

Giant axillary schwannoma: diagnosed on FNAC

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Abstract

Schwannomas are benign neoplasms of the nerve sheaths. They are commonly known to occur in the head and neck region. Brachial plexus schwannomas are extremely rare. Diagnosis using fine needle aspiration plays a vital role in starting an early treatment. A case of giant sized schwannoma in the left axilla of a 35 year old lady diagnosed on FNAC is presented here with.

Keywords: Giant, Axilla, Schwannoma, FNAC.

Introduction

Schwannomas, also referred as neurilemmomas, are benign, encapsulated perineural tumour of neuroectodermal derivation that originates from the Schwann cells of the neural sheath of motor and sensory peripheral nerves. The aetiology is still unknown. We report a case of axillary mass, clinically diagnosed as axillary lymphadenopathy, diagnosed on FNAC as axillary Schwannoma in the left axilla. This case has been reported for its rarity and unusual site and for highlighting the significance of cytology in the effective diagnosis.

Case Report

A 35-year-old female presented with a painless, gradually increasing lump in the left axilla for 5 months. On examination the lump was globular and measured 5 cm in diameter. It was hard, non-tender, mobile and not attached to the overlying skin. X-Ray showed a soft tissue mass. CT scan showed a well-defined heterogeneously enhancing soft tissue mass involving the left axilla. A clinical diagnosis of granulomatous lymphadenopathy was thought of.

FNAC of the mass showed moderately cellular smears having cohesive clusters as well as singly scattered spindle shaped cells (Fig. 1a). At places palisading of nuclei was appreciated (Fig. 1b). Some of the areas showed tissue fragments (Fig. 1c). The nuclei had blunt ends (Fig. 1d). A provisional diagnosis of benign neural tumour was made.

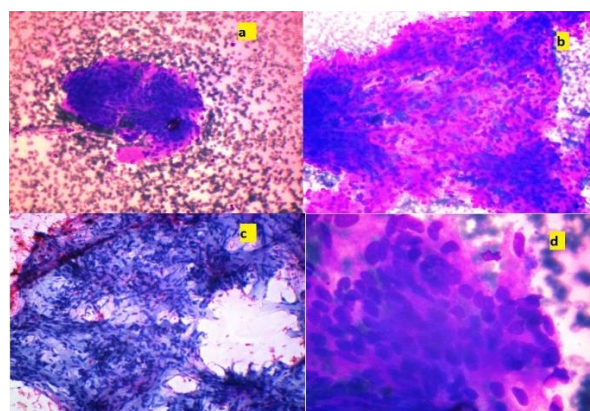


Fig. 1. Photograph showing (A) Smear with cohesive cluster of spindle shaped cells (LG×40) (b) Smear with palisading pattern of nuclei (LG×100) (c) Tissue fragments (H&E × 100) (d) High power view showing blunt nuclear ends (LG×400)

Surgical excision of the mass was done and the resected specimen was sent for histopathological examination. The specimen measured 10 x 6 x 5 cm. Cut – section showed a cystic area filled with brownish gelatinous material (Fig. 2a). H &E stained sections showed biphasic population of cells with Antoni A (Cellular) and Antoni B (Hypocellular) areas (Fig. 2b). Sections showed Verocay bodies and palisading arrangement of nuclei (Fig. 2c). The tumour cells were separated by oedematous fluid and focal cystic spaces. No area of necrosis was appreciated. Immunohistochemistry for S-100 showed strong positivity (Fig. 2d). A final diagnosis of Giant Axillary Schwannoma with focal cystic degeneration was made.

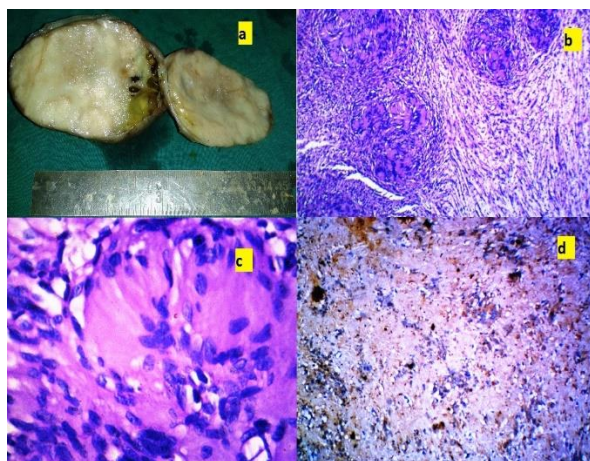


Fig. 2. Photograph showing (a) large Resected specimen (b) Section with Hyper and Hypocellular areas (H&E×100) (c) High power view showing verocay body and palisading arrangement of nuclei (H&E×400) (d) Section with S-100 positivity ×40)

Discussion

In 1910, Verocay, first described a group of neurogenic tumours and referred them as “neurinomas”. About one-fourth of the Schwannomas occur in the Head and Neck region, involving cranial nerves and sympathetic plexuses.⁽¹⁾ Extracranial schwannomas can present as a solitary mass anywhere in the body. The common sites include the head and neck, the flexor surfaces of the upper and lower extremities, the posterior mediastinum in the thorax and on the trunk.⁽²⁾ Any part of the body can be affected. They occur mainly in the head and neck region, but localization in the axilla is very unusual.⁽¹⁾ Involvement of the brachial plexus is very rare.^(3,4)

Schwannomas are usually solitary, firm, well circumscribed, encapsulated slow growing round or ovoid tumours with a smooth surface.⁽¹⁾ They can occur at all ages but most commonly affect individuals in the age group of 20 to 40 years with a slight female preponderance. FNA smears in schwannoma show spindle cells with fibrillary background and palisading nuclei (Verocay bodies). There may be several pitfalls in using cytology for the diagnosis of neural lesions.⁽⁵⁾

Diagnosis of soft tissue tumour poses great difficulty. The absence of a definite tissue pattern especially on cytology makes diagnosis difficult. The tumour cells show cytoplasmic positivity for S-100 protein.⁽⁴⁾ Differential diagnosis included axillary lymphadenopathy, fibroma, lipoma, paraganglioma and vascular tumours. In the present case since the mass was large and cystic the differentials included ganglioma, and lymphangioma.⁽⁶⁾ Microscopically schwannoma shows a dimorphic pattern with cellular (Antoni A) and loose-textured (Antoni B) areas, Verocay bodies and hyaline blood vessels.⁽⁵⁾ FNAC in the present case had characteristic morphology of a benign peripheral nerve sheath tumour, but the location

was unusual and clinically also it was not suspected. With an early diagnosis of schwannoma on FNAC a the patient can be managed properly.

At times long standing tumours may develop degenerative changes.⁽⁷⁾ Some of the changes include haemorrhage, calcification, and fibrosis and rarely cystic changes.⁽⁸⁻¹¹⁾ Since, schwannomas are benign in nature, complete surgical excision is the treatment of choice. The recurrence rate is very low.

Conclusion

Early diagnosis can provide a proper management to the patient. Soft tissue masses may be difficult to diagnose. FNAC if carried out properly helps in a quick interpretation of the lesion in majority of the cases. All masses should be subjected to FNAC before complete excision is planned. Neurogenic tumours are common in the head and neck areas but can occur anywhere in the body so should be considered in the differential diagnosis of all lesions.

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