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Fracture neck femur poses a great challenge to orthopaedic surgeons and remains an unsolved problem as far as its management is concerned in many ways. The surgeons have some control over the problem of non-union of the femoral neck fracture, but not over avascular necrosis of femoral head. The femoral neck fracture is entirely intracapsular and as in other intracapsular fractures, the synovial fluid bathing the fracture interferes with the orderly healing process. Furthermore, the femoral neck has essentially no periosteal cambium layer; therefore all healing must be endosteal. These two factors along with precarious blood supply to femoral head make healing unpredictable and non-union fairly frequent.

Vonlangenbeck was the first to use internal fixation for femoral neck fracture in 1850-1878. After Vonlangenbeck, Koning (1875), Nicolasysen (1897) and Hey Groves (1916) used various devices for internal fixation with the aim of, secured and rigid fixation, out of which Smith Peterson trilangled nail gained maximum popularity but at present it is gradually getting out of use because superior fixation devices available. Multiple pinning, Deyerle apparatus, Gardan screws, Asnis screws
or a sliding screw apparatus like Richards or Zimmer compression screw, the Calandruccio compression devices or a combination of devices such as compression screw and side plate assembly with one or two supplemental threaded pins.

Multiple pinning is one of the latest treatment which prevent rotation and provide good fixation and check other shearing movements at fracture site.

Frangakis in 1966 observed that almost all the cases of femoral neck fracture, had comminution of posterior cervical cortex and due to this comminution, traction and internal rotation brings into contact only the anterior portion of the fracture surfaces of the femoral neck. Thus it appeared that bone grafting along with internal fixation could be more advantageous.

Non-union, avascular necrosis and late segmental collapse are the two principle complications of femoral neck fracture inspite of anatomical reduction, impaction and rigid internal fixation.

So surgeons think over the third essential factor, the precarious blood supply of femoral head. So attempt to restore blood supply were attempted from time to time.

To overcome the problem of poor vascularity, many workers (Helstadius, 1942; Stuck & Hinchey, 1944; Baadsgaard and Medgyesi, 1965) studied the role of muscle pedicle bone graft in experimental animals.
In 1962, Judet was first to use the quadratus femoris as a muscle pedicle bone graft in cases of displaced femoral neck fractures to improve vascularity of head fragment.

Meyer's, Harvey and Moore (1973, 74) studied the role of muscle pedicle bone grafting with internal fixation in fracture neck femur and reported good results in 95% of cases. However, late segmental collapse occurred in 5% of united femoral neck fractures.

Baksi in 1983 studied the role of muscle pedicle bone grafting in avascular necrosis of femoral head and utilized this principle, of improving vascularity with muscle pedicle bone grafting, in treatment of femoral neck fractures and reported satisfactory union in 75% of cases, delayed union in 12%, non-union in 9% and technique failure in 4%.

We undertook the present study to establish the role of muscle pedicle bone grafting with internal fixation in treatment of fresh as well as un-united cases of femoral neck fractures.

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