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Cash Report

Primary diaphyseal osteomyelitis of radius in adult: a rare case report

Riyaz N. N., Nithin Sunku*

Department of Orthopaedics, Pariyaram Medical College, Kannur, India

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***Correspondence:**
Dr. Nithin Sunku,
E-mail: drsnithin@gmail.com

ABSTRACT

Chronic osteomyelitis is a highly debilitating condition that causes significant morbidity and can by extremely difficult to manage. Isolated involvement of the shaft of the radius is a rare presentation. A 32years old male presented with pain and swelling of right forearm since 5 months. X ray showed lytic lesion and MRI was suggestive of acute on chronic osteomyelitis. We present a case of chronic osteomyelitis successfully treated with debridement and antibiotics.

Keywords: Chronic osteomyelitis, Forearm, Diaphyseal, Radius

INTRODUCTION

Chronic osteomyelitis is a highly debilitating condition that causes significant morbidity and can by extremely difficult to manage. Staphylococcus aureus is the most common cause of osteomyelitis, accounting for more than 50% of cases.[1] We present a case of chronic osteomyelitis successfully treated with debridement and antibiotics.

CASE REPORT

A 32-year-old man present with a progressive swelling over the right forearm since 5 months duration. Initially there was only a minimal swelling and 1 month after he noted another swelling just proximal to that. Initially he had mild dull aching type of pain. 3 months after the appearance of the swelling he had difficulty in movements.

He doesn't have any history of constitutional symptoms like loss of weight, loss of appetite, evening rise of temperature, etc. There was no past history of pulmonary tuberculosis. There was no similar illness in the family.

On examination, there was diffuse swelling which was non-tender and there was local rise in temperature and it is non-pulsatile and non-trans-illuminant. There was a slight restriction in pronation and supination. There was no clinical evidence of chest or other joint involvement.

His ESR was only 10mm/hr and all other investigations were normal. X-ray of forearm showed lytic lesion in middle third of radius (Figure 1). MRI revealed features suggestive of acute on chronic osteomyelitis (Figure 2).

Surgical debridement of his right radius was performed under general anaesthetic. The radius was exposed throughout its length through a volar "Henry" approach. The bony sinuses were thoroughly curetted and pulse-lavaged with five litres of normal saline. Pus and gelatinous/fibrous tissue was curetted from the medullary cavity then thoroughly irrigated with 10 litres of pulsed normal saline. The volar wound was closed with 3-0 nylon, and was covered with dry dressings. Postoperatively he commenced on 1.5 g of IV vancomycin and 600 mg of rifampicin twice daily. Renal function was checked every 48 hours. Analgesia was IV morphine and oral diclofenac and paracetamol. The wounds were checked at 48 hours and showed no sign of

infection. Later check x ray showed callus formation (Figure 3).

Figure 1: X-ray of forearm.

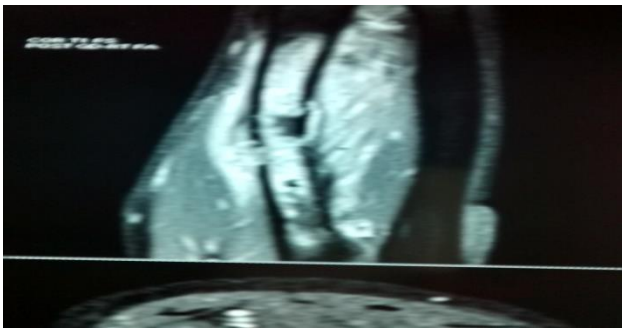

Figure 2: MRI showing chronic osteomyelitis.

Figure 3: X-ray showing callus formation.

Patient was followed up for 1 year without any recurrence. His postoperative hand functions were excellent and full range.

DISCUSSION

Primary diaphyseal chronic osteomyelitis of radius is a rare condition. Conventional treatment consists of high-dose intravenous antibiotics for at least six weeks.[2] Disadvantages of this regimen include prolonged hospital stay, cannula-site infections and thrombosis, and increased costs. Studies in some centres have shown good results with combination intravenous and oral antibiotic therapy.[3] We demonstrate cure of resistant chronic osteomyelitis of the radius with surgical debridement and combined intravenous and oral antibiotic therapy. This has obvious financial implications for the treatment of this condition. In a primarily diaphyseal intracortical lesion, as in our case, it is essential to exclude osteoid osteoma, intracortical haemangioma and Brodie's abscess.[4] Because of such varied clinical and radiological presentations, biopsy and culture are necessary to establish the diagnosis. This particular case merits special attention because isolated diaphyseal tuberculous osteomyelitis without articular involvement is a rarity in an immunocompetent individual.[5]

Normal plain radiographs in cases of suspicion require more sensitive investigations such as Montaux test, MRI and CT scan to detect and localise the lesion. Biopsy is mandatory to confirm the diagnosis. Antibiotics remain them in stay of treatment and judicious surgical intervention (debridement and curettage) help to promote early healing.

CONCLUSION

Chronic osteomyelitis requires a high index of clinical suspicion. Markers of acute inflammation such as ESR and Creactive proteins are usually elevated, but are nonspecific. Radiographic appearances of osteomyelitis depend on the stage of presentation at diagnosis, ranging from mild soft tissue swelling to areas of osteolysis with local osteopenia. Similar radiological findings may be seen in many other conditions. Surgery is a valuable adjunct in establishing the diagnosis by histopathological analysis and in evacuation of an abscess or debridement of necrotic bone.

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