Case Report

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Bilateral Chronic Osteomyelitis of the Femur with Intramedullary confined Bulky

James Yaovi^{*1,2}, Walla Atchi¹, Akpoto Messanvi¹, Abalo Anani¹

¹Orthopedics department, Sylvanus OLYmpio teaching Hospital, BP : 57, Lome, Togo.

²Laboratory of anatomy, Medical school of Lome, BP : 1515, Lomé Togo.

Corresponding Author: James Yaovi Edem, Orthopedics department, Sylvanus OLYmpio teaching Hospital, BP : 57, Lome, Togo. E-mail : nanoj@yahoo.fr

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Abstract:

Osteomyelitis is one of the infectious diseases frequently encountered in developing countries. It is a chronic infection that concerns the long bones' diaphysis which treatment can be very laborious.

We present two cases of chronic bilateral osteomyelitis of the femur observed on a 42 years lady and a 15 years teenager, both with sickle cell disease, AS the former and homozygote SS the latter. The symptomatology was dominated by persistent pains in both thighs with a bilateral purulent discharge fistulizing the skin. Radiographic assessments have helped to highlight bilateral images of pandiaphysitis bulky with intramedullary receivers in both cases. Surgical treatment consisted of a fistulectomy and a sequestrectomy after achieving a wide flap bilateral femoral diaphysis. Some pus samples were made and allowed to isolate in both cases a Staphylococcus Aureus. Clinical Bilateral forms are rarely found in literature.

In all cases, the germ implicating it as well as the field are predictive factors in the occurrence of this rare clinical form

Keywords: Chronic Osteomyelitis, Bilateral, Femur

Introduction:

Chronic osteomyelitis is one of the infectious pathologies frequently met in the developing countries. It is a chronic infection of the bone and marrow which touches the diaphysis of the long bones and which involves enormous therapeutic problems [1]. Its diagnosis is often easy in its usual localizations (long bones metaphysis) and is at the same time clinical and para clinical resting in particular on the biological and radiological assessments. The osseous attack is usually unilateral [1]. Nevertheless, certain rare cases of even multiple bilateral localizations were described [2, 3,4]. We report here two observations of bilateral chronic osteomyelitis of the femur.

Observation No1:

Mrs. X, a 42 years old patient, dealer, carrying ACE drepanocyte feature, was received in consultation at the University hospital Sylvanus OLYMPIO of Lomé for presence of chronic wounds to the side face of the two thighs associated to chronic pains (figure 1). The clinical examination found chronic dents with the two sites with purulent flows associated to pains of moderate intensity on palpation.

Figure 1 : Image showing the skin fistula scating on the external face of the thigh.

The radiographic assessment found a pandiaphysitis associated to bilateral intramedullary bulky sequestration (figure 2). A surgical treatment was indicated. After a side access with the face of the thigh, femoral diaphyseal broad shutter femoral (figure 3) energy of the under trochanteric area until the distal metaphyseal part was achieved by means of an oscillating saw. A setting flat was carried out and a bulky sequestration of 5 cm surroundings was removed. We then proceeded to the setting flat obviously using a rigid manual reamer. During the operation, pus taking away was carried for cytobacteriologic that permit to isolate a stock from *Staphylococcus Aureus*.

An antibiotic treatment by Amoxicilline-Acid clavulanic was instituted in immediate follow up throughout for thirty one days. The operational continuation was simple. At six (6) months, the evolution was favorable with a complete cicatrization of the wound and an amendment of the flows. After the same surgical procedure, the cicatrization was complete in three (03) months and the complete recovery of the function of the knee in six (06) months. At approximately two (02) years of retreat, the two operational wounds are completely healed and the dents completely disappeared.

