

INTRAARTICULAR NODULAR FASCIITIS OF THE HIP JOINT

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INTRODUCTION

We present a case of an intra-articular nodular fasciitis (NF) of the hip in a middle-aged man, which is a rare benign lesion usually arising from subcutaneous, fascial or subfascial sites of the upper extremities, followed by the head and neck, trunk and lower extremities, but has been reported at various unusual sites, including the parotid gland, orbit, external ear, oral cavity, genital tract and lymph node capsule¹. NF is thought to be a benign reactive lesion, often mistaken for a soft-tissue sarcoma in clinical practice. To our knowledge, there is only one other report in the literature of an intra-articular occurrence in the hip².

CASE

A 50-year-old military police officer complained of groin pain on the right side for 3 months. The patient had no history of an acute trauma or any pain in the hip. The clinical examination of the hip revealed a positive anterior impingement sign with violent pain and a moderate tenderness on palpation in the groin. The MRI of the hip (nativ, Gd) showed an extensive synovialitis and joint effusion and a slightly increased alpha angle 64° (norm <50°) as a correlate for a Cam impingement. A diagnostic and therapeutic arthroscopy (Figure 1) was performed for biopsy, complete synovectomy and offset correction. The histological result revealed an unspecific aspect with mucoid (degenerative) changes comparable to ganglion cysts, no sign of malignancy. 4 months after the arthroscopy the symptoms still remained. The new MRI (multiple sequences: nativ, arthro, i.v.; Figure 2) showed a significant growth of the intra-articular tumor around the neck of the hip (19x64x75mm) with a slight peripheral enhancement. The iron-sensitive sequences showed no increased blooming (no siderosis), as an indicator for pigmented villonodular synovitis. To obtain a new histology a CT aided biopsy was performed, which again presented a myofibroblastic proliferation without any sign of malignancy (Figure 3). As a NF kept in mind as a possible differential diagnosis, molecular-genetic next generation sequencing detected a MYH9-USP6-gen-fusion, which corroborated the diagnosis.

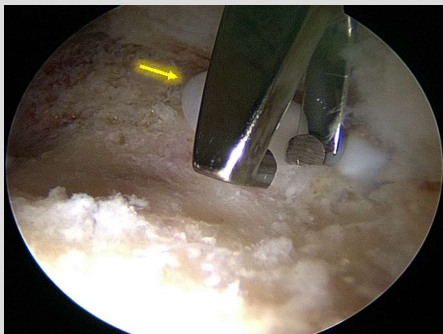


Figure 1: Arthroscopy of right hip; macroscopical impression of NF (dorsal of clamp; arrow)

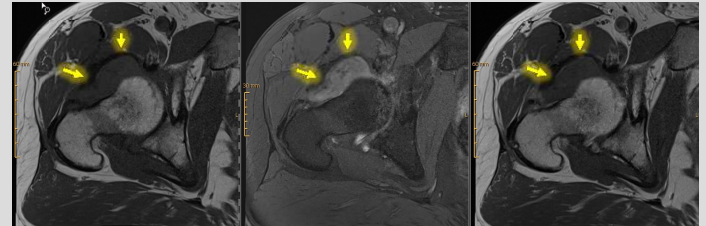


Figure 2: MRI right hip (T1 TSE TRA; T2 TRUFI; T1 TSE KM): T2 hyperintense and T1 isointense (to muscle) tumor anterior to femoral neck, slight peripheral contrast enhancement, no blooming in iron-sensitive sequences

DISCUSSION

Intra-articular nodular fasciitis is rare. Most cases in the literature describe a joint involvement of the knee, but there exist cases of the elbow, hand, ankle and the hip³. The symptoms vary from pain in the affected joint to joint effusion, painful mass, catching sensation and limited range of motion. The MRI usually identifies a lesion with an iso- to hypointense signal in T1-weighted and a hyperintense signal in T2-weighted sequences. Contrast enhancement is typically diffuse, but may be peripheral. But the histologic diversity likely accounts for the variable MR imaging appearance of the lesions. Histologically, it is defined as a benign proliferation of fibroblasts and myofibroblasts, abundant spindle-shaped cells, which are arranged within a variably loose myxoid to collagenous stroma. The histopathological features are the same as in lesions in extraarticular appearance with the exception that stromal hyalinisation, central cystic degeneration and haemosiderin deposition appear to be more common, probably related to frictional trauma. Immunohistochemically, the spindle cells are positive for alpha-smooth muscle actin (SMA). The identification of a MYH9-USP6 gene fusion by RT-PCR is described as a useful tool to corroborate the diagnosis⁴. In symptomatic patients the therapy consists of arthroscopic resection with good result. The published case reports showed no recurrence after resection⁵⁻⁹, in our case we observed a re-growing mass after about 4 months. As a reactive lesion, the recurrence could be induced from the surgery by itself. At 1 year follow-up, the patient was mildly symptomatic but adapted well, further surgery was not necessary.

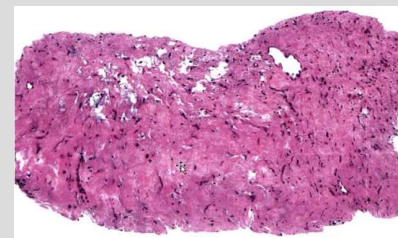


Figure 3: Histology showing unspecific myofibroblastic proliferation, no malignancy

HIGHLIGHT

We describe a rare intra-articular NF of the hip, which, in contrast to the published cases, presented with a recurrence after arthroscopic resection.