

Milwaukee Shoulder Syndrome

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Abstract: Milwaukee shoulder syndrome is a rare destructive arthropathy of the shoulder characterized by pain, joint effusion containing deposits of calcium hydroxyapatite crystals, rapid destruction of cartilage and subchondral bone, and a complete rupture of the rotator cuff. Joint analyzes show often very few leukocytes and a high concentration of calcium hydroxyapatite. Treatment is symptomatic and includes physiotherapy, antiinflammatory drugs and intra-articular cortisone injections. Surgical treatment by reverse total prosthetic replacement is indicated for failure of medical treatment and advanced lesions of this condition.

Keywords: Milwaukee, shoulder, syndrome, reverse, prosthesis .

INTRODUCTION:

Milwaukee shoulder or rapidly destructive arthropathy of the shoulder, It was described by D.J. McCarty in 1981. It is a very rare and underreported condition in the literature, it mainly affects elderly patients, with a predominance of female, it associates a moderate pain, a rupture of the rotator cuff, a joint instability, a mildly inflammatory or non-inflammatory effusion, and marked destruction of the head of the humerus. We report a case of Milwaukee shoulder, the goal is to show an overview of this condition, our attitude for its management and the final functional result.

OBSERVATION:

A year old female patient with no significant pathological history, consulting for right shoulder pain evolving since 06 months, associated with a functional impotence, physical examination found a slight swelling of his shoulder with limited shoulder movement. Joint amplitudes without signs of infectious arthritis and the vascular-nervous examination.

The comparison of standard radiographs of her right shoulder between the consultation and the second one at 04 months interval were able to objectify a rapid progression of destruction of the glenohumeral joint, loss of sphericity of the humerus and pinching of the joint space (Figure 1).

The scannographic complement has made it possible to objectify in addition to the destruction subluxation of the humeral head and amorphous capsular calcifications declivities that may correspond to hydroxyapatite deposits.

A joint fluid puncture found a hemorrhagic fluid not inflammatory with the presence of hydroxyapatite crystals, the culture was negative.

The diagnosis of Milwaukee shoulder syndrome was made, the patient was medical treatment with anti-inflammatory drugs, intra-articular injection of cortisone and physiotherapy, given the lack of improvement under treatment, the patient benefited from a reverse total shoulder arthroplasty (figure 2) with good functional results at one year postoperatively .

DISCUSSION:

The Milwaukee shoulder was first described by D.J. McCarty in 1981 describe four women in Milwaukee, USA, with shoulder effusion of the glenohumeral joint and a massive rotator cuff tear [1, 2, 3].

Milwaukee shoulder syndrome is a rare destructive arthropathy of the shoulder characterized by pain, joint effusion containing deposits of calcium hydroxyapatite crystals, a rapid destruction of the cartilage and bone underneath chondral and a complete rotator cuff tear [4, 5]. Predisposing factors for Milwaukee shoulder are : recent trauma, 1dialysis and hyperparathyroidism [6].

On standard x-rays, Milwaukee shoulder is manifested by a pinching of the glenohumeral joint with little or no osteophytosis, subluxation of the humeral head, destruction of the subchondral bone with a collapse of the head and periarticular calcifications [7]. The results of the CT scan are similar to those of the standard radiography.

MRI allows for a better analysis of the condition of the rotator cuff and the damage to the cartilage and subchondral bone [8] for our patient we did not perform an MRI due to the delays too long in our structure for the realization of MRI.

Imaging and study of the synovial fluid make it possible to differentiate the shoulder from Milwaukee of other arthropathies including avascular necrosis of the humeral head, dialysis arthropathy, rheumatoid arthritis and septic arthritis.

Treatment is symptomatic and includes physiotherapy, anti-inflammatory drugs and intra-articular cortisone injections [9]. Surgical treatment by replacement is indicated when medical treatment has failed and the lesions are not well treated of this condition [10].

CONCLUSION:

This case study demonstrates the importance of considering the Milwaukee shoulder as a potential etiology of subacute monoarthritis. The rapid nature of the joint destruction, the interest of imaging and the study of synovial fluid in the search for hydroxyapatite crystals is important to confirm the diagnosis, treatment is initially medical followed by surgical treatment by prosthetic replacement in case of failure of the initial treatment.

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X-ray of the right shoulder showing rapid progression of the destruction of the glenohumeral joint, loss of sphericity of the humerus and pinching of the joint space.

443x444mm (96 x 96 DPI)



Control radiograph after the shoulder prosthesis is in place.

421x571mm (96 x 96 DPI)