

## DIFFERENT APPROACHES IN TREATMENT OF INFECTED NON-UNIONS

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**Introduction:** We present the case of a 60 years old patient involved in a car accident with trochanteric fracture and open type I comminutive 1/3 proximal right tibial fracture. For the treatment of trochanteric fracture DHS (dynamic hip screw) was used and for the tibial fracture we opted for plate and screws. Due to the absence of complete bone consolidation, the plate was removed and another surgery using intramedullar nail and plate for the tibial tuberosity was performed. Unfortunately patient did not follow the hygienic conditions as a consequence he contacted an infection which led to septic non-union. To treat this new situation the device was removed and an Ilizarov frame was used. This technique allowed radical resection of the infected bone. For lengthening procedures, a percutaneous "corticotomy" was used in which the accessible cortices of tibia were cut, avoiding as much as possible penetration of medullary canal. The wires were tensioned up to 130 kg to provide adequate stiffness for bone segment stability and correction of axial, translational and rotational deformities. Even with this lengthy period of fixing wear (1.5 months for each cm of lengthening), the Ilizarov procedure was very helpful for this patient who needed extensive resection of bone and reconstruction to achieve stability.

**Methods:** The treatment option was DHS for trochanteric fracture and plate and screws for tibial fracture. Patient developed non-union at the level of tibial metaphysis as a consequence the plate was removed. After the procedure we opted for intramedullary nail for tibial fracture and plate for tibial tuberosity. However the patient did not follow the postoperative indications as a result he developed septic non-union. Due to the infected non-union we opted for the Ilizarov technique.

**Results:** This technique was very effective in treatment of septic non-union, which needed large excision of bone. The patient recovered completely and regained the mobility of his leg.

**Conclusion:** The Ilizarov procedure benefits patients who need extensive resection of bone and reconstruction to achieve stability. Disadvantages include the time required to achieve a solid union (six weeks for each centimeter of lengthening) and the high incidence of associated complications (minor pin track infection, residual equinus contracture, a nerve palsy or unexpected sequel that can compromise the final results).

**Keywords:** Ilizarov technique, Trochanteric fracture, non-union, DHS, plate, screws, reconstruction.

## COMPARATIVE ANALYSIS OF DIFFERENT TYPES OF SEPSIS

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**Introduction:** Sepsis is defined as the systemic inflammatory response to infection. Severe sepsis is considered as the major public health issue. In severe sepsis, local infection is accompanied by systemic neutrophils activation. Innate immune cells play an important role in pathogenesis of the sepsis. High numbers of blood neutrophils could be due to excessive recruitment from the bone marrow, the return of margined cells into the circulatory pool or both. The sequestration of neutrophils could be a key stage in the initiation of multiple organ failure and negative evolution of sepsis.