Case for diagnosis*

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CASE REPORT

A 47-year-old woman with a 24-week history of nodule in the inguinal area. The patient reported that the nodule had grown progressively, finally ulcerating in the centre and discharging pus. On physical examination, a firm, mildly tender, non-infiltrated nodule in the left inguinal area was revealed (Figure 1). No loco-regional adenopathies were present.

Histological study showed a new formation located in the thickness of the dermis and in shallow hypodermis. The epidermis presented pseudoepitheliomatous hyperplasia and ulceration. Tumor cells were constituted by polygonal cells, with clear granular cytoplasm and oval or round nucleus. No mitosis or atypia was found (Figure 2). Immunohistochemical study showed positivity for S100 protein, CD68 and inhibin, and negativity for CD1a, AE1-AE3, actin and desmin (Figure 3). Proliferative activity (Ki 67) was low (less than 5%). The tumor was completely removed by surgical excision. A body computer tomography (body CT) was carried out in order to complete the extension study. No signs of metastases were found.

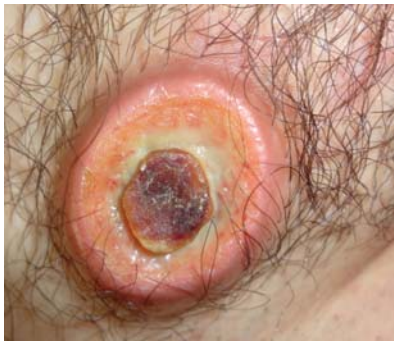

FIGURE 1: Red tender ulcerated nodule with central crust surrounded by a peripheral yellow fibrinous area with erythematous border and purulent discharge

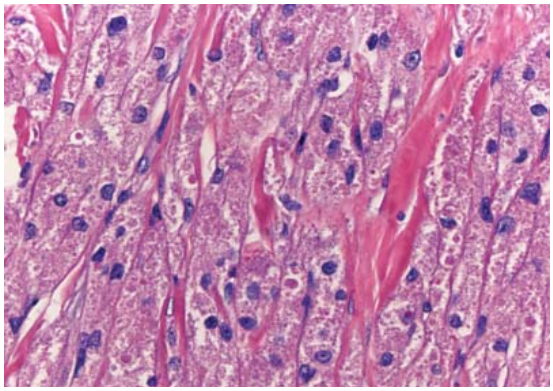

FIGURE 2: Hematoxylin-eosin stain. Magnification x400. Polygonal cells with clear granular cytoplasm and oval or round nucleus

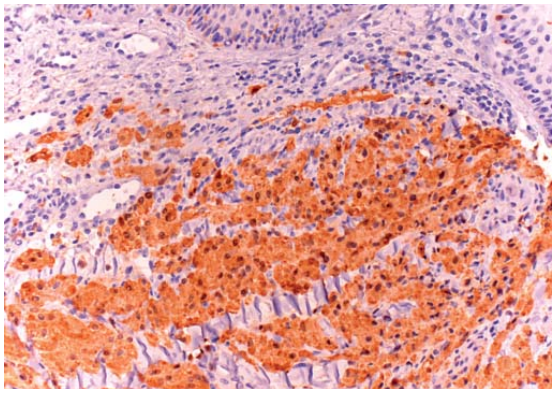

FIGURE 3: Immunohistochemical study showed positivity for S100 protein. Magnification x200

