

## An Unusual Case: The Importance of Wrist Arthritis in Post-Polio Sequelae

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Submitted: 22 Dec 2018; Accepted: 02 Jan 2019; Published: 13 Mar 2019

**Citation:** Mahmut Altuntas. (2019). An Unusual Case: The Importance of Wrist Arthritis in Post-Polio Sequelae. *Med.Clin.Res*, 4(4), 1-2.

### Introduction

Joint pain and accompanying swelling is the most common complaint in clinical practice. In these cases, the important thing is to determine the underlying etiology and to give appropriate treatment. The most common cause of most joint disease observed in the form of acute monoarthritis is gout and calcium pyrophosphate crystal storage disease. The prevalence of gout disease peaks among the ages of 40 to 50. The causes of increased prevalence are advanced age, the use of diuretics for obesity and hypertension, trauma and excessive alcohol consumption. Gout is 5 times more common in males. The gout attack occurs most often in the first metatarsophalangeal joint in the ankle.

### Case report

A 45-year-old male patient had developed polio sequelae in both lower extremities due to previous poliomyelitis. He was able to do daily tasks and activities using only the wheelchair by his both upper extremities (Figure: 1). He was admitted to our family medicine outpatient clinic with swelling and severe pain in his right hand wrist for the last 3-4 weeks. He was taking analgesics for the last month. He did not have a history of chronic illness or drug use such as diuretics.



**Figure 1 :** Post-Polio (polyomyelitis) sequela with right wrist swelling

Clinical examination revealed a slight redness, flexion and extension limitation in the right wrist. A two-way wrist radiograph was taken against the possibility of a fracture or trauma.

There was a slightly lysis in the epiphysis of the metacarpophalangeal bone (Figure 2).

The body temperature was 36.5 C. C-reactive protein (CRP) concentration was 23 mg / L (normal range <5 mg / L) and serum creatinine level was 0.58 mg / dL (base line value: 1.25 mg / dL) Serum uric acid level was 8.1 mg / dL (normal range 3.5-7.2 mg / dL). No other abnormal findings were detected.



**Figure 2:** Lytic lesion in metacarpophalangeal distal epiphysis

The patient was diagnosed with gout and was given oral all opurinol and analgesic for seven days. Oral 0.5 mg colchicine was given daily. After 15 days, the pain, swelling and movement limitation were completely dissolved. Serum uric acid level (2.6 mg / dL) decreased with CRP. No gout attack was reported during the last six months.

In the literature, isolated wrist gout arthritis is a rare condition. It is seen in 0.8% of early gout cases. Gout arthritis can be seen in the wrist in 19 to 30% of untreated gout cases (2). Acute gout attack is due to urate crystals that precipitate acute inflammation in the joint. The digestion of food containing excess purine, trauma, starvation, surgery, excessive alcohol intake and medications affect this concentration. Gout arthritis is usually seen as monoarticular. It is seen in the first metatarsophalangeal joint in the lower extremity at 50-60% (3). In our case, the metacarpophalangeal joint was retained on the right wrist, but no etiological risk factors were known to precipitate intra-articular acute inflammation except the post-polio sequelae. However, uric acid and CRP levels were high in blood.

In our case, excessive force on the right wrist due to the post-polio sequelae triggered intra-articular inflammation by creating a mechanical trauma. Since he could not use his lower extremities, the pain in his right wrist was thought because of mechanical muscle strain and so effective diagnosis and treatment was applied for the last 7-8 years. In the case of an unusual condition similar to our case, a preliminary diagnosis of gout monoarthritis should be considered. Our case is important in terms of creating an awareness about this situation.

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