Figure 2 : (A) preoperational film showing a bilateral femoral pandiaphysitis with bulky intra medullary sequestra.
(B) post operational film showing the femoral flange

Figure 3 : Thigh lateral approach with achievement of a femorotomy (A et B)

Observation N°2

Mr. Y, 23 years, SS homozygous typing cell of Drepanocytosis has been received to the consultation at the University hospital Sylvanus OLYMPIO for chronic wounds localized at the external face of the two thighs associated with osseous pains evolving till eight (08) years. The clinical examination found a bilateral cutaneous sinus way associated to purulent flows. From the radiographic films of the two femurs that had been made, it was found a bilateral Brodie abscess with a central bulky sequestration

(figure 4). A broad femorotomy sitting on the level of one third average of the femoral diaphysis was carried out after a side access of the thigh. We proceeded to a flattening of the abscess of Brodie abscess with a sequestrectomy (figure 5) and fistulectomy to level as of soft parts. An abundant washing was made to the level where was femoral after a boring with the engine by anterograde way. A stock of *Staphylococcus Aureus* sensitive to Amoxicilline-Acid clavulanic was isolated under cytobact investigation from the taking away carried out in per operational, justifying their

operational administration in follow-up for three (03) months. The later follow-up were simple. The cicatrization was obtained in two (02) months.

The patient was operated with the contralateral thigh five (05) months after the first intervention. The evolution was favorable in both cases with a complete disappearance of the dents.

Figure 4: (A) preoperational film showing a bilateral brodie abscess with bulky central sequestrum.
(B) Post operational film.

Figure 5: (A) and (B) Ablation of a bulky intra medullar sequestrum(4,5cm)

Comments

Chronic osteomyelitis is a very frequent pathology in Sub-Saharan African countries which occurs on damaged grounds [1]. Its'long bones preferential localization is most frequent [1]. The bilateral forms are extremely rare [1]. Olaniyi in Nigeria [2] brought back a case with multiple osseous localizations with a bilateral femoral attack. A bilateral tibial attack due to *Pantoea agglomerans* was reported by Bachmeyer [3] at a SS homozygote drepanocytosis patient. The presence of a drepanocytic ground constitutes according to all the authors [1, 2, 3] a supporting factor. However, Sipahioglu and all [4] brought back a case of bilateral acute osteomyelitis of the tibia without the existence of a disease under unclaimed or a particular ground. Chronic osteomyelitis evolves with rustled bottom and the clinical signs are often frustrate. The presence of pains at the level of the member and especially

a purulent flow dent to the skin is nevertheless constant signs according to the authors [1, 2,3]. These signs were found among our two patients. Standard radiography enabled us to make the diagnosis. The presence of micro geodes or bulky sequestrations will intra medullary associated with a pandiaphysite constitutes obvious radiographic diagnostic signs. These same signs were described by certain authors who associate a periosteal reaction to it, a cortical hyperostosis which narrowed the medullary cavity or Brodie abscess [1, 5,6]. This diagnosis can be made with the tamo densitometry or at best with the MRI [3,7]. These two analyses make it possible to better analyze the osseous rehandlings, the sinus ways and the attack of the soft parts. Among our two patients, only standard X-raying was carried out taking into account limited financial means. The treatment of chronic osteomyelitis represents a challenge for the orthopedist traumatologist surgeons [1]. It is

in general medico-surgical. The surgical treatment understands a broad excision of infected tissues. The resection of the sinus way and the ablation of the sequestration constitute crucial stages in the surgical approach. This ablation was carried out among our two patients after the realization of a diaphyseal osseous shutter. The shutter was repositioned as of the ablation of the sequestration without the installation of any osteosynthesis equipment. In addition, boring will intra medullary associated to ablation of the sequestration made it possible to make a kind of diaphyseal curetting, what made it possible to supplement the resection of tissues and infected sites. This surgical treatment must be associated with an antibiotic treatment which must be active on the isolated germs, diffuse in the bone and be well tolerated. This requires a narrow and prolonged monitoring and an adaptation of dosages on a case-by-case basis. Only the absence of repetition after a very prolonged stop of antibiotics allows of speaking about cure. In our two cases, a gilded staphylococcus sensitive to amoxicillin-acid clavulanic was isolated. According to the literature, it is the principal germ responsible for the formation for chronic abscess found at the sickle cell disease [1]. Total duration of treatment per antibiotic was three (3) months. In other series [9, 10.11], the duration of the antibiotic treatment was 45 days on average. Among our two patients a thirty (30) days antibiotic treatment was largely sufficient.

Conclusion

The bilateral clinical forms with intramedullary sequestration are very rare forms. The existence of a drepanocytic ground constitutes an important predictive factor. The success of the treatment of these forms is due to two essential components:

- a well planned and well codified surgery which makes it possible to eradicate to the maximum the unit of the infected sites
- a treatment by antibiotics adapted to the germ

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