Introduction

Fractures of the femoral shaft considered to be a high velocity injuries . The art of femoral fracture managment is to blanace the need for early mobilzation and functional use of the extermity with the maintenance of satisfactory length and alignment of the fracture . ***(Bucholz and Browner , 1990)*** .

Since Kuntscher introduced the technique of intramedullary nailing for fixation of fractures of long bones in 1940 , the method has undergone progressive development and differentiation . Probably the most important technical advance was made in 1950s when Kuntscher initated the procedure of reaming the medullary canal prior to nailing which improved fracture stability considerably ***(Olerud 1986).***

The first interlocking nail designed in the late 1960 , but it recieved litte attention untill klemm modified and published the first clinical experience in 1972 ***(Taylor 1992)*** .

The basic idea is to combine the advantage of closed intra medullary nailing under fluoroscopic control with the added fixation of percutaneously inserted transfixing screws introduced through predrilled holes at the proximal or distal end of the nail or both to apply static or dyamic locking ***(Bucholz and Browner , 1990)*** .

The interlocking nailing stability following osteosynthsis is not a result of elastic impringement of the clover leaf shaped nail or three point fixation of the nail within the medullary canal . Rather,

transverse threaded screws inserted through prefabricated holes in the nail anchor the intramedullary implant directly to cortical bone . Essentinly all fractures between lesser trochanter and femoral condyles can be stabilized by the device , regardless of the fracture configuration or the degree of communition ***(Klemm et al., 1986)*** .

Simple and open fracture of the femur can safely be treated with the interlocking nail .

Regular interlocking medullary nails can be used for fixation of most femoral fractures between the distal fifth and a point just distal to the lesser trochanter . Interlocking nails is useful in the treatment of segmental fractures, comminuted fractures, in treatment of rotationally unstable fractures, in cases of non infected pseudoarthrosis of the femur , in patients with osteoporotic bone, in some cases of infected fracture femur but these infected cases needs prolonged and two stage treatment . The first stage is the attempt to achieve fracture union by secure internal fixation , and the second is attempts to eradicate or suppress the infection ***(Klemm, 1986)*** .