

Long-term Follow-up of an Osteoid Osteoma of the Femoral Neck Treated with Percutaneous Procedure Under Computed Tomography Guidance

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Introduction

Osteoid osteoma (OO) is a benign bone tumor, characteristic of both nocturnal pain alleviated by administration of non-steroid anti-inflammatory drugs (NSAIDs) and a nidus which appears as a small, relatively radiolucent zone. X-ray finding of the nidus depends on the site of the lesion. Cortical OO is usually characterized by reactive sclerotic bone around the nidus. On the other hand, intramedullary or intra-articular OO may be difficult to identify because of less reactive sclerotic bone (Figures 1 and 2).

diagnosis, causing synovitis and joint contracture, resulting in bone atrophy and hypertrophy of the femoral head. Long term prognosis of femoral head deformity can lead to continuous joint contracture and hip joint deformity. We report a case of a 13 year-old boy with OO of the femoral neck. He complained of right hip joint pain for two years, and was diagnosed as Perthes desase at the previous clinic. At the initial visit to our hospital, he presented claudication, disturbed range of motion, and Drehmann sign in the right hip. X-ray demonstrated a hypertrophic femoral head and neck, and bone atrophy, while the femoral neck showed partial sclerotic change. Hip joint position in external rotation and flexion was also noted. Computed tomography (CT) demonstrated a nidus with calcificaiton on the posterior side of the femoral neck. Magnetic resonance imaging (MRI) showed synovial fluid with bone edema. Altogether, imaging studies supported the diagnosis of an femoral neck OO with hip joint inflammation. The lesion was treated with percutaneous resection follwed by ablation using a standard electro-surgical knife under CT guidance. He was free from pain immediately after treatment. Afer 7 years, moderate joint contracture and both hypertrophy of the femoral head and hip joint demormity on X-ray remained. OO of the femoral neck shoud be treated before femoral deformity occurs to conserve better hip joint function (Figures 3-5).

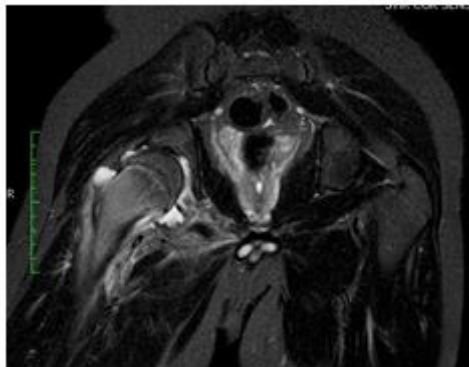


Figure 1: MR STIR.



Figure 2: X-P.

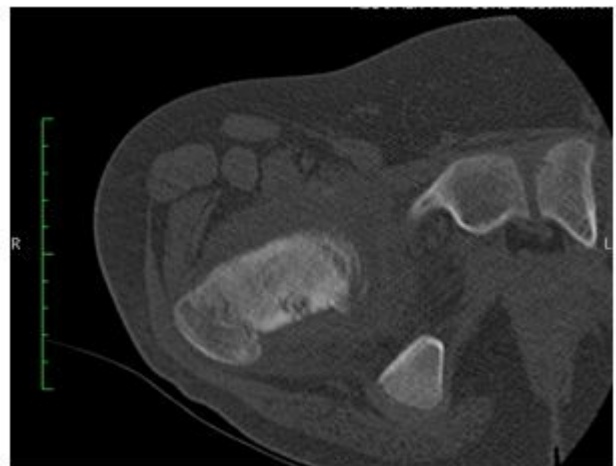


Figure 3: CT.

OO of the femoral neck is rare and non-specific both in clinical and radiographic presentations; thus often associated with delayed

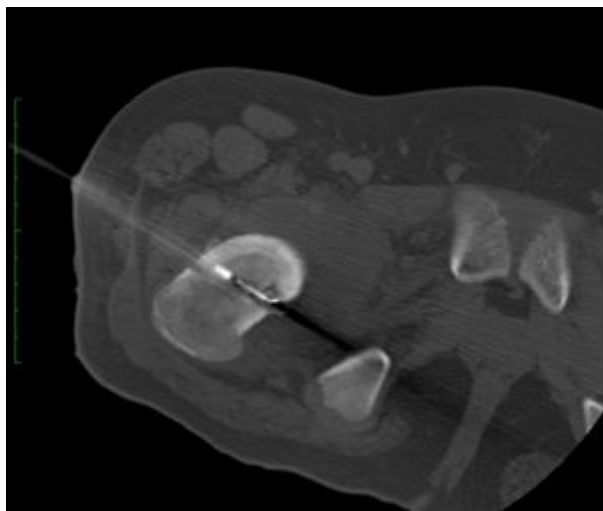


Figure 4: Percutaneous resection with ablation.



Figure 5: X-P post. op. 7 years.