excision can damage the normal fascicles during dissection of the capsule. Intracapsular excision with gentle dissection between the tumor capsule and normal fascicles minimizes the risk of nerve damage.[6] The epineurial layer covering the tumor capsule should be dissected in a manner similar to peeling an onion to

allow for safe removal of the tumor, which should be approached by its proximal and distal poles (Figure 3).[3]

Histological findings are usually classical with S100 expression. However it is important to differentiate it from its malignant variations and other forms of neurofibromas.

This unusual mass is known to carry a very humble prognosis and very low rate of recurrence.

CONCLUSION

There can be a plethora of lateral neck swellings. The clinician needs to be vigilant and follow a logical sequence of work up to reach a closer differential diagnosis. The surgical precision should be as meticulous so as to excise the whole mass without damaging the parent nerve tissue and may warrant microscopic techniques as well. Long term follow up may be needed if arising from a major nerve root or developing post excision neurological deficit.

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