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DISCUSSION

Granular cell tumour (GCT) is a rare tumour that usually appears as painless nodules. It has an insidious onset and slow growth rate. This condition is of neural derivation, as supported by immunophenotypic and ultrastructural evidence[1] These tumors can arise at any part of the body. However, they are far more common in the head and neck regions (45% to 65% of cases). The oral cavity (particularly the tongue, which accounts for 25% of the cases) and the breast are also frequently affected.[2] The localization on the inguinal skin, such as the case we present here, is unusual. Biological behaviour is usually benign. However, malignant forms with distant metastases have been reported, comprising fewer than 2% of all granular cell tumours. Those GCT larger than 3 cm, locally destructive (e.g., ulceration, necrosis, haemorrhage) or with infiltrative activity at the edges should be treated promptly by radical excision.[3] The histopathological findings showed in our case match with typical features of GCT. Large polyhedral cells are usually arranged in the form of nests bounded by variable stroma. Markedly enlarged lysosomes in tumor cells may be found as eosinophilic globules surrounded by a clear halo. Typically, the granules stain positive with periodic acid-Schiff (PAS) staining.[4] The immunohistochemical findings suggest that this condition may have a Schwann cell origin. The tumour cells stain positively for S-100 protein, NK1-C3 and neuron-specific enolase in most cases.[5] Cases of metastases have been described despite benign histopathological appearance.[6,7] Therefore an extension study and follow-up are needed in order to assess the biological behaviour of granular cell tumours in those cases in which no concordance between macroscopic and microscopic features is shown.[8,9]

Our case showed inguinal localization and ulceration, which are rare features of this per se uncommon entity. Although generally benign and slow growing tumours, their biological behaviour is difficult to determine with accuracy. Therefore, it is very important for both physicians and pathologists to be aware of the clinical and histopathological features of GCT in order to establish a proper management of this condition. ❑

Abstract: Granular cell tumour is a rare tumour of neural origin usually located on the face and the neck. The biological behaviour is usually benign. However, certain clinical and histopathological features should alert physicians to a malignant behaviour. This case report describes the occurrence of a granular cell tumour in the inguinal area that resembled a malignant tumour. The histopathological study revealed typical features of granular cell tumour and an extension study confirmed the absence of metastasis. This case highlights the importance of considering this disorder in the differential diagnosis of ulcerated nodules and of managing atypical granular cell tumor appropriately.
Keywords: Case reports; Granular cell tumour; Immunohistochemistry; Pathology

REFERENCES

1. Rejas RA, Campos MS, Cortes AR, Pinto DD, de Sousa SC. The neural histogenetic origin of the oral granular cell tumor: an immunohistochemical evidence. Med Oral Patol Oral Cir Bucal. 2011;16:e6-10.
2. Brandão M, Domenech J, Noya M, Sampaio C, Almeida M, Guimarães N, et al. Foot granular cell tumor (Abrikossof's tumor): unusual location of a relatively uncommon tumor. An Bras Dermatol.2001;76:215–222.
3. Fanburg-Smith JC, Meis-Kindblom JM, Fante R, Kindblom LG. Malignant granular cell tumor of soft tissue: diagnostic criteria and clinicopathologic correlation. Am J Surg Pathol. 1998;22:779-94.
4. El-Khalawany M, Mosbeh AS, Abd-Al Salam F, Abou-Bakr A. Ulcerative granular cell tumor: a clinicopathological and immunohistochemical study. J Skin Cancer. 2011;2011:497648.
5. Le BH, Boyer PJ, Lewis JE, Kapadia SB. Granular cell tumor: immunohistochemical assessment of inhibin-alpha, protein gene product 9.5, S100 protein, CD68, and Ki-67 proliferative index with clinical correlation. Arch Pathol Lab Med. 2004;128:771-5.
6. Haustein UF. Malignant granular cell tumour with generalized metastases and polymyositis. Acta Derm Venereol. 2001;81:307-8.
7. Gomard-Mennesson E, Isaac S, Freymond N, Guibert B, Pacheco Y, Devouassoux G. Pulmonary metastases from Abrikossoff's tumour. Transformation capability of a benign granular cell tumour. Rev Mal Respir. 2007;24:900-4.
8. Behzatoğlu K, Bahadir B. Malignant granular cell tumor with unusual histological features. Pathol Int. 2007;57:115-9.
9. Mahoney A, Garg A, Wolpowitz D, Mahalingam M. Atypical granular cell tumor-apropos of a case with indeterminate malignant potential. Am J Dermatopathol. 2010;32:370-3.

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