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Para Spinal Mass with Multiple Differential Diagnosis- A Case report

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Abstract
A paraspinal mass may be caused by large number of conditions including an abscess, non specific lesions and benign & malignant conditions involving mesenchymal/soft tissues. The diagnosis of many such lesions may be done with ease especially when correlated with clinical and radiological findings. However, the diagnosis is substantially challenging, especially when Clinico- radiological data are inconsistent and multiple diagnosis is offered. In these situations the role of histopathologist is of utmost importance for the final diagnosis as he/she must be aware of presence of rare cases that might arise from the paraspinal soft tissue. We report here a rare case of paraspinal mass which is diagnosed clinically as Lipoma /Neurofibroma and radiologically as Dermatofibrosarcoma Protuberance /Peripheral Nerve Sheath tumour. The histopathological diagnosis was Glomus tumour.
Keywords: *Glomus tumour, Pericyte, Paraspinal.*

Introduction

The diversity of soft tissues in the paraspinal region is challenge to the clinicians, pathologists and radiologists. Paraspinal soft tissue mass may be caused by inflammatory disorders, developmental anomalies, reactive and degenerative processes and neoplasms(1).

Although diagnosis of these lesions are usually narrowed down substantially after thorough Clinical examination and modern radiological findings, sometimes pathologists faces a challenging task to correlate Clinico-radiological features with pathological findings. Under these circumstances the role of histopathologist is of utmost importance to offer an accurate diagnosis for future planning of the treatment of the condition.

Case Report

A 45 yrs. female was admitted with the history of pain and burning sensation in the right lumbar region on & off since 1 year. She was a known case of hyperthyroidism since 4yrs. and is on medication. There was no history of trauma or other illness. There was no palor, icterus, oedema or cyanosis. Pulse & BP were normal.

Systemic examination did not reveal any abnormality, except low sensorium in the Right leg.

Routine blood and biochemical parameters were within normal limits.

Thyroid hormonal status: Euthyroid at the time of admission.

Other blood biochemistry parameters are non-contributory.

MRI of Lumbo-sacral spine including SI joints (Plain & Contrast) reveals a heterogenous lobulated soft tissue mass lesion in Right paraspinal subcutaneous fat at L4 level with heterogenous enhancement, surrounding streakiness and fascial thickening _ suggested HP correlation to rule out soft tissue neoplasm like Peripheral nerve sheath tumour/ Dermatofibrosarcoma protuberance.

Operative findings suggested - ? Neuro fibroma/? Lipoma.

Excision of rt. Paraspinal lesion at L4 was done under GA and the tissue was sent for HPE.

Gross specimen: The histopathology laboratory received a globular, partially encapsulated soft tissue mass measuring 4.5 X 3.5 X 2.6 Cm. The outer surface was irregular and contained fat.

Cut section was brown with areas of haemorrhage.

HPE findings: Microscopic examination reveals a well-demarcated lesion composed mostly of sheets of cells that were admixed with large, gaping, dilated spaces filled with blood [Figures 1 and 2]. These tumour is composed of monotonous, small, and round to oval uniform cells with round to oval nuclei are, each containing a moderate amount of eosinophilic cytoplasm and have prominent perivascular distribution [Figure 3] . Few areas show solid sheets of cells of similar morphology with scanty vascular spaces. No cellular pleomorphism was present. There was no evidence of necrosis or increased mitotic activity. High-power examination showed small nuclei with fine chromatin and smooth nuclear membrane embedded in scanty myxoid stroma. Capsular and lympho-vascular invasion were not observed.

Based on histopathological findings the mass was diagnosed as a Pericytic (Perivascular Tumour) consistent with Glomus tumour (WHO, 2013 category-5).

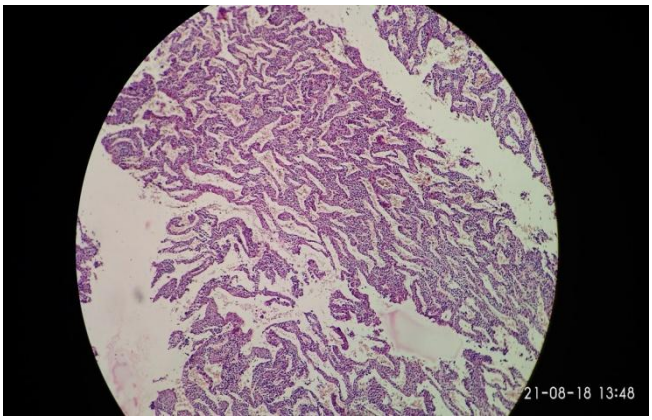

Figure 1 HPE image showing sheets of cells admixed with large, gaping, dilated spaces filled with blood [100X]

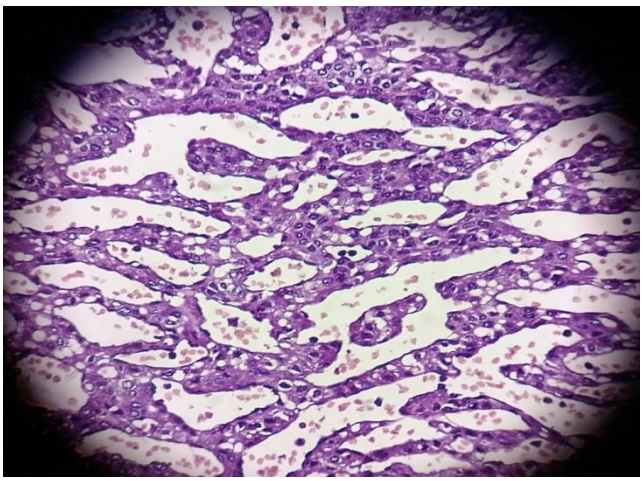

Figure 2 HPE image showing Perivascular, monotonous, small, and round to oval cells, each containing a moderate amount of eosinophilic cytoplasm 400X

