

## **Femur Pseudarthrosis Treatment With Reaming Intramedullary Nail**

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**Purpose:** We value in our service patients with femoral fractures treated with plates who developed a pseudarthrosis and that according to our protocol would be treated with plate removal with minimal incision, fascia and skin closure, and immediate intramedullary femur nail insertion with reaming. Taking into account the biological osteosynthesis and the importance of vascularity and soft-tissue care, we started this treatment thinking that the intramedullary reaming would give us enough graft input and reactivation of the healing process, without having to make a substitute contribution bone or other graft.

**Methods:** 11 cases of femoral diaphyseal fractures treated with open reduction and plate osteosynthesis were incubated, who after 8 months had no evidence of fracture healing and presented an atrophic callus at the level of the fracture site. Preoperative planning was performed in each of the patients that consisted of removal of osteosynthesis material with minimal incision technique, immediate closure of the fascia and skin, and we began the treatment with the technique for intramedullary nailing to a closed focus. We performed the opening of the femur canal and did a sufficient intramedullary reaming without causing an internal cortical necrosis and then we did the osteosynthesis with a locking intramedullary nail.

**Results:** Osteosynthesis was performed with intramedullary nail in 11 patients, whose smaller diameter was 13 mm and larger diameter of 15 mm; all nails were blocked. There was no alteration in the mobility of the hip or knee. The healing of the fracture was achieved between 8 and 20 weeks. There were no deformities such as rotation or limb shortening.

**Conclusion:** We consider that if a meticulous surgery is done by removing the plate with minimal incision technique, then fascia and skin closure immediately, and then performing a careful intramedullary reaming and then a femur osteosynthesis with nail, the fracture healing can be obtained without other additional treatment. We recommend this method of treatment for pseudarthrosis of femur fractures initially treated with plate.