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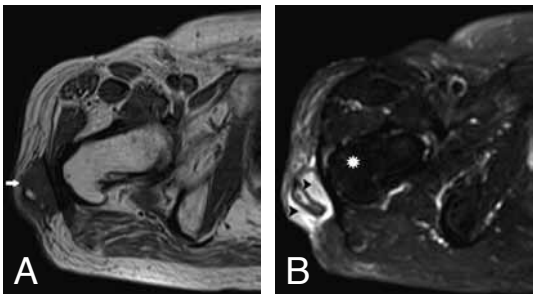
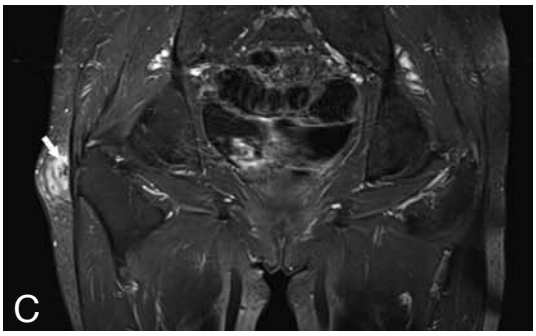
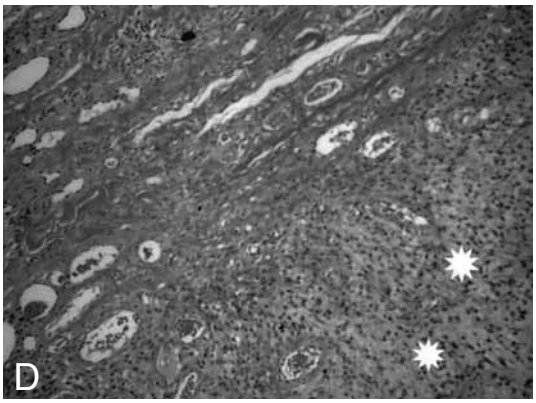
IMAGES IN CLINICAL RADIOLOGY







Decubital ischemic fasciitis

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A 77-year-old immobilized woman presented with a hard, palpable and fixed mass over the greater trochanter. Subsequent Magnetic Resonance Imaging (MRI) revealed a subcutaneous mass lesion abutting the iliotibial band. On T1-weighted images (WI), the lesion was isointense to muscle (white arrow), with a central focus of high signal intensity (SI) (Fig. A, axial T1-WI). Fat suppressed (FS) T2-WI showed predominantly hyperintense signal (black arrowheads) with intralesional foci of low SI, adjacent to the right greater trochanter (white asterisk) (Fig. B, axial FS T2-WI). After intravenous administration of gadolinium contrast, marked enhancement was seen with small areas of non enhancement, in keeping with necrotic foci (white arrow) (Fig. C, coronal contrast-enhanced FS T1-WI.). Neither invasion of the gluteus muscles nor the bone marrow of the greater trochanter was seen. Solely based on the MRI findings, malignancy could not be excluded. Therefore, wide surgical resection of the lesion was performed. Histological examination revealed the diagnosis of ischemic fasciitis, with a central hypocellular area surrounded by a fibroblastic (white asterisk) and vascular proliferating outer zone (Fig. D).

Comment

Ischemic fasciitis was previously described as 'atypical decubital fibroplasia' and is a rare distinctive, pseudosarcomatous fibroplasia typically occurring in the deep subcutaneous tissue over bony prominences (greater trochanter, sacrum, iliac crest, shoulders) in immobilized (bid-ridden or wheelchair-bound) elderly patients.

MRI findings are usually nonspecific. The lesion is predominantly isointense to muscle on T1-WI and heterogeneously hyperintense on T2-WI images. Focal areas of high SI on T1-WI may correspond to fat necrosis, whereas low SI on T2-WI may be due to old hemorrhage. After intravenous administration of gadolinium contrast, there is marked and heterogeneous enhancement. Areas in the center which do not enhance indicate the presence of necrotic foci. The lesion may breach the fascia, but the bone, which is in close contact to the adjacent soft tissue, is not involved. Lesion heterogeneity on MRI may mimic a necrotic sarcoma or abscess. The location of the lesion in the subcutaneous tissue at pressure points is the most important clue to correct diagnosis. This is of utmost importance to avoid overtreatment and unnecessary morbidity in elderly patients with poor operative risks. Histopathological examination reveals a zonal appearance. A central area of fat necrosis is surrounded by a well vascularized fibroblastic proliferation with high cellularity. Pigmented macrophages are indicative of old hemorrhage. There are also myxoid changes, hyalinisation and edema.

Reference

1. Ilaslan H., Joyce M., Bauer T., et al.: Decubital ischemic fasciitis; clinical, pathologic and MRI features of pseudosarcoma. *AJR*, 2006, 187: 1338-1341.

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