

Focus on pertrochanteric fractures

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Hip fracture treatment encompasses a vast amount of medical literature. However, reviewing the past 50 years, there has been no significant improvement with respect to functional outcome or mortality.

Epidemiology

The relative incidence of pertrochanteric fractures remains unchanged over the last decades. The absolute number of pertrochanteric fractures may increase in the years to come, along with aging of the population and an increase of osteoporosis. Therefore, rigorous preventive treatments of osteoporosis should be considered in high-risk patients, along with improved safety measures to reduce falls.

Extra- vs. intra-medullary fixation

Extramedullary fixation using the sliding hip screw has been the mainstay and gold standard in the fixation of pertrochanteric femoral fractures. However, there has been a dramatic shift in treatment over a relatively short period of time, as orthopaedic surgeons have extensively left this faithful device. Cephalomedullary nails presented promising biomechanical results and seem superior to plates simply by the design of the implant. Intramedullary nails

have a shorter lever arm compared to plates, attached to the lateral femoral shaft, and thereby decrease the risk of implant failure. Some surgeons advocate that stabilizing pertrochanteric fractures with intramedullary nailing takes less time, is minimally invasive with reduced blood loss compared to compression hip screws. In the treatment of pertrochanteric fractures, clinical studies have not been supportive for any of these claims.

Primary arthroplasty

The gluteus medius muscle represent the motor of the hip joint. With its attachment to the greater trochanter, usually involved in the proximal femoral fracture complex, the functional outcome after primary hip arthroplasty is inferior. Therefore, hip arthroplasty is rarely indicated in the treatment of pertrochanteric femoral fractures. However, in some patients the complexity of the fracture or other patient-related factors may cause the orthopaedic surgeon to consider arthroplasty as the treatment of choice. Several predictors of inferior outcome after CRIF or ORIF such as age, gender, poor bone quality and hip osteoarthritis, operation and postoperative weight-bearing restrictions have been identified. However, decision-making remains challenging and quantifying independent predictors influencing outcome using a scoring-system is necessary: The Hamburg Per- and Intertrochanteric Fracture Score (HPIFS) might be a useful decision-making tool.

Osteoporosis

Approximately 6 million patients in Germany suffer from osteoporosis, but only a quarter receives specific treatment.

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Secondary fracture prevention is an important issue in the clinical management of patients sustaining hip fractures. But, in contrast to the excellent surgical care provided to the latter of patients, adequate osteoporosis treatment remains an unmet clinical that needs urgently to be improved. A holistic approach to pertrochanteric fracture management includes improved risk assessment, optimized basic medical care and options for individualized medical treatment.

Summary

You hopefully will find this 'Focus on pertrochanteric fractures' helpful in your future decision-making and treatment of patients suffering from this complex injury.

Conflict of Interest J.M. Rueger declares that there is no conflict of interest.