



Magnetic resonance aspects of hydroxyapatite crystals deposits during inflammatory/resorptive phase in rare locations: an iconographic essay.

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BACKGROUND

The objective of this panel is to demonstrate by MRI the calcifications in soft tissues related to hydroxyapatite crystal deposit during its inflammatory/resorptive phase, in less common locals, such as hands, buttocks and knees.

CASE REPORT

Hydroxyapatite crystals deposit usually presents itself, in most of cases, as an extra-articular form, although it could be also found in the synovial fluid. The physiopathology of these deposits are still undefined. One of the most accepted theories is that the presence of tissue damage (micro or macro) activates the fibrogenic repair system that favors the deposit and crystal formation of hydroxyapatite. The deposit occurs inside of the tendons, and it can also affect ligaments, synovial bursas, peritendine tissues and, less often, muscular fibers. The crystal formation occurs mainly in shoulder tendons (70% in rotator cuffs), and then less frequent in hips, elbows, wrists and knees. This disease has multiple phases (silent, inflammatory/resorptive and repairing). Our essay presents cases during the inflammatory/resorptive phase, when the disease becomes symptomatic and most of patients complain about feeling pain. The first case demonstrates calcifications on the hand in the fourth finger (Figure 1, Figure 2); the second case shows calcifications in between the fibers of the muscular belly of the left gluteus medius (Figure 3, Figure 4); and the third case concerns a calcification located next to the fibers of the proximal tendon of the medial gastrocnemius in the left knee (Figure 5).

CONCLUSION

The Hydroxyapatite crystals deposits disease has its etiology uncertain. Although most of the patients present the asymptomatic/silente form, some could still exhibit the inflammatory/resorptive form that can be symptomatic and harmful to the patient's daily and laboral activities. It can prevail in various myotendinous or ligament structures, which the less common ones are hands, hips and knees. The imaging exams are indispensables to its diagnosis, and, in that situation, the MRI is the most sensible method to evaluate the inflammatory alterations in symptomatic patients.