



Indications for Osteoporotic Pelvis Fractures

Cory Collinge, MD

Elderly Pelvic Fx

- Osteoporotic bone
- Cavernous bone corridors
- Limited fixation opportunities
- Unicortical screws
- Thin skin
- Tolerance of "NWB"?

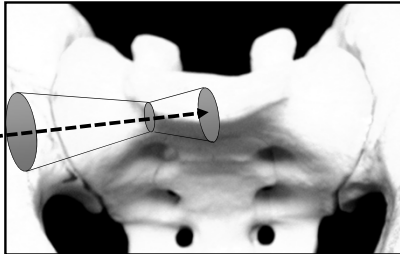


Indications for Surgery (?)

- Mechanical instability > deformity
- Marked deformity
- Pain expected to improve with ORIF
- Painful nonunion
- Insufficiency fracture

Pelvic Anatomy

- Certain corridors for screw insertion



Examples

Failure of Screw Fixation

Starr et al. Pubic ramus fractures treated with PerQ screws, JOrthoTrauma, 2008

- 12/85 Rx failures: 10 women/ avg age 55

Superior Pubic Ramus Fractures Fixed With Percutaneous Screws: What Predicts Fixation Failure?

Adam J. Starr, MD, Tetsuya Nakatani, MD,† Charles M. Reinert, MD,* and Kevin Cederberg, MD‡*

Objective: The purpose of this study is to present the early complications of percutaneous screw fixation of superior pubic ramus fractures and to present a new classification scheme for superior pubic ramus fractures.

Design: Retrospective.

Setting: Level 1 trauma center.

Patients: One hundred and twelve patients with pelvic fracture between the ages of 14 to 89 years underwent percutaneous screw

sustained recognized neurologic, vascular, or urologic injury as a result of percutaneous screw fixation of a superior pubic ramus fracture.

Conclusions: The prevalence of loss of reduction after percutaneous screw fixation of pubic ramus fractures is 15%. Loss of reduction is more common in elderly and female patients and in patients whose ramus screws are placed in a retrograde fashion. Also, loss of reduction appears to be more common in fractures medial to the lateral border of the obturator foramen.

Key Words: superior pubic ramus fracture, percutaneous fixation, complications, fixation failure

Failure of Screw Fixation

Starr et al. LC-2 fractures treated with PerQ screws, JOrthoTrauma, 2007

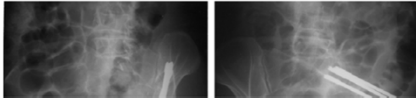
- Rx failures

PERCUTANEOUS SCREW FIXATION 121

evidence of sacroiliac joint arthritis on their latest radiographs.

One patient, an eighty-nine-year-old woman, had late displacement of her superior pubic ramus fracture after antegrade percutaneous screw fixation with a 7.3-millimeter cannulated screw (Figs. 5, 6, and 7). The patient's bone was osteopenic, and the distal tip of the screw pulled out of the medial fragment of the ramus. In spite of this loss of fixation, the patient's thigh symptoms were healed uneventfully, and she is once again ambulatory with a walker.

Another patient's postoperative radiographs showed a cut-out of a screw along the inner cortex of the iliac wing. The radiographs showed that a portion of the shaft of the screw exited the bone along the inner cortex of the ilium above the greater sciatic notch. The patient had no complications because of this screw cut-out, and the pelvic fracture healed uneventfully.



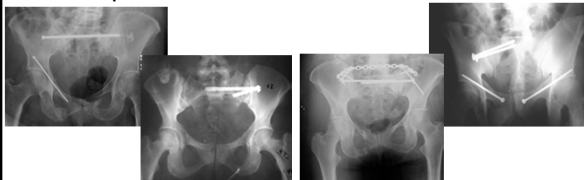
Failure of Screw Fixation

Sagi and Papp, Outcome of 2 vs multihole symphyseal plating, JOrthoTrauma, 2007

- 28% loss of fixation
- No discussion of age effect
- Noted 1/3 >50 years old

Strategies for Improved Fixation?

- More screws
- Longer screws
- Non-traditional screw trajectories
- Add plates



Strategies for Improved Fixation?

Bill Blazewych, Night Shift, 1982

- What if you mix the mayonnaise in the can, WITH the tunafish? Or... hold it!
- Chuck! I got it! Take LIVE tuna fish, and FEED 'em mayonnaise! Oh this is great.
- [*speaks into tape recorder*]
Call Starkist!

Examples

Other
