ISSN: 2634 - 8861

Journal of Infectious Diseases & Case Reports

SCIENTIFIC Research and Community

Case Report

Open Access

Pelvic Osteomyelitis, about Four Observations and Review of the Literature

Omar Lazrek[1], Mehdi Omar Krimech[1], Ben Jemaa Mohammed[3], Moncef Boufettal[1,2], Rida Allah Bassir[1,2], Moulay Omar Lamrani[1], Mohammed Kharmaz[1] and Mohamed Salah Berrada[1]

[1]Department of Traumatology and Orthopedic Surgery Hospital IBN SINA, Rabat, Morocco

[2]Laboratory of Anatomy, Faculty of Medicine Rabat, University Med V Rabat, Morocco

3Department of Orthopedic Surgery and Traumatology, CHU Habib Bourguiba of Sfax, Tunisia. Faculty of Medicine of Sfax, Tunisia

ABSTRACT

Acute pelvic osteomyelitis is rare (2 to 11% of osteomyelitis). The clinical picture is atypical making their diagnosis difficult. We report four cases of acute pelvic osteomyelitis in order to study the clinical and paraclinical features of this osteomyelitis location while specifying its different therapeutic modalities.

***Corresponding author**

Omar Lazrek, Department of Traumatology and Orthopedic Surgery Hospital IBN SINA, Rabat, Morocco, Email: omar.lazrek@gmail.com

Received: January 07, 2022; **Accepted:** January 14, 2022; **Published:** January 25, 2022

Introduction

Acute hematogenous osteomyelitis in children is usually localized in the metaphyses of the long bones, Pelvic involvement is rare, Acute pelvic osteomyelitis accounts for 2 to 11% of osteomyelitis. It is a medical-surgical emergency which requires an early diagnosis. Its symptomatology often suggests a neighboring pathology that can mislead the diagnosis and delay treatment. Methicillin-sensitive Staphylococcus aureus (MSSA) is the most implicated germ. The emergence of strains of Staphylococcus aureus resistant to community methicillin (MRSA_C) makes its medical and surgical management increasingly difficult.

Case Reports

Observation n ° 1

This is a 6-year-old boy, with no particular history, who presents with feverish pain in the right hip of acute onset. The patient reports the notion of trauma to the right hip a week ago.

Clinical examination found a severe infectious syndrome (Temperature: 39.5 °), with total functional impotence of the right lower limb and pain in the hip and thigh Palpation of long bone metaphyses was painless

Complementary exam

A biological inflammatory syndrome (GB: 12000 elt / mm3, CRP: 22mg / l)

Figure1: Basin X-ray: without particularity

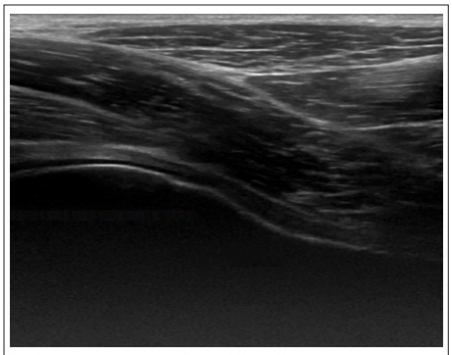

Figure 2: Ultrasound of the hip: No joint effusion or periosteal detachment

Figure 3: MRI of the pelvis: Spongy signal abnormality of the inner and posterior wall of the right acetabulum (Hypo T1, Hyper T2), Low abundance intra-articular effusion

Treatment: the patient received anti-staphylococcal antibiotics (total duration of 8 weeks) IV for 3 weeks: (Amoxiclav + Gentamycin) then replaced by (Cefotaxime + Fosfomycin + Rifampicin) for the absence of improvement, with relay Per bone for 5 weeks: (Sulfamethoxazole-Thrimetoprime + Rifampicin) associated with Immobilization by a pelvic-foot plaster for 6 weeks.

evolution
- Clinical cure: (Stable apyrexia, Disappearance of pain)
- Normalization of the biological parameters of inflammation: obtained from the first week of treatment (GB: 6900 elt / mm3, CRP: 4 mg / l).
- At 2 years' follow-up, the patient regains normal walking.

Observation n ° 2:
This is a 12-year-old boy, living in an urban environment with good socio-economic status who presents acute febrile pain in the right iliac fossa with ipsilateral hip flessum and polypnea, with the notion of a benign trauma of the right iliac fossa. Bowl.

The clinical examination found a fever at 40, with mental confusion, polypnea, a defense of the right iliac fossa, an exquisite pain of the right iliac wing with total impotence of the right lower limb and flessum of the right hip which becomes painless at soft mobilization.

