

Programme and abstracts



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[FP38] IS THE MANAGEMENT OF OPEN LEG FRACTURES IN A HOSPITAL FACILITY IN IVORY COAST A PROBLEM AND WHY?

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Introduction: The management of patients with open leg fracture in Ivory Coast does not meet the standards of developed countries due to socio-economic conditions, accessibility and organization of care. However, is this care problematic? Is it associated with more post-traumatic infection or mechanical complications and are these correlated with the delay for treatment and the method of treatment?

Material and Methods: This is a single-center prospective study conducted on between January 2018 and May 2018 at Bouaké University Hospital. The observed parameters included factors related to patient, fracture and treatment conditions and were correlated with the rates of complications by multi-variate analysis.

Results: Fractures, mostly comminuted (69.8%), occurred following a road accident (93%). The series has 30 Gustilo 1 and 2 fractures and 13 Gustilo 3 fractures. The average delay before surgery was 26.6 ± 8.1 hours. Fracture stabilization required the use of a cast, an external fixator or an unlocked nail in 27, 10 and 6 cases, respectively. Complications developed in 28 patients (65%), including 17 malunions and 22 postoperative infections. 11 infections were controlled but 8 developed chronic osteomyelitis and 3 septic non-unions. Uncomplicated union was observed in only 15 cases and an acceptable functional outcome in only 16 cases. Gustilo Grade 3 fractures were associated with an increased risk of complication (p=0.02). The delay of management was not correlated with the appearance of a complication. In contrast, the use of plaster immobilization was significantly associated with an increased risk of complications and infection (p = 0.001).

Conclusion: The management of open fractures in our conditions is associated with a high rate of complications and a satisfactory result in a small number of patients. More than the delay of management, the immobilization modalities by plaster and the insufficiency of this method of contention are correlated to the complications. The development of a National Health Care system covering the expenses for emergent treatment, including rapid transportation to hospitals and availability of external fixators at a lower cost would most probably contribute to a reduction of complications and infection.

Keywords: Open fractures, developing countries, fixation, operative time

[FP39] VASCULARIZED FIBULA FLAP IN THE MANAGEMENT OF BONE LOSS SECONDARY TO OSTEOMYELITIS IN CHILDREN.

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Aim: Vascularized fibula flap is one of the available options in the management of bone loss that can follow cases of severe haematogenous osteomyelitis. The aim of this study was to evaluate the outcomes of this procedure in a pediatric population in a Sub-saharan setting.

Method: The retrospective study focuses on the procedures done in the period between October 2013 and December 2016. Twenty-eight patients, 18 males and 10 females, were enrolled. The youngest was 2 years old, the oldest 13. The bones involved were tibia (13), femur (7), radius (5) and humerus (3). In 5 cases the fibula was harvested with its proximal epiphysis, whereas in 17 cases the flap was osteocutaneous and osseous in 6 cases. In most cases, operations for eradication of the infection were carried out prior to the graft. The flap was stabilized mainly with external fixators, rarely with Kirschner's wires or mini-plate. No graft augmentation was used

Results: Graft integration was achieved in 24 cases. Three cases of early flap failure required the removal, while in one case complete reabsorption of the flap was noted a few months after the procedure. The follow-up period ranged from a minimum of 2 and half to a maximum of 6 years. Integration of the graft was obtained in a period of 4 months on average. The fibular flap with epiphysis had good functional outcomes with reconstruction of articular end. Early and delayed complications were observed. All grafts underwent a process of remarkable remodeling. No major problems were observed in the donor site, except for a transitory foot drop that resolved spontaneously.

Conclusions: Reconstruction of segmental bone defects secondary to hematogenous osteomyelitis with vascularized fibula flap is a viable option that salvages and restores limb function. It can be safely used even in early childhood. The fibula can be harvested as required by the local conditions. When harvested with a skin island, bone loss and poor soft tissues envelope may be addressed concurrently. The procedure is long and difficult but rewarding. When surgical skills and facilities are available, it can be carried out even in settings located in low resources countries.