

# Granular cell variant of atypical fibroxanthoma. A case report

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## SUMMARY

We report a case of an 84-year old female with granular cell atypical fibroxanthoma. The patient had an exophytic cutaneous tumor without ulceration localized on the left thigh. Histologically, the tumor consisted of a large epithelioid and spindle cells with a moderate to abundant amount of eosinophilic granular cytoplasm. The nuclei were irregular with coarse chromatin and some exhibited prominent nucleoli. Some of the tumor cells displayed atypical bizarre pleomorphic nuclei. Mitotic figures were sparse. Immunohistochemically, the tumor cells showed diffuse positivity for vimentin, CD10, NKi/C3 and CD68 (KP1). CD68 (PGM1) was positive only focally. Other markers examined, which included Melan A, HMB45, S-100 protein, cytokeratin AE1/AE3, desmin, h-caldesmon,  $\alpha$ -smooth muscle actin, NSE, CD1a, CD34, and CD31 were negative. A granular cell variant of atypical fibroxanthoma is rare, and only a few cases have been reported in the literature to date.

**Keywords:** dermal tumor – atypical fibroxanthoma – granular cells – cytoplasmic granules – granular cell tumors

## Granular cell varianta atypického fibroxantomu. Popis případu

### SOUHRN

Prezentujeme případ 84 leté ženy s granulární variantou atypického fibrózního fibroxantomu. Pacientka měla na levém stehně exofytický kožní nádor bez ulcerace. Mikroskopicky byl nádor tvořený velkými epitelioidními a vřetenitými buňkami se středním a velkým množstvím eosinofilní granulované cytoplazmy. Jádra byla nepravidelná s hrubým chromatinem a někde se zřetelnými jádérky. Některé buňky měly bizarním pleomorfní jádra. Mitózy byly zastíženy pouze řídce. Imunohistochemicky byl v nádorových buňkách pozitivní průkaz vimentinu, CD10, Nki/C3 a CD68 (KP1). CD68 (PGM1) byl pozitivní pouze fokálně. Další markery včetně Melanu A, HMB45, S-100 proteinu, cytokeratinů AE1/AE3, desminu, h-caldesmonu,  $\alpha$ -hladkosvalového aktinu, NSE, CD1a, CD34 a CD31 byly negativní. Granulární varianta atypického fibrózního fibroxantomu je vzácná, dosud bylo v literatuře prezentováno pouze několik případů.

**Klíčová slova:** kožní nádor – atypický fibroxantom – granulární buňky – cytoplasmatická granula – nádory z granulárních buněk

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Atypical fibroxanthoma (AFX) is a dermal tumor with a favorable prognosis, which is commonly regarded as a superficial variant of malignant fibrous histiocytoma (1,2). AFX is usually present as a solitary lesion on the sun-damaged skin of older adults. Cases associated with xeroderma pigmentosum and immunosuppression have been reported, and ultraviolet-induced p53 mutations have been identified in these lesions (3,4). AFXs exhibit highly pleomorphic histologic features, however the metastatic potential is low. Several morphological subtypes have been described including a clear-cell, desmoplastic or keloidal, angiomatoid, hemosiderotic, myxoid, and rare case reports of the granular cell variant (4-9).

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## MATERIALS AND METHODS

Sections from formalin-fixed, paraffin-embedded tissue blocks were stained with hematoxylin-eosin. Selected sections were analyzed immunohistochemically using the avidin-biotin complex method with antibodies directed against the following antigens: vimentin (1:300, Bio-Genex, San Ramon, CA, USA), cytokeratin AE1/AE3 (1:50, Dako, Glostrup, Denmark), CD10 (1:100, NeoMarkers, Fremont), desmin (1:200, Dako), S-100 protein (1:1600, Dako),  $\alpha$ -smooth muscle actin (1:100, Dako), h-caldesmon (1:50, Dako), HMB-45 (1:50, Dako), CD1a (1:30, Dako), NSE (1:400, Dako), CD34 (1:50, Dako), CD31 (1:50, Dako), melan A (1:25, Novocastra), NKi/C3 (1:100 Bio, Genex), CD68 (KP1) (1:25, Dako), and CD68 (PGM1) (1:25, Dako).

Electron microscopy examination was done on formalin-fixed, paraffin-embedded tissue, because glutaraldehyde-fixed material was not available.

## RESULTS

The excisional cutaneous biopsy from the left thigh of an 84-year old female measured 27 x 14 x 5 mm. In the center of the skin excision was a non-ulcerated exophytic tumor 10 x 10 x 5 mm.