The biological assessment found an Inflammatory Syndrome (CRP: 314 mg / l, ESR: 85 mm at H1) with absence of hyperleukocytosis (GB: 5700)

Figure 4: STD X-ray of the pelvis: without particularities

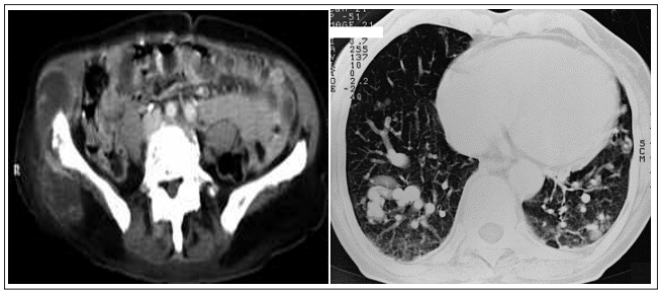

Figure 5: Pelvic and thoracic CT: endo and exo pelvic collections fusing in the gluteal muscles and the anterior compartment of the thigh, Multiple bilateral pulmonary nodules + small areas of necrosis

The patient received surgical drainage of the collections with cortical trepanation of the iliac wing and intraoperative samples as well as probabilistic antibiotic therapy based on amoxicillin-clavulanic acid + gentamycin

The immediate postoperative course was marked by respiratory distress with polypnea and signs of respiratory struggle secondary to lesional OAP, unstable hemodynamic state with septic shock followed by neurological failure and coma.

The patient died despite intensive resuscitation, without modification of the antibiotic therapy.

The intraoperative sample was positive for MRSA -C.

Observation n ° 3
It was a 13-year-old boy, with no history, who presented with trauma to his right hip 6 weeks ago. He consults for a fever that has progressed for 4 weeks and has not improved by blindly prescribed antibiotic treatment.

Clinically, the fever was estimated at 39 ° with abdominal pain without osteo-articular pain, nor lameness. The remainder of the physical examination was normal.

A biological inflammatory syndrome (CRP: 150 mg / l, ESR: 20 mm 1H, GB: normal) was found in the assessment.

Figure 6: X-ray of the pelvis: without abnormalities

Ultrasound of the pelvis found an intra-articular effusion of the left hip with No subperiosteal detachment

A bone scan was performed which found hyperfixation of the left hip

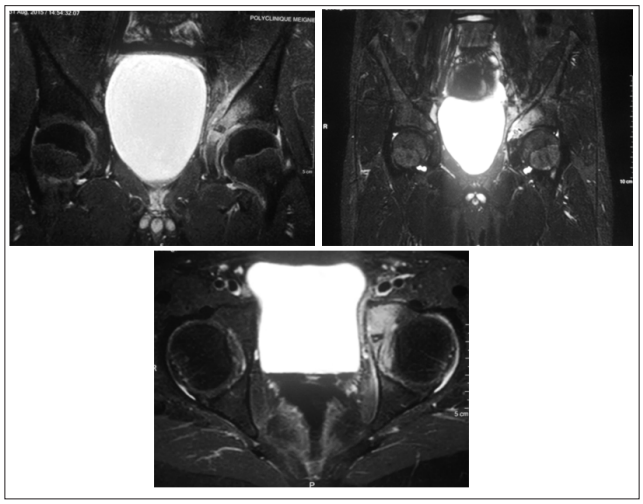

Figure 7: MRI of the pelvis: T2 hyper-signal of the left acetabulum, Subperiosteal detachment of the acetabulum wall on the endopelvic side

The patient received antibiotic therapy based on cefotaxime + fosfomycin (3 weeks) by IV, followed by synergistin (3 weeks)

The course was favorable, marked by a disappearance of the fever and the biological inflammatory syndrome. The radiological examination by computed tomography shows integrity of the hip joint. Gait was normal with no pain or lameness at the last follow-up.

Observation n ° 4

This is a 3-year-old girl, with no previous history, who consulted for febrile left lameness, with a clinical examination a fever of 39 °, pain in the right and left iliac wing, without pain on mobilization. soft left hip nor pain when rolling the hips Laboratory examination found a Biological inflammatory syndrome (hyperleukocytosis at 12,000 elt / dl, CRP: 50 mg / l, ESR: 40 mm at 1H)

The pelvic x-ray was normal normal

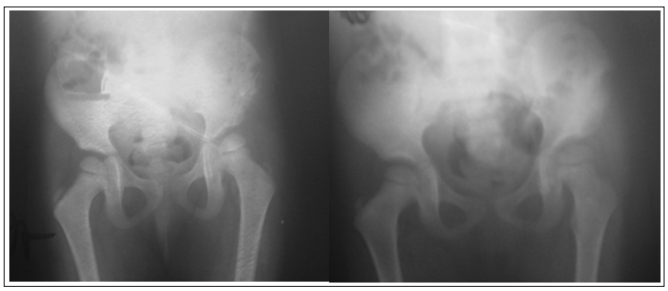

Figure 8: Basin X-ray: without particulartités

Ultrasound found a collection of ilio-psoas muscle with infiltration of the gluteal muscles of the left iliac wing with no hip joint effusion.

