Schwannoma of Brachial Plexus

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Abstract Brachial plexus tumours are a rare entity. Schwannomas are benign nerve sheath tumours and only about 5% arise from the brachial plexus. Due to its rarity and complex anatomical location they can pose a formidable challenge to surgeons. We present a case of a young patient who presented with an axillary swelling three months after a lymph node biopsy from the same axilla, which turned out to be a Schwannoma arising for the medial cord of the brachial plexus.

Keywords Brachial plexus tumours · Schwannoma · Axillary swelling

Case Summary

A 17 year old male presented with swelling and pain in his left axilla of 15 days' duration. On examination, he had a 5×4 cm firm swelling in the left axilla. There was no neurological deficit in the upper limb.

An FNAC was hemorrhagic. A CT scan of chest revealed a 7.6×4.3 cm mass in left axilla posterior to pectoralis major and anterior axillary artery which showed heterogeneous enhancement and suggestive of a lymph node mass or a neurogenic tumour (Fig. 1).

Fig. 1 a. Contrast enhanced CT scan showing the isodense lesion in axilla with minimal enhancement. b. Sagittal reformatted image showing the tumour

During surgery for excision through an axillary approach, a 6×4 cm firm mass arising from the medial cord was found (Fig. 2). The tumour was enucleated avoiding any damage to cord. In the post operative period, the patient

Fig. 2 Per-operative photograph of the tumour

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complained of loss of sensation over index finger and thumb. The histopathology of the tumour was consistent with Schwannoma.

Discussion

Brachial plexus tumours are rare comprising of only 5% of all tumours of upper limb [1]. The two most common brachial plexus region tumors are the Schwannomas and the Neurofibromas, both of which are benign and arise from the nerve sheath [2]. The most frequent site is in the head and neck, which comprises 25% of all Schwannomas, and only about 5% of Schwannomas present as brachial plexus tumours [3, 4]. Due to their rarity and complex anatomical location they form a formidable diagnostic and therapeutic challenge to surgeons [1].

Schwannomas are indolent tumors but may present with symptoms secondary to nerve compression. Grossly these tumours are oval or plexiform and may be pink, tan, yellow or gray [3]. Histologically, the terms Antoni type A and type B are used to describe varying growth patterns in Schwannomas.

Imaging studies are valuable in the pre-operative diagnosis. On CT, most Schwannomas are iso-dense relative to brain parenchyma. Calcification or areas of hemorrhage are rare and

the enhancement pattern is typically homogeneous [5]. On MRI Schwannomas are iso-intense to hypo-intense on T1-weighted MRI and enhance with gadolinium [6].

Surgery is indicated for tumors that cause neurological dysfunction or pain or for any rapidly growing tumors with a suspicion of malignancy, and complete resection of these tumors results in cure [3].

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