Case Report

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A Case Report of Complete Excision of Brachial Plexus Schwannoma: A Rare Entity

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Brachial plexus schwannomas are rare benign nerve sheath tumors and only about 5% of schwannoma arise from the brachial plexus. They create a great challenge to surgeons due to their rare occurrence and complex anatomical location. We present a case of 37 yrs female presented with a right supraclavicular mass with severe radiating pain in right hand. Further investigation was done with MRI and FNAC which turns out to be huge right brachial plexus schwannoma. Gross total resection was done without any neurological motor deficits.

Key Words: brachial plexus, excision, schwannoma

Brachial plexus schwannomas are rare entity. They are benign nerve sheath tumors and only about 5% of Schwannoma arise from the brachial plexus. They create a great challenge to surgeons due to their rare occurrence and anatomical location. Benign schwannomas are the commonest peripheral nerve tumors and malignant transformation is very rare. We present case of mass over right supraclavicular region with severe radiating pain in right hand which turns out to be schwannoma in biopsy.

Case Report

A 37-year-old right handed female complaints of lump in her right upper clavicular region with persistent severe radiating pain in right hand, since more than a year. Pain was not subsided with heavy painkiller. Local neurological examination of right hand could not access due to severe pain and hyperesthesia. Power of right upper limb was 3+/5, rest were grossly normal. Contrast MRI neck and brachial plexus **(Figure 1)** was done, which reveal homogeneous enhancing lesion in right brachial plexus region with size approximately 4x6x4cm. FNAC was done which turned out to be schwannoma. We advised them for surgical excision and also explained about possibility of motor deficits due to lack of intraoperative nerve stimulator but they want to be pain free rather than regaining of motor function or paralysis of right upper limb. So we planned to operate on this lady in our own set up, though it was surgical challenging and also the mass is in dominant hand region.

Surgical excision of mass was followed by right L shape incision over neck. 4x6x4 cm mass was enucleated with minimal damaging parent cord. Complete excision was done. The histopathology of the tumor was consistent with Schwannoma. In post operative period patient was completely freed of pain without motor deficits, but patient persists minimal decrease in sensation over little finger and ring finger (C7 and C8 dermatome). Now patient is doing her daily work without motor deficits and recurrence of mass. Adjuvant therapy was not given.

Discussion

Brachial plexus tumors are rare comprising of only 5% of all tumors of upper limb and are benign and arise from the nerve sheath. 4 The most frequent site is in the head and neck, which comprises 25% of all Schwannoma, and only about 5% of Schwannoma present as brachial plexus

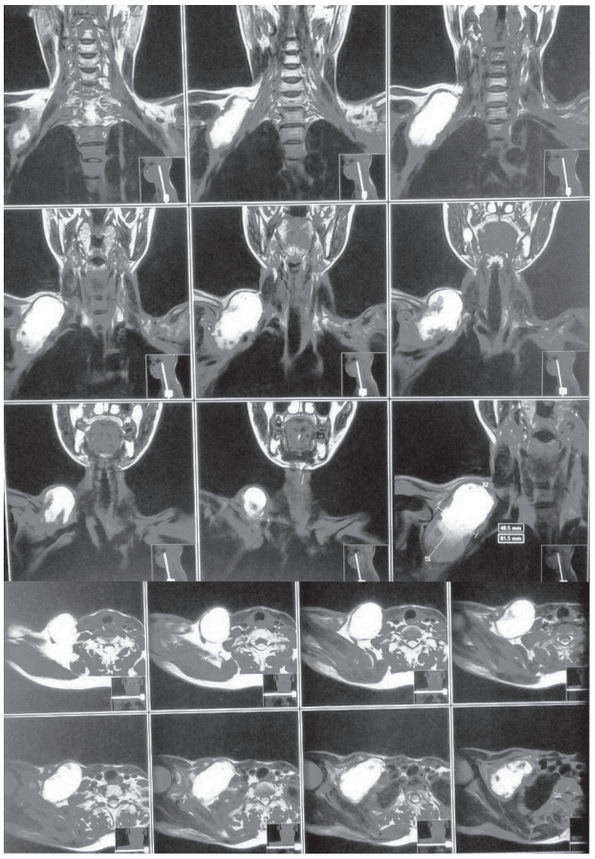

Figure 1: MRI of soft tissue of neck (coronal and axial section) showing huge hyperintense mass in right brachial plexus region.

tumors.[5,1] Due to their rarity and complex anatomical location they form a therapeutic challenge to surgeons.[4] Schwannoma is inert tumor but may present with symptoms like pain, secondary to nerve compression. Grossly these tumors are oval or plexiform and may be tan, pink, yellow or gray.[5] Histologically, the terms Antoni type A and type B are used to describe varying growth patterns in Schwannoma.

In the pre-operative CT, most Schwannomas are iso-dense relative to brain parenchyma. Calcification or areas of hemorrhage are rare and the enhancement pattern is typically homogeneous.[3] On MRI Schwannomas are iso-intense to hypo-intense on T1-weighted MRI and enhance with gadolinium.[2] MRI is gold standard for rapid diagnosis of neurogenic tumors of the brachial plexus. Surgery is indicated for Schwannoma that cause neurological dysfunction or pain or for any rapidly growing tumors, and complete resection of these tumors results in cure.[5]

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