The patient underwent a flattening of the ilio-psoas muscle abscess with intraoperative discovery of an abscess under the periosteum of the iliac wing ruptured in the soft tissues

The microbiological results of the intraoperative sample were in favor of a MRSA –C

She had secondarily adapted probabilistic antibiotic therapy based on rifampicin + theicoplanin with good clinical and biological evolution, without postoperative complications with total recovery of walking without lameness, or septic arousals despite the persistence of radiological demineralization of the wing. Iliac

Discussion

Acute pelvic osteomyelitis is a special disease entity. It should be evoked in any lameness with pain in the hip, thigh and / or abdomen.

Abdominal syndrome is often associated with its clinical picture ranging from simple pain to abdominal defense. This atypical clinical presentation can misdiagnose towards abdominal surgical syndromes causing diagnostic delay or even treatment errors. Bone scintigraphy, MRI of the pelvis and ultrasound or scanno-guided puncture of the lesion are the main positive diagnostic tools justifying the use of early antibiotic therapy. In the absence of formal bacteriological evidence, anti-staphylococcal antibiotic therapy should be initiated. Cure can be achieved with antibiotic treatment alone without resorting to surgical drainage. this is explained by the vascular richness of the pelvic bone and therefore its better capacities. This is conditioned by the sensitivity of the germ in question [1].

Surgical treatment is indicated in cases of large collection or failure of medical treatment.

Strains of MRSA-C often express Panton Valentine's leukocidin (PVL). This toxin has a necrotizing power mainly for neutrophils, which explains the absence of hyperleukocytosis or even leukopenia contrasting with increased CRP and ESR [2]. Clinically, the production of this toxin is very significantly linked to 3 major types of infections: primary skin infections, in particular those requiring surgical drainage, necrotizing pneumonia and primary osteomyelitis more severe than infections caused by non-infected strains. PVL secretors. Compared to MSSA, M-MRSA has a greater osteoarticular tropism [3]. It is the cause of complicated clinical pictures (thromboembolic complications, septic metastases and transition to chronicity even with well-managed treatment) [4]. Several antibiotics are usually active on C-MRSA (pristinamycin, theicoplanin, cotrimoxazole, rifampicin, fucidic acid, etc.). Clindamycin has the particularity of having an inhibitory effect, demonstrated in vitro, on the release of PVL. If pelvic osteomyelitis is suspected, the practitioner should treat it in time without delaying the initiation of effective antibiotic therapy and intravenous [5]. This probabilistic antibiotic therapy should be active against strains of MRSA-C at the slightest suspicion of resistance to community-acquired methicillin even in the absence of formal bacteriological evidence.

Conclusion

The clinical variability of pelvic osteomyelitis causes diagnostic difficulties.

Bone scintigraphy and MRI of the pelvis allow optimal exploration of deep pelvic locations.

In the absence of a surgical sample, the isolation of the germ is most often done by an echo or scan-guided puncture.

Antibiotic treatment alone can lead to a cure if the germ in question is sensitive.

The use of surgery is not systematic. However, it keeps precise indications.

Conflicts of interest
The authors declare no conflict of interest.

Contributions from the authors
All the authors contributed to the realization of this research work. All authors have read and approved the final version of the manuscript.

References

1. JENZRI M, SAFI H, NESSIB MN, JALEL C, SMIDA M etal.(2008)« L'ostéomyélite aiguë hématogène du pourtour du foramen obturé chez l'enfant : à propos de sept cas », Rev. Chir. Orthop. Réparatrice Appar. Mot 94 : 168- 173.
2. BEAUPRE A CARROLL N (1979) « The three syndromes of iliac osteomyelitis in children », J. Bone Joint Surg 61: 1087-1092.
3. DAVIDSON D, LETTS M, KHOSHHAL K (2003) « Pelvic osteomyelitis in children : a comparison of decades from 1980-1989 with 1990- 2001 », J. Pediatr. Orthop 23: 514-521.
4. MORGAN A, YATES AK (1966)« The diagnosis of acute osteomyelitis of the pelvis », Postgrad. Med. J 42: 74-78.
5. ZVULUNOV A, GAL N, SEGEV Z (2003) « Acute hematogenous osteomyelitis of the pelvis in childhood : diagnostic clues and pitfalls », Pediatr. Emerg. Care 19 : 29-31.