Hip fractures are a major cause of hospitalization, morbidity and mortality, particularly in our increasing elderly population. Because many hip fracture patients have multiple chronic, and potentially acute, medical problems internists play a critical role in their care. The goal of this module is to provide internal medicine residents with the foundations and best practices to participate in the care of patients with hip fractures in collaboration with orthopedic surgeons and other members of the healthcare team.

GOALS

1. Perform an appropriate preoperative medical evaluation for patients undergoing hip fracture repair.
2. Describe the optimal timing for surgical repair of a hip fracture to improve patient outcomes.
3. Describe common perioperative medical complications associated with hip fractures and apply risk reduction strategies.

The specific pertinent learning objectives (from the curricular map) along with teaching and assessment methods are included in TABLE

SESSION CONTENT

Brief summary description of what is covered in this session.

Case based discussion covering

1. Goals of the healthcare team caring for patients with hip fractures
2. Morbidity and mortality associated with hip fractures
5. Secondary prevention in patients who have had a hip fracture
AGENDA & METHODS

Independent Reading
Case Discussion with Faculty

FACILITIES & EQUIPMENT

None

HAND OUTS


REFERENCES


Case 1
You are paged by the orthopedic surgery resident with a request to evaluate a patient in the emergency department who has a right hip fracture. The patient is an 84 year old woman with diabetes mellitus, hypertension and congestive heart failure. She tripped on a rug in her kitchen while making breakfast. There is OR time available later today and they will take her to surgery today if you believe she is “medically optimized”.

Case Discussion Questions:

- What are (or should be) common goals of healthcare team members who care for patients with hip fractures?

- List responsibilities specifically of internists who participate in the inpatient care of hip fracture patients.

- List the anatomic site(s) of fracture encompassing the term “hip fracture”. Label the images at the end of the case discussion.

- List the most common surgical approaches to hip fracture management. Cite why a general understanding by internists is important.

You review the patient’s chart. She has never been to this medical center before. You proceed to the emergency department. The patient is very sleepy after receiving a dose of hydromorphone shortly before your evaluation. She falls asleep not long after being awoken. The patient’s daughter is at the bedside and provides you with the following information:

The patient has diabetes mellitus and is on glipizide and metformin. The patient monitors her blood sugars periodically and states that they are “good”. She has a long history of high blood pressure for which she takes metoprolol and lisinopril. She was hospitalized 1 year ago for “heart failure”. She has had no problems since and has not been on a “water pill” for the past several months. She lives alone and does her own cooking and light cleaning. She uses a cane when she walks outside of her home. She seems to be a little forgetful but her family feels very comfortable with her living alone since they visit often. Her daughter has not heard the patient complain of shortness of breath or chest pain. She does not smoke or drink. She takes the medications mentioned above and an occasional acetaminophen for knee and hand arthritis. She has no known drug allergies.
Physical exam: BP 138/72, pulse 64, respiratory rate 12, afebrile, oxygen saturation on RA 95%.
You perform a complete physical examination. There are no findings which concern you.

LABS:
Na 135
K 3.9
Cl 109
CO2 25
BUN 25
Cr 2.1
Glucose 201

WBC 13,600
Hgb 11.5
Plt 136,000

PT/aPTT normal

EKG - tracing at end of case

The patient’s daughter becomes tearful and asks “What does this fracture mean for mom? Will she be able to live at home by herself again?”

• Cite general epidemiologic and prognostic data for patients who sustain a hip fracture.

• You begin your consult note. While in the midst of writing it, the orthopedic resident pages you and asks if they can take her to the OR shortly. If not, then the surgeon will not be available until the day after tomorrow.

• Given the data, how would you respond?

• “Patients with hip fracture should undergo surgical repair within 48 hours” --- Myth or Truth?

• Give examples of “major” preoperative medical abnormalities.

• List the most common perioperative complications associated with hip fracture

• How common are delirium and venous thromboembolism? Describe risk reduction strategies for both.
• Describe an approach to secondary prevention in patients who have had a hip fracture.

**Case 2**
A 74-year old man with severe aortic stenosis for whom surgical and percutaneous replacement have been deemed too high risk, systolic heart failure, metastatic pancreatic cancer, and stage II sacral decubitus ulcer sustains a hip fracture when he slips out of his wheelchair. He has been bedbound for the past 2 months.

**Case Discussion Question:**

• How would you approach this patient’s preoperative risk assessment and therapy?
Label each image with the type of fracture depicted.