Hip Fracture

Main points:
1. Hip fracture is a marker and a cause of bad outcomes.
2. The mortality benefit of early surgery may be due to confounding by co-morbid illness.
3. Don’t forget primary and secondary prevention of osteoporosis.

Epidemiology
250,000 American hip fractures annually and climbing
At one year,
- 24% are dead
- 54% of survivors can walk unaided
- 40% of survivors can perform ADLs independently

Timing of surgery
Many studies find decreased mortality in early repair (ie within 24-48 hours), but a recent retrospective multi-site cohort study with 8000+ patients found no difference after accounting for active medical issues, and argues that time to surgery is more a marker of co-morbid illness than cause of poor outcomes. Time to surgery is a risk factor for decubitus ulcers.

Bottom line – Most review articles recommend it is reasonable to wait up to 72 hours to optimize active medical problems, such as unstable angina, CHF, infection, severe COPD, though little is known about specific goals and standards.

Antibiotics
A meta-analysis showed a 44% decrease in post-op wound infection in patients given peri-operative antibiotics. The timing and number of doses is not clear, but within 2 hours before and 24 hours after is recommended. Because staph A is most common agent, 1st gen cephalosporin or vanco are recommended.

PE/DVT prophylaxis
- Fatal PE occurs in 4-7% of patients with a hip fractures.
- Proximal DVT occurs in 25%.
- All patients should be started on SCDS and SQ heparin or LMWH on admission and continued until fully ambulatory.
- Discontinue SERMs or HRT in setting of fracture and repair because of increased VTE.

Delirium
- Occurs in up to 60% of hip fracture patients.
- Avoid sedatives and cholinergic meds, maximize reorientation and minimize restraints.
- Prophylactic geriatric consult resulted in decrease of delirium from 50 to 32% (NNT 1 in 5.6)

Secondary Prevention
Hip Fracture is one of the defining criteria for osteoporosis, thus all hip fractures patients should be treated with calcium, vit D, and anti-resorptive therapy such as a bisphosphonate, which have been shown to prevent second fractures.

Sources:
Primary Prevention Review

- Weight bearing exercise
- Bone density screening
- Calcium (1500mg/day), vitamin D (800IU/day), anti-resorptive therapy for T score >-1.
- Stopping tobacco and limiting alcohol intake
- Treating hyperparathyroidism or hyperthyroidism

Sources: