

Acute Osteomyelitis of the Pelvis

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| Received: 03.04.2023 | Accepted: 08.05.2023 | Published: 06.06.2023

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Abstract

Acute osteomyelitis of the pelvis is unusual in children. Diagnosis and management are often delayed, resulting in increased morbidity. Our work aims to draw attention to this rare location by analyzing a 17-year-old patient, which will be further studied in a literature review.

Keywords: Acute osteomyelitis; Pelvis; Hip; Pain.

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INTRODUCTION

Acute osteomyelitis is a bone infection mainly affecting children, often in the long bones. The location at the level of the pelvis remains rare and is marked by a delay in diagnosis and management. We report the case of a 17-year-old girl who was diagnosed with acute osteomyelitis of the pelvis.

CASE REPORT

This 17-year-old girl with no particular pathological history presents with left ischial pain due to a fall in a sitting position. A standard pelvic x-ray showed an ischiopubic branch fracture. The patient was then placed on bed rest and symptomatic treatment. However, her evolution was not favorable. As the days passed, the patient's general condition began to deteriorate, and the patient found difficulty using her left lower limb. The patient presented to the emergency medicine department seventeen days after her fall.

On physical examination, she was febrile at 39°C and was in the psoriasis position. She was unable to walk, limping with difficulty throughout her gait. The left hip did not show any signs of local inflammation; however, she was awakened by acute pain in the left ischium on palpation. The additional examinations showed an infectious syndrome with hyperleukocytosis at 25,000/mm³ predominantly polynuclear neutrophils (82.1%), a sedimentation rate was elevated at 83mm at the 1st hour, and a CRP at 329mg/L. Pelvic X-ray

showed a fracture of the ischiopubic branch (Figure 1). The pelvis's computed tomography (CT) scan revealed a purulent collection respecting the fracture site, ranging from the ischium to the posterolateral soft tissues and measuring 8 x 5cm (Figure 2). The internal obturator approach surgically managed the patient with drainage and internal washing. Parenteral antibiotic therapy for *Staphylococcus aureus* was initiated postoperatively and continued after confirmation of the result by bacteriological culture and sensitivity test. Ciprofloxacin associated with Augmentin was continued for 15 days, then oral relay was done only by Ciprofloxacin for one month. The evolution was spectacular, with the disappearance of fever and psoriasis, and on day seven postoperatively, the patient could walk without pain. After three months, the pelvic fracture consolidated, and the biological parameters were normalized.



Figure 1: Standard pelvic X-ray showing ischiopubic branch fracture



Figure 2: CT scan of the pelvis in cross-sectional and frontal section showing the purulent collection at the level of the adductor compartment

DISCUSSION

Acute osteomyelitis (AOM) of the pelvis is a rare form of childhood AOM representing 6.3 to 20% compared to the AOM of long bones [1]. It is seen at an older age and more in boys than girls, with a sex ratio of 1.5:1 [2]. The probability of trauma as a contributing factor is infrequent; 17% for the pelvis versus 40% for the AOM of long bones [2]. The AOM of the pelvis is mainly located at the level of the ileum (38%) because of its rich vasculature, followed by the ischium (19%) and the pubis (14%) [2-3]. The time between the onset of symptomatology and diagnosis varies from one day to 2.5 months; in the case of our patient, it was 17 days. This diagnostic delay can be attributed to the deep localization of the infection and the non-specificity of clinical signs [4]. This can cause complications, such as altering the general condition, fever, abdominal pain, limping, psoriasis, and many others.

Blood cultures performed during chills can isolate the germ in 50% of cases. *Staphylococcus aureus* is the most common germ in 90% of cases, but *Kingella Kingae's* prevalence is growing [5]. Standard X-ray is normal initially; however, MRI and bone scintigraphy are the most sensitive and specific tests [6]. MRI also allows a detailed study of the extent of the infectious process. Ultrasound and CT scan detects purulent collection, can assist in guided aspiration, and detect bone erosion early [6]. Treatment requires adequate antibiotic therapy to eradicate the infection with a short intravenous period and then rapid conversion to oral therapy [5]. Surgery is indicated in particular situations, such as in our case, where a purulent collection requires drainage and washing. Radiological and biological monitoring is required until standardization. Properly managed, pelvic AOM has an excellent prognosis with healing without sequelae [7].

CONCLUSION

AOM of the pelvis is infrequent. Nevertheless, its diagnosis should be evoked in the differential diagnoses of patients with hip or groin pain in a febrile context. Only early, adequate and sufficient treatment guarantees healings without sequelae.

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