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Schwannoma of Psoas Muscle-A Case Report

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Abstract

neurilemmoma, are usually benign tumors arising from Schwann cells of peripheral nerve sheath. Retroperitoneal location is extremely rare. We report a case of 38 year old male patient with complaint of chronic abdominal pain. Complete surgical excision is the definitive treatment. Prognosis is quite good since postsurgical recurrences are unusual.

Keywords: Schwannoma, Psoas muscle

Introduction

Schwannoma is a benign tumor of peripheral nerve sheath which is truly encapsulated. Most common location is flexor surfaces of the extremities. Retroperitoneal location is extremely rare comprising 0.5–5% of all schwannomas except in patients having von Recklinghausen's disease, in whom retroperitoneal location is more frequent otherwise mostly schwannoma occurs sporadically. Primary retroperitoneal tumors represent a variety of lesions, of which less than one third are benign and most commonly they are schwannomas.[1,2] Malignant cases are known to occur in association with NF.

Case Report

A 35 year old male patient was admitted in the department of Surgery with complaint of chronic abdominal pain since many years. Neurological examination didn't show any abnormality. There was no history of trauma. He had no other systemic disease or relevant family history of medical illness. A CECT abdomen revealed a well-defined heterogenously enhancing soft tissue density mass in the psoas muscle. The mass was excised and sent into department of Pathology.

A formalin fixed grey white soft tissue mass measuring 6x4x3cm was received.Cut surface was grey white with focal yellow brown areas. Microscopy revealed an encapsulated lesion having two different areas, Hypercellular and hypocellular areas in variable proportions. Hypercellular areas are consisting of monomorphic spindle shaped cells, with poorly defined eosinophilic cytoplasm and pointed basophilic nuclei in variable collagenous stroma. At some places, nuclear palisading also seen and these palisades are separated with intervening eosinophilic cytoplasm (Verocay bodies). Hypocellular areas(Antoni B areas) are composed of Schwann cells, but less in number and cytoplasm is inconspicuous and the nuclei appear to be suspended in a myxoid background. Thick hyalinised blood vessels are also seen in these areas.

Discussion

Schwannoma is classically regarded as a benign, nonrecurring tumor of adulthood with no sex predilection.[3,4] majority of cases develop in subcutaneous tissue, or less often muscle, with a slight predilection for the distal extremities or head and neck region. Retroperitoneal location is less common but with ever-increasing use of computed tomography and magnetic resonance imaging scans, small incidental schwannomas in the retroperitoneum are being identified more frequently. Bilateral schwannomas of the acoustic nerve are the cardinal (or pathognomonic) feature of neurofibromatosis type 2 (NF2).[5] Multiple peripherally located schwannomas develop in rare patients, but, other than those associated with coexistent vestibular schwannoma(s), these are not associated with neurofibromatosis.[6,7] Most cases of solitary schwannomas are asymptomatic. Immunohistochemical, schwannomas show diffuse and strong S-100 protein positivity. Those located in the gastrointestinal tract are also often glial fibrillary acidic protein (GFAP) positive, whereas those in the retroperitoneum and mediastinum are very commonly keratin positive.[8] keratin is often expressed in retroperitoneal schwannomas but virtually never in peripheral schwannomas.[9] Immunohistochemically, the tumor cells show immunoreactivity for S-100 protein, calretinin (in contrast to neurofibromas), calcineurin, basal lamina components (such as laminin, type IV collagen). By cytogenetic analysis, most schwannomas show either monosomy 22 or loss of 22q material. Mutation (or inactivation) of NF2 leads to loss of merlin expression, thought to be a key event in schwannoma oncogenesis.

Figures and Tables

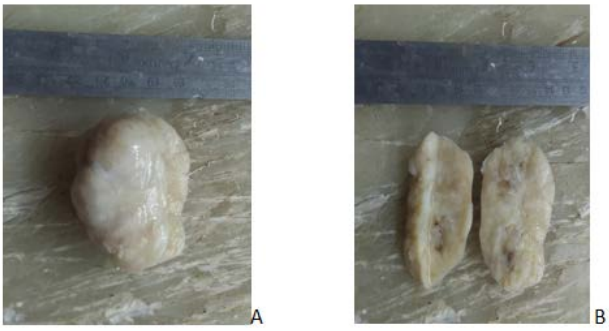

Fig 1. (A) & (B) showing grey white soft tissue mass containing grey white cut surface with focal yellow & brownish areas.

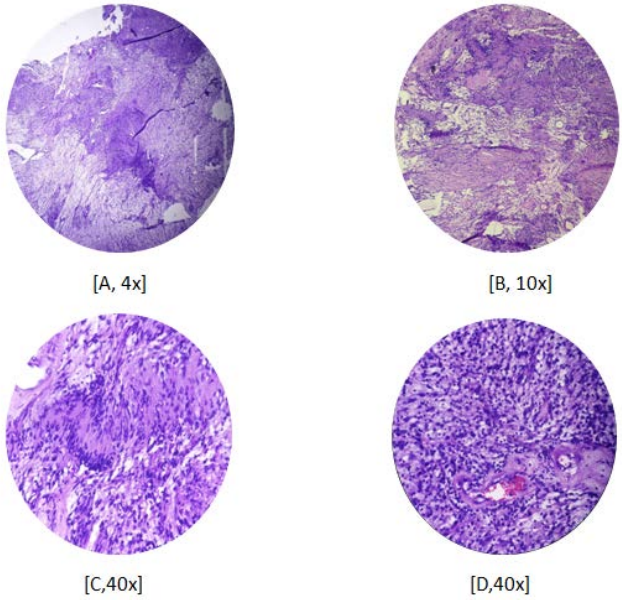

Fig 2.[A] & [B] showing Hypercellular (Antoni A) and Hypocellular(Antoni B) areas. [C] Antoni A pattern showing schwann cells with abundant eosinophilic cytoplasm & spindle shaped nuclei and peripheral palisading of nuclei or Verocay body formation.[D] Antoni B pattern showing hyalinised blood vessels and lymphocytic infilteration.

Conclusion

Schwannoma of psoas muscle is very rare tumor. It is usually benign. It is the most common tumor among benign tumors of retroperitoneal origin. Malignant changes are seen when associated with von

Recklinghausen's disease. Usual treatment of choice is radical excision with negative margins.

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