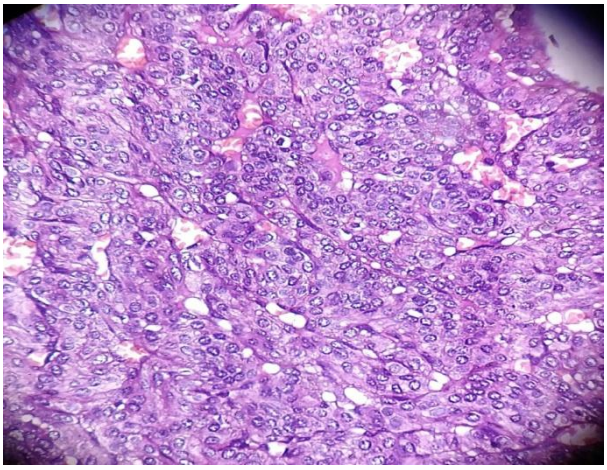

Figure 3 HPE image of a solid area showing cellular details [400X]

Discussion

Glomus tumors are commonly present in the skin and soft tissues and these account accounting for 1% to 2% of all soft tissue tumors[2]. They may present as a solitary or multiple tumours and vast majority are found in the distal extremities, particularly in the hand, wrist, foot, and under the fingernails or in the foot[3]. In rare cases, the tumors may present in other body areas, such as the gastric antrum or glans penis(4). The 2013 WHO classification of soft tissue tumours includes Glomus tumors and its variants as members of the smooth muscle cell tumours which is further subclassified into Pericytic (Perivascular Tumour) family of neoplasms, the other members of the family being Glomangiomatosis and Malignant Glomus tumour, Myopericytoma, Myofibroma, Myofibromatosis Angioleiomyom(2). The tumor cells reveal immunopositivity for vimentin, smooth muscle actin, caldesmon and Calponin. Paraspinal Glomus tumours are rare tumours that arise from the modified smooth muscle cells of the normal glomus body. Only three cases have been detected in our hospital contributing 2.4% of total soft tissue tumours, out of which the present case is from the paraspinal soft tissue. All cases were benign. The present case was clinically suspected to be of neural origin as it mimics Neurofibroma. Occasionally, the paraspinal lesion may mimic Neurofibroma clinically; although normal human nerve does not contain glomus bodies. Nonetheless, rare examples of glomus tumors do arise in peripheral nerves of various sizes. Their pathobiological characteristics are poorly understood, but both benign and malignant forms are observed by different authors(7,8). Surgery is the treatment of choice. Laser treatment, electromagnetic radiation, and sclerotherapy also have been used(9). There is only low rate of recurrence(9).

Conclusion

Para spinal glomus tumours are the rare tumours with vague clinical presentation. Differential diagnosis of glomus tumour should always be kept in mind along with other lesions such as Nerve sheath tumours, Lipoma, Dermatofibrosarcoma protuberance, while evaluating a patient with low back pain. Histopathological evaluations of all such lesions are mandatory even if the diagnosis is clinically & radiologically evident. Complete surgical excision is mandatory to get complete relief in the symptoms and to avoid recurrence.

References

1. Gombos, Z; Zhang, PJ (September 2008). "Glomus tumor". *Archives of pathology & laboratory medicine*. 132 (9): 1448–52..
2. Fletcher, C. D. M., Bridge, J. A., Hogendoorn, P. C. W. and Mertens, F. eds, 2012. World Health Organisation Classification of tumours: Tumours of Soft Tissue and Bone. Fourth edition. Geneva: WHO Press.
3. Fletcher, C. D. M., Unni, K. K. and Mertens, F. eds, 2002. World Health Organisation Classification of tumours: Tumours of Soft Tissue and Bone. Third edition. Geneva: WHO Press.
4. F. Babeau, S. Knafo, V. Rigau, N. Lonjon. (2013) Paravertebral glomangioma mimicking a schwannoma. *Neurochirurgie* 59:4-5, 187-190.
5. Kaylie DM, O'Malley M, Aulino JM, Jackson CG (2007). "Neurotologic surgery for glomus tumors". *Otolaryngol. Clin. North Am.* 40 (3): 625–649.
6. Glomus tumor and glomangioma of the nerve. Report of two cases.Scheithauer BW, Rodriguez FJ, Spinner RJ, Dyck PJ, Salem A, Edelman FL, Amrami KK, Fu YS. J Neurosurg. 2008;108:348–356.
7. A Glomus Tumor with Recurrence and Malignant Transformation in the Chest Wall: A Cautionary Tale of Seeding? Ivan H. W. Yim, MRCS, Malcolm B. Will, PhD, FRCS, Fiona M. Carnochan, FRCS, and William S. Walker, FRCS Department of Cardiothoracic Surgery, Royal

Infirmary of Edinburgh, Edinburgh, United Kingdom. (Ann Thorac Surg 2016;102:e397–9)

8. Myers RS, Lo AK, Pawel BR. The glomangioma in the differential diagnosis of vascular malformations. Ann Plast Surg. 2006;57:443-446.