

High Energy Young Femoral Neck Fractures- The Unsolved Fracture

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What are we talking about:

Pts < 60 yrs old
Functioning without limitation prior to injury
No Comorbidities
Internal fixation, not arthroplasty

1. Is Open Reduction necessary to achieve the best outcome?
 - a. Advocates of ORIF to obtain anatomic reduction use data from papers that contain mainly patients who underwent closed reductions.
 - b. Radiographic anatomic reduction may not be perfectly reduced if the hip is opened and checked, but does that matter and does that affect outcomes? Based on the currently literature, only radiographic anatomic reduction has been documented to be important. There are NO studies to answer the question: Are imperfect actual reductions necessary to achieve good outcomes or are anatomic radiographic reductions sufficient.
2. How do surgeons obtain healing of femoral neck fractures without shortening of the neck.
 - a. Loss of femoral neck length (offset) is correlated with loss of hip function.
 - b. Femoral neck fxs are prone to shorten as the fracture impacts during weight bearing.
 - c. Femoral neck fxs that don't impact and compress seem to be at risk for nonunion.
 - d. Multiple strategies have been tried to allow some compression but resist shortening. None of these have been a definitive solution.
 - e.
3. Where does this leave us?
 - a. These issues continue to be unsolved problems
 - b. Although many in the trauma community vehemently argue that displaced femoral neck fractures must have an OPEN reduction, there is no outcome data to support this opinion. However, there is data to support that IF a *radiographic anatomic reduction* can be achieved, the outcomes are satisfactory. **What seems to matter, based on our current level of reported outcomes, a femoral neck fx should look anatomically reduced on AP and lateral x-ray views. Anything short of this should be openly reduced to achieve an anatomic reduction.****
 - c. Fixed angle implants are effective in resisting varus and preventing shearing forces at the fracture site.
 - d. Sliding implants that allow dynamic compression have a high rate of shortening.
 - e. Locking implants lead to high rates of failure
 - f. Anatomic reduction, intra-operative compression stabilized with length stable implants is an improvement, but not a perfect solution.