ORIGINAL RESEARCH PAPER

General Surgery

A SPECULATED PLEOMORPHIC ADENOMA OF PAROTID TURNS OUT TO BE A SPINDLE CELL LIPOMA

KEY WORDS: Spindle Cell Lipoma, Benign Tumour

Dr Mohana Priya K S* Institute of General Surgery, RGGGH & MMC, Chennai 03, Tamilnadu, India. *Corresponding Author

Prof Dr P S Shanthi DGO, MS, Institute of General Surgery, RGGGH & MMC, Chennai 03, Tamilnadu, India.

Dr Vikas C Kawarat DNB,MRCS Institute of General Surgery, RGGGH & MMC, Chennai 03, Tamilnadu, India.

Prof Dr R Kannan Institute of General Surgery, RGGGH & MMC, Chennai 03, Tamilnadu, India.

ABSTRACT

Spindle cell lipoma is a rare benign adipocytic tumour which compromises about 1.5 % of the lipomatous tumour. It is a slow growing tumour most frequently located in upper back and neck with male predominance. Less frequently the tumour may occur in unexpected sites. A 43 year old male patient with history of right sided ,painless, indolent cheek mass. Clinical examination revealed a soft,non tender mass in the parotid region on right side. MRI scan shows lesion arising from tail of right parotid abutting right masseter muscle probably warthin tumor. Fine needle aspiration showed occasional epithelial cells with spindle cells. Case was proceeded with superficial parotidectomy. Grossly there was a well encapsulated mass of size 3.5 cm adherent to the adjacent parotid gland. Histopathology showed mature adipocytes in fibromyxoid stroma with spindle cell suggesting spindle cell lipoma. Spindle cell lipoma, a benign lipomatous tumour usually arises from the shoulder, upper back. These lesions can also arise from atypical sites causing diagnostic challenges. These tumours have to be differentiated from malignant tumours which may require aggressive surgery, while spindle cell lipoma itself is curative by a simple excision. This requires awareness of this entity by both surgeons and pathologists to aim for a proper management .

INTRODUCTION

Spindle cell lipoma is a benign adipocytic tumors, currently regarded as morphologic variant of a single neoplasm composing approximately 1.5% of all lipomatous tumors. This was first described in 1975 by Enzinger and Harvey. It is a benign soft tissue tumor tipically occurs in the posterior neck and upper trunk (back and shoulder) and there is a male predominance. These are mostly superficial, extremely rare in deep soft tissue. Less frequently SCL may involve the face, forehead, scalp, buccal-perioral area and upper arm, and only rarely it may arise in unexpected sites, including oral cavity [2,3], larynx [4], tongue [5] and lower extremities [1]. To the best of our knowledge, only four cases of SCL of the parotid region have been reported so far: three cases were located in the peri-parotid soft tissues [6-8] and only one case within the parotid parenchyma [9].

Clinically SCL presents as a long standing asymptomatic small sized mobile lesion in the soft tissues of posterior neck, shoulder, upper back. Grossly, unlike classic lipoma, it has a yellowish to grayish-white colour, depending on the relative extension of the fatty and spindle cell components; histologically, it is composed of two main components, mature fat and bland-looking spindle cells, which may be present in varying proportions. We here in report a rare case of SCL arising as a mass in right peri-parotid soft tissues of a 43 year-old man. This is an unusual site for this benign neoplasm, with only four cases previously reported [6-9].

Case Presentation:

A 43-year-old man presented to the General Surgery department at our hospital with history of a right-sided, painless, cheek/parotid mass for 6 months. Clinical examination revealed a soft ,non tender mass in the parotid region on right side .MRI scan shows lesion arising from tail of right parotid abutting right masseter muscle probably warthin tumor. The neck showed no other masses or lymphadenopathy. Fine needle aspiration showed occasional epithelial cells with spindle cells. Diagnostic considerations included a peri-parotid soft tissue lesion versus a primary tumor of the parotid gland.

Figure 1 Showing A Swelling In Right Parotid Region

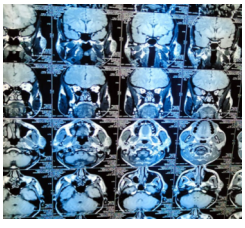

Figure 2 Showing Mri Of The Region - Lesion Arising From Tail Of Right Parotid Abutting Right Masseter Muscle

Case was proceeded with superficial parotidectomy. Grossly there was a well encapsulated mass of size 3.5 cm adherent to the adjacent parotid gland. The cut section revealed a lipomatous lesion, soft in consistency and yellowish in colour. Histopathology showed a lipomatous tumor surrounded by a relatively thick fibrous capsule, with a peripheral, thin rim of parotid gland parenchyma composing of mature adipocytes in fibromyxoid stroma with spindle cell suggesting spindle cell lipoma. The wound healed without problems, and no recurrence had been noted during the 6-month follow-up period.

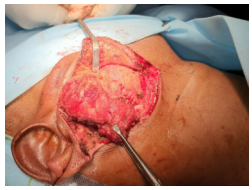

Figure 3 : Intraoperative Image Of The Right Superficial Parotidectomy

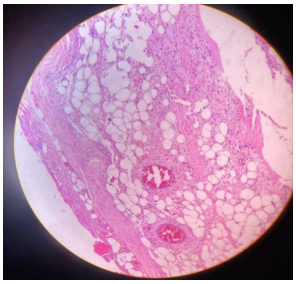

Figure 4: Histopathological Images Showing Mature Adipocytes In Fibromyxoid Stroma With Spindle Cell

DISCUSSION:

Spindle cell lipoma, a distinct histological variant of lipoma, originates from adipose tissue, and is characterized by the replacement of mature fat by collagen-forming spindle cells. The lesion was originally described by Enzinger and Harvey in 1975, and accounts for about 1.5% of all lipomas It is most commonly found in males between the ages of 40 to 60 with a peak in the sixth decade. Syed et al. suggested this male predilection was attributable to the frequent detection of androgen receptors in this tumor.

This is most commonly found in the subcutaneous layer of the posterior neck, shoulder or upper back. However, it has been reported to occur in the anterior neck, suprasellar region, buccal fat pad, esophagus, nasal vestibule, tongue, floor of mouth, vallecula, parotid gland, hypopharynx, larynx, breast, and mediastinum [4]. Growth is slow, and the average diameter of the tumor reported as 4 to 5 centimeters. The tumor is usually solitary and painless. Rare cases of multiple lesions including familial cases have been reported [5].

The exact pathogenesis is yet to be established. The origin of the spindle cells have been proposed as fibroblasts, adipocytes, immature mesenchymal cells, and CD34-positive dendritic interstitial cells [1,6]. Histologically, the lesion consists of mature adipocytes and small uniform spindle cells mixed with eosinophilic collagen bundles within a myxoid stroma. This is unlike lipoma, which typically only has an adipocyte component forming a lobular pattern embedded in a collagenous matrix. The spindle cells are positive for CD34 but negative for S-100 protein on immuno histochemistry stains. However, CD34 is not specific for spindle cell lipomas, and other tumors along the spectrum of differential diagnosis of lipomas may also stain positive for this marker. Spindle cell lipomas are desmin negative and express losses of chromosomes 12q and/or 16q, which may help the diagnosis [7].

Differential diagnoses include a spectrum of benign lipomatous tumors consisting of mature fat cells with or without other mesenchymal tissue elements. The World Health Organization categorizes these into the following: lipoma, lipomatosis, lipomatosis of nerve, lipoblastoma, angiolipoma, myolipoma, chondroidlipoma, spindle cell/pleomorphic lipoma, and hibernoma. However, the most important differential diagnosis is well-differentiated liposarcoma. Well-differentiated liposarcoma is usually found in the extremities or retroperitoneum of older patients, with equal gender distribution, and with less well-defined borders. Histo pathology will reveal infiltrative features, cellular pleomorphism, rich vascularization, and pronounced mucoid matrix. Unlike spindle cell lipoma, for which local excision is sufficient, liposarcoma requires extensive wide excision.(7)

Diagnosis is difficult to make based on radiological images, owing to the wide spectrum of imaging features produced by the variation in the ratio between fat and spindle cells. Gross examination of the mass itself is equally unspecific, also rooting from the diverse ratio between fat and spindle cells. Although atypical in location, spindle cell lipoma should always be considered while approaching a soft tissue mass, as this entity may be easily cured by simple excision.

CONCLUSION:

Spindle cell lipoma may arise in various atypical sites which should be taken into consideration at diagnosing a soft tissue lesion. This is a beningn tumour which can be cured by simple excision. This entity should be differentiated from the malignant tumours which may require aggressive treatment. Accurate diagnosis by pathologist ensures correct treatment and prognostic information.

REFERENCES:

1. Fletcher CD, Martin-Bates E. Spindle cell lipoma: a clinicopathological study with some original observations. Histopathology. 1987;11:803–817.
2. Enzinger FM, Harvey DA. Spindle cell lipoma. Cancer. 1975;36:1852–1859.
3. Syed S, Martin AM, Haupt H, Podolski V, Brooks JJ. Frequent detection of androgen receptors in spindle cell lipomas: an explanation for this lesion's male predominance? Arch Pathol Lab Med. 2008;132:81–83.
4. D'Antonio A, Mottola G, Caleo A, Addesso M, Boscaino A. Spindle cell lipoma of the larynx. Ear Nose Throat J. 2013;92:E9.
5. Fanburg-Smith JC, Devaney KO, Miettinen M, Weiss SW. Multiple spindle cell lipomas: a report of 7 familial and 11 nonfamilial cases. Am J Surg Pathol. 1998; 22:40–48.
6. Suster S, Fisher C. Immunoreactivity for the human hematopoietic progenitor cell antigen (CD34) in lipomatous tumors. Am J Surg Pathol. 1997;21:195–200.
7. Miettinen MM, Mandahl N. World Health Organization, editors; International Agency for Research on Cancer, editors. Spindle cell lipoma/pleomorphic lipoma. In: Fletcher CD, Unni KK, Mertens F, editors. Pathology and genetics of tumours of soft tissue and bone. Lyon: IARC Press; 2002. pp. 31–32.
8. Laliotis A, De Bree E, Vasilaki S, Papadakis M, Melissas J. Co-existence of intramuscular spindle cell lipoma with an intramuscular ordinary lipoma: report of a case. Pol J Pathol. 2013;64:224–227.