



A Rare Case of Granular Cell Tumour: A Case Report

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Abstract

A rare type of soft tissue tumour that is usually neuroectodermal in nature. It is found to arise mainly in Schwann cells. It can occur anywhere in the body, but it usually occurs in the head and neck region, trunk, stomach, oesophagus and in some other internal organs. Most of them are benign but some may be malignant. A 27 year old man presented with a painless swelling of 3cm over the left shoulder region. Surgical excision was done and then the tissue was sent for histopathological examination and IHC was done for confirmation.

Introduction

Granular cell tumour was described by Abrikosoff in 1962. It was considered of muscle origin but now regarded to be of peripheral nerve origin⁽¹⁾.

These are mainly subcutaneous but may be found in internal organs like stomach, oesophagus, anal canal, etc⁽³⁾. Tongue is also a common site of occurrence.

These tumours are uncommon and found to be benign mostly and malignant in 0.5-2% cases. Benign tumours have good prognosis after surgical resection but malignant ones have poor prognosis after surgical resection due to risk of local recurrence and distant metastasis commonly found in 30-40 years of age, but may be found in other age group also⁽⁴⁾.

Mechanism of formation of tumour is due to Wallerian degeneration. This process is induced after a nerve fibre is damaged and results in distal

degeneration of axon after separation from neuronal cell body. Development of tumour occurs due to presence of axon fragments (containing glycogen and myelin structures) and Schwann cells.

Materials and Methods

A 17 year old boy presented with a painless swelling over the left shoulder for 9 months. It was gradually increasing in size for 3 months. The size of lesion was 3cm, fixed, hard, non tender. A clinical diagnosis of lipohaemangioma was made at Silchar Medical College and hospital. Surgical excision was done and sent for Histopathological examination in the department of Pathology, Silchar Medical College and hospital.

The Histopathological examination of the mass was done.

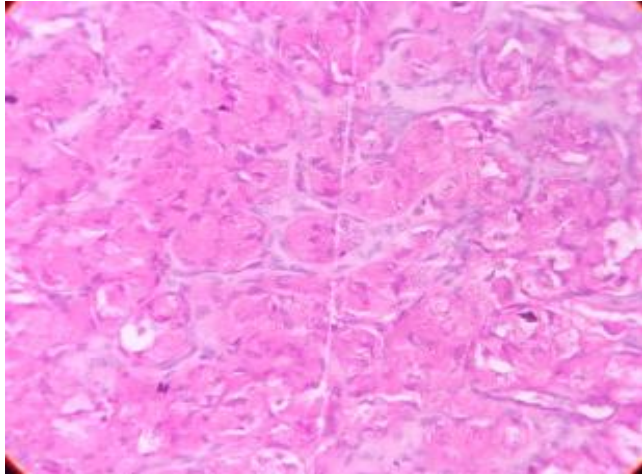


Fig 1. High power view of HPE section
Large/polygonal cells with granular eosinophilic cytoplasm, arranged in nests and trabeculae
Then for confirmation Periodic Acid Schiff stain
Periodic Acid Schiff stain

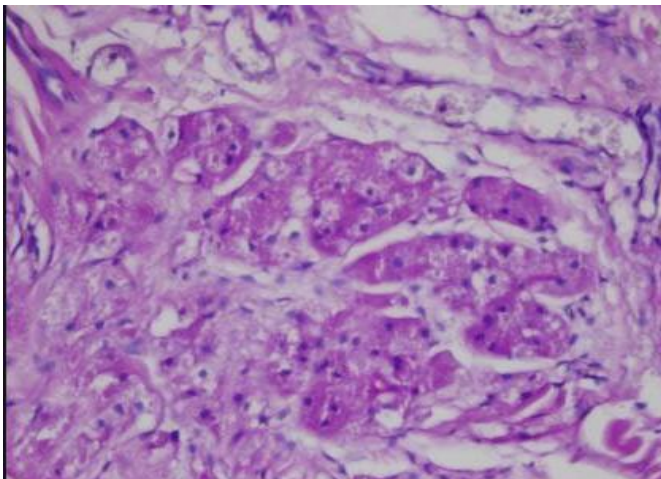


Fig 2: high power view of PAS stain

Immunohistochemistry for S-100 was done.

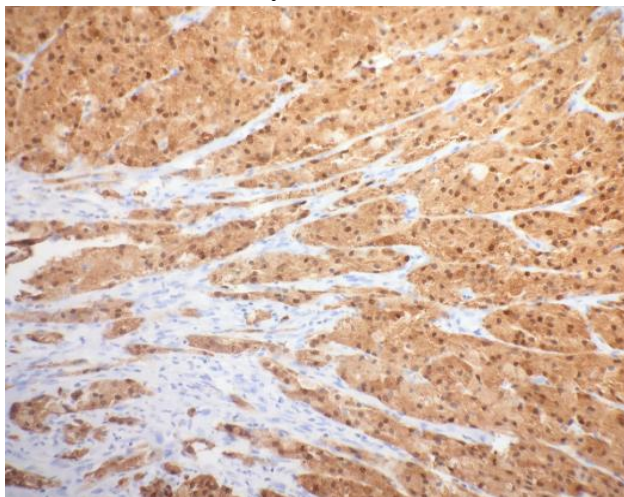


Fig 3: high power view of staining by S - 100

Discussion

Granular cell tumour were formerly called as Granular cell myoblastoma⁽⁶⁾.

Most granular neoplasms are neuroectodermal in origin but immunophenotyping helps in distinguishing the lesions showing granular cytoplasmic change⁽⁶⁾.

These tumours usually have wide range of age distribution but commonly found between 30-50 years of age. The commonest site of occurrence of lesions are trunk, tongue and other visceral organs. In this study the site of occurrence of lesion was trunk region. Around 10% patients may have multiple lesions. Size is usually <3cm, painless, fixed, hard. Histologically these tumours show uniform appearance irrespective of their location. Section showed epidermal hyperplasia with cells arranged in nests/ trabeculae⁽⁴⁾. Cells are large, rounded or polygonal and have fine granular eosinophilic cytoplasm. The nuclei are usually centrally located, hyperchromatic, pyknotic, vesicular. These cells are usually found around small nerves.

These cells showed PAS positivity on staining and IHC showed positivity with S -100.

Variants of granular cell tumour:

- 1) Gingival granular cell tumour of newborn infants
- 2) Primitive non- neural (polypoid) granular cell tumour
- 3) Malignant granular cell tumour

Conclusion

Granular cell tumour is a rare condition but it must be considered in the differential diagnosis of cutaneous and mucosal tumours. These tumours are mostly benign while malignant tumours may occur in 2-3 % cases. In benign lesions local recurrence is found in <6 % cases which may be due to incomplete excision.

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