



Case Report

Cutaneous granular cell tumor: A case report

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ABSTRACT

Granular cell tumor is a rare benign neoplasm of the skin that accounts for 0.5% of all soft-tissue tumors. Granular cell tumor can affect both sexes and in any age, although it is most common in females. The common locations are the head and neck, the tongue is affected in 25% of cases but any internal organs can be affected such as soft tissue, bronchus, stomach, rectum, anus, biliary ducts. Here, we report a 58-year-old female patient who presented with a 4-year history of a slowly growing mass, with a dimension of 5 × 4 cm on her left waist, diagnosed as a Granular cell tumor at histopathological examination.

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INTRODUCTION

Granular cell tumor (GCT), also known as Abrikossoff tumor, is an uncommon benign neoplasm thought to be neural in origin and derived from Schwann cells.¹ GCTs are more common in females than males.² It typically presents as a slow-growing, solitary, and painless nodular lesion located at the cutaneous and subcutaneous level (43%), on the tongue (23%), or any other part of the body.³ Granular cell tumours have been reported in all age groups ranging from 11 months to 85 years, most cases generally occur between the 4th and 6th decades of life.⁴

CASE REPORT

A 30-year-old female patient presented with the complaint of a slowly growing mass on her anterior chest for 3 and half year. The lesion was mild painful and itchy. There was no discharge, and it was growing in size. On clinical examination, a single, firm, brown-colored, fixed cutaneous nodular lesion with well-defined borders was noticed. The cutaneous nodule measures 4.3x3.1x3.1 cm and the

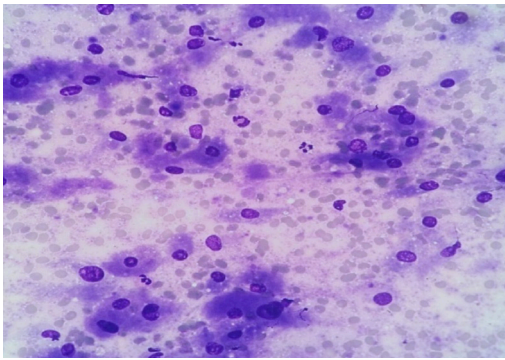


Figure 1: FNAC shows polygonal cells with granular cytoplasm. (Giemsa stain; X400)



Figure 2: Gross specimen with centrally located brown colored nodule.

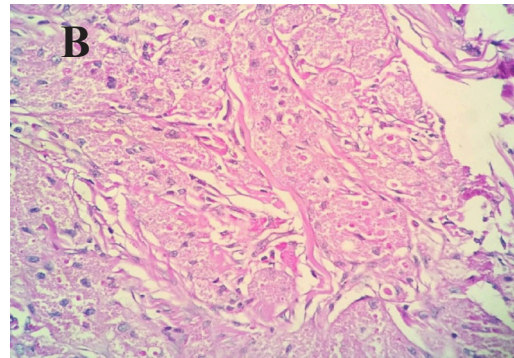
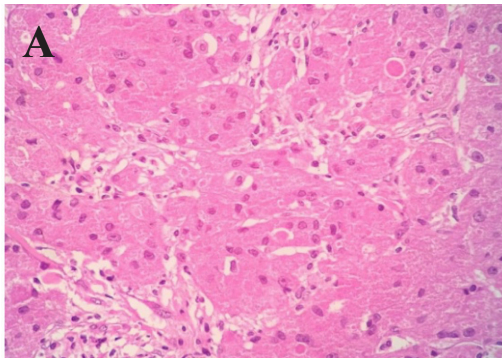


Figure 3: A) Photo micrograph showing neoplastic cells with granular cytoplasm and centrally placed oval nucleus along with pustulo-ovoid bodies (HE stain; X100). B). PAS positive granules (PAS stain; X100).

overlying skin show small whitish color dotted areas. CT scan revealed subcutaneous mass.

Laboratory examinations were within normal range. FNAC was performed which showed sheets of ovoid to polygonal cells with abundant granular cytoplasm, and centrally placed oval nucleus (fig.1). Provisional diagnosis of granular cell tumor was made and excision biopsy was recommended. The specimen was excised and sent to histopathology laboratory. The excised specimen consists of skin measure 6x3x2.7 cm with brown colour nodular area in the centre with white dot like areas in the surface. (fig.2) The histopathological examination with HE stain shows nests of tumor cells separated by fibrous connective tissue in the dermis and subcutis. These neoplastic cells composed of large cells with abundant granular cytoplasm, indistinct cell border and centrally placed oval nucleus. Pustulo-ovoid bodies are also seen. (fig.3A) The section with PAS stain shows cytoplasmic PAS positivity in the granules. (fig.3B) There is no lymphovascular invasion, necrosis, mitotic activity, or cellular atypia.

Cut margins are free of tumor cells. Postoperatively, the patient's recovery was uneventful; the patient had no local recurrence or metastases till 9 months follow up.

DISCUSSION

GCT is a benign tumor originating from Schwann cells. It commonly affects women between the fourth and the fifth decades of life. Our patient is in her third decade. GCTs grow slowly and insidiously. These tumors mostly present as a painless mass in the subcutaneous tissue. Clinically GCT presents as small, firm, slow growing asymptomatic nodule less than 3 cm. in diameter. Our patient had a 4.3cm nodule. They are rarely encapsulated and recurrence is uncommon. In our case also the lesion was solitary and small in size but was slightly itchy and was tender to touch. Pruritus and pain have been reported occasionally with these lesions. Larger lesions may sometimes show surface ulceration.⁵ No ulceration was observed in our case. Cutaneous GCT may present with extension into the junctional region of the epidermis and thus may mimic melanocytic neoplasm.⁶ Histopathologically, GCT shows pseudoepitheliomatous hyperplasia with infiltration of the dermis with large cells containing a granular cytoplasm and small central nuclei. Pustulo-ovoid bodies of Milian, which are larger granules surrounded by a clear halo, are observed. Vascular invasion up to the level of the subendothelial layers, without intraluminal cells, infiltration of the erector pili muscles, and perineural extension can be seen. The cytoplasmic granules

are positive for periodic–acid Schiff, S-100, neuron-specific enolase, and myelin basic protein.^{7, 8, 9} PAS was positive in our study. Surgical excision is the treatment of choice for granular cell tumour 2 since the granular cell tumour has poorly defined margin, the recommended treatment is excision with a margin of safety.¹⁰

Conflict of Interest: None

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