Plain Language Summary

Hip Fractures in the Elderly

Background
This plain language summary provides an overview of the management of low energy hip fractures in the people who are 65 years old or older. A hip fracture is a break in the upper quarter of the femur (thigh) bone. An estimated 340,000 hip fractures per year in United States and approximately 1.7 million in 1996 with most fractures occurring in women older than age 65 years. The annual number of hip fractures is estimated to increase.

What are risk factors for a hip fracture?
Low energy hip fractures usually occur with a fall or direct impact to the hip. In severe cases, it is possible to break the hip by merely standing on the leg and twisting. Hip fractures in the elderly are often associated with osteoporosis (low bone mass), and other medical conditions such as, but are not limited to, loss of balance, diabetes, poor vision, or a lack of home safety or supervision that may increase the chance for falls.

What treatment options are available for SSI?
Most SSIs are treated with antibiotics. However, additional surgery or procedures such as debride- ment (the removal of dead, damaged, or infected tissue), may be necessary. Research shows that the use of antibiotics for a short-term period of 8 weeks is sufficient and does not result in a notably different outcome than a longer-term duration of 3-6 months. Rifampin, when used with an antibiotic, also increases the likelihood for successfully treating an SSI.

What are treatment options for a hip fracture?
Treatment options depend on many factors, including the type or pattern of fracture, patient health condition, and patient demand. The treatment for a hip fracture is generally with surgery. Routine use of preoperative traction, or the use of weights to pull the bones into the correct position, for patients with a hip fracture is not supported by evidence.

What is done to prepare for surgery?
Surgery for a hip fracture within 48 hours of hospital admission is associated with better outcomes. However, prior to surgery, it is important to ensure the patient’s safety and optimize their health status. There is some evidence to support not delaying hip fracture surgery for patients on certain blood thinners: aspirin and/or clopidogrel (Plavix). Lab tests and other diagnostic studies may be done before surgery. Pain management prior to surgery may be a combination of medications. An injection to temporarily numb the injured hip can improve preoperative pain control in patients with hip fractures.

Surgical Treatment
Outcomes are similar for general or spinal anesthesia for hip fracture surgery. The surgeon plans the surgery based on the pattern of hip fracture. For femoral neck fractures that have not shifted out of place, there is evidence to support stabilizing with screws without or with a plate.
For femoral neck fractures that have displaced and are unstable, evidence supports partial or total hip replacement of the broken part of the upper femur. The replacement of the upper femur should be coated with bone cement when placed into the shaft of the femur. However, different types of replacements for the head of the femur provide similar outcomes. For some patients with a fracture of the femoral neck, a total hip replacement may be the recommended surgery. For a partial or total hip replacement, the surgeon may make a skin incision from either an anterior (on the front upper thigh) or posterior (along the buttock and outside of the hip) approach. However, hip dislocation may occur more often from a posterior approach. Taking precautions after surgery to prevent hip dislocations is important for recovery.

For intertrochanteric (a location between the greater trochanter and lesser trochanter, or where the vertical thigh bone shifts to the ‘ball’ of the hip’s ball and socket joint) hip fractures, surgery is recommended. There is evidence that either a sliding hip screw or a cephalomedullary device (a rod inside the bone marrow of the femur) for a stable intertrochanteric fracture. For unstable or certain fracture types, evidence supports the use of a cephalomedullary device.

**What be expected after surgical treatment?**

Postoperative care consists of a team of doctors, physician assistants, nurses, therapists, nutritionists, and discharge planners. The medical team may use blood tests to monitor the need for a transfusion. For pain management, a combination of medications in different modes is used to help manage pain after surgery.

After surgery, the patient can expect to get up and move as soon as possible. The evidence shows that prevention of a blood clot is recommended.

Medicines to thin the blood and/or mechanical compressive devices (machines that squeeze the feet or legs and help keep the blood moving through the veins) may be used to help prevent a blood clot. Patients should make every attempt to sit up, stand up, and walk as soon as they can after surgery. Early movement is a good way to prevent blood clots.

Physical and occupational therapy in the hospital and after leaving the hospital is recommended to improve the patient’s ability to function and help prevent future falls.

**What can be done to prevent a hip fracture?**

Proper nutrition is important to prevent future fractures. Many elderly people do not get enough protein, vitamin D and calcium in their diet to support their bone strength. Nutritional supplementation has been shown to reduce death and improve nutritional status after a hip fracture. The use of vitamin D and calcium after a hip fracture can also supplement bone strength.

For patients with dementia, the use of a care team improves function and prevents falls. The team can be made up of occupational and physical therapists, a geriatrician (doctor that specializes in care of the elderly), nurses, nutritionists, and other health care providers that provide further care and follow-up after the patient leaves the hospital. However, fall prevention must be a part of daily life in elderly who are more likely to fall.

After a hip fracture, the patient can expect testing for osteoporosis (low bone mass) and receive treatment when needed. A major risk factor for another fracture due to low bone mass is having a prior fracture. So, it is important to identify if the patient has low bone mass and treat it with nutrition and/or medicines that support healthy bones.