OUTCOME IN PATIENTS WITH TROCHANTERIC AND SUBTROCHANTERIC FEMORAL FRACTURES

ASPECTS ON SURGICAL METHODS, QUALITY OF LIFE AND COGNITIVE FUNCTION

av

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Abstract

A hip fracture is a significant cause of increased morbidity and mortality in elderly people and Scandinavia presents the highest incidence of hip fractures worldwide. The hip fracture is a serious consequence of osteoporosis which demands acute surgery with a high risk of complications and a threat to a continued independent living. Trochanteric and subtrochanteric femoral fractures constitute approximately 50% of all hip fractures.

The overall aim of the thesis was to evaluate the outcome in patients with stable trochanteric (Study II), unstable trochanteric (Studies I and III) and subtrochanteric (Studies I and IV) femoral fractures with aspects of the surgical methods, including assessments of functional outcome and the health-related quality of life (HRQoL). Moreover, the aim was to evaluate whether severe cognitive dysfunction could predict functional outcome, HRQoL and mortality (Study V).

In an RCT, 217 patients, mean age 84, with an unstable trochanteric or subtrochanteric fracture were allocated to treatment by either a standard Gamma nail (SGN) or a Medoff sliding plate (MSP) (Study I). The SGN showed good results in both unstable trochanteric and subtrochanteric fractures. Moreover, the SGN showed a reduced number of severe general complications and wound infections compared to the MSP. The MSP in the biaxial dynamisation mode had a low failure rate in patients with unstable trochanteric fractures but a high failure rate in the smaller group of patients with subtrochanteric fractures.

In a prospective cohort study, 148 patients, mean age 83, with a stable trochanteric fracture treated with a sliding hip screw (SHS) were included (Study II). The results confirm a favourable outcome after a stable trochanteric fracture treated with an SHS with a low reoperation rate and a good functional outcome and only limited deterioration in HRQoL.

In a prospective cohort study, 117 patients, mean age 84, with an unstable trochanteric fracture treated with the trochanteric Gamma nail (TGN) were included (Study III). The results showed that an unstable trochanteric fracture treated with the TGN had a substantially negative impact on the patient’s musculoskeletal function as well as on the patient’s HRQoL. The need for revision surgery was low in patients with a 3-part fracture, while the reoperation rate among those with 4-part fractures was significantly higher. The by far most common fracture complication, i.e. a secondary lag screw penetration/cut-out, was successfully treated with a total hip replacement.

In a prospective cohort study, 53 patients, mean age 82, with a subtrochanteric fracture treated with the long Gamma nail (LGN) were included (Study IV). The results showed that a subtrochanteric fracture treated with the LGN had a substantially negative impact on the patient’s musculoskeletal function as well as on the patient’s HRQoL. However, the need for revision surgery was comparatively low.

In Study V 213 patients from Study I were included. The results showed that a systematic use of a validated instrument for assessing cognitive function, the SPMSQ, identified patients with severe cognitive dysfunction and effectively predicted their outcome regarding walking ability, ADL function and mortality. The results strongly suggest that the SPMSQ can be recommended for use in the elderly hip fracture population in routine health care.

Key words: Trochanteric fractures; Subtrochanteric fractures; Elderly; Fracture fixation; Intramedullary; Treatment outcome; Quality of Life