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## Myositis ossificans: keep the scalpel away!

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**Background:** Myositis ossificans is a rare benign disease. The ectopic bone formation within muscle and soft tissues that characterizes Myositis Ossificans, follows, in most cases, a traumatic event. Differential diagnosis includes osteosarcoma, soft tissue sarcoma and osteomyelitis. The purpose of this study is to characterize a series of patients with Myositis Ossificans, treated in a Pediatric Orthopaedics Department.

**Methods:** Retrospective analysis of all pediatric patients treated in our institution for Myositis ossificans, between 2008 and 2012. Data was collected regarding age, sex, history of trauma, clinical presentation, imaging features, treatment options and follow-up.

**Results:** 7 patients were identified with Myositis Ossificans: 4 males and 3 females, aged between 7 and 15 years. Five patients were referred due to a soft tissue mass and 2 patients had the diagnosis made prior to referral. A previous traumatic event was identified in all cases. The anatomic distribution of the lesions was diverse: 4 in the thigh, 2 in the shoulder and 1 in the calf. Radiologically, all lesions showed a peripheral mature ossification and radiolucent center; 4 lesions were adjacent to cortical bone, with a marked periosteal reaction. Biopsy was needed in one case, to confirm the diagnosis in a patient with worsening pain. Conservative treatment was undertaken in 6 patients, with spontaneous regression of the lesions. One patient had surgical excision of the lesion.

**Conclusion:** All cases in our series had a traumatic etiology. The diagnosis of Myositis Ossificans is based upon clinical presentation and imaging features. In most cases, biopsy is not needed and treatment should be conservative, as spontaneous regression is the rule. Surgical treatment is reserved to persistent painful situations and should be performed after the maturation of the lesion, usually after 6 months.

We present an important case series of Myositis Ossificans in the pediatric population. Care should be taken to avoid unnecessary and harmful interventions in these patients.

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