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5B.4**The AO/ASIF proximal femoral nail antirotation (PFNA): A new design for the treatment of unstable proximal femoral fractures**

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Introduction: PFNA design compacts the cancellous bone to provide increased stability and has been bio-mechanically proven to retard rotation and varus collapse. We evaluated the early results of treatment of proximal femoral fractures by using PFNA.

Methods: Sixty-two patients who underwent PFNA fixation between 2006 and 2007 were reviewed. Fractures were categorised according to the AO/ASIF classification. The quality of fracture reduction, PFNA blade position and neck shaft angle were assessed. The tip–apex distance was measured (TAD). Intra-operative technical difficulties and complications were recorded.

Results: Sixty-two patients with a mean age of 78 years (range 44–94 years) were reviewed (20 men and 42 women). Most fractures (48) resulted from low energy injury following a fall. Associated injuries were noted in 15 patients. Majority of the fractures were AO/ASIF types 31A2 (26) and 31A3 (33). Closed reduction was successful in 50 patients and 12 patients required open reduction. Fracture reduction was good in 41, acceptable in 19 and poor in 2 patients. PFNA blade position was central in 52 patients. Mean pre-op neck shaft angle was 132 and post-op was 130. Twenty-four patients had TAD of less than 10 mm, 25 had 10–25 mm and 13 had >20 mm. Technical difficulties were encountered in 14 operations. Fifty-two fractures united between 3 and 4 months. Four patients had delayed union (6–8 months). Two patients were lost to follow-up. Five patients died (2—early post-op period and 3—after 3 months). PFNA blade cutout was noted in two patients. There was no infection.

Conclusions: Unstable proximal femoral fractures were treated successfully with the PFNA. The PFNA blade appears to provide additional anchoring in osteoporotic bone.

Keywords: Proximal femoral nail antirotation; New design; Unstable; Proximal femoral fractures

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5B.5**An indepth analysis of why decision of conservative management of hip fractures was made in 50 patients: A pilot audit study done in Northwest of England**

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Introduction: Hip fractures guidelines suggest that all patients with fracture neck of femur should be operated upon as soon as possible (within 24 h). Despite this different studies suggest that still 11% of hip fractures are treated conservatively (varies 3–37%).

Aim: Our main aim was to find out whether there is a place for non-operative treatment as a definitive primary option in patients with significant medical co-morbidity.

Methods: We did this audit in 2007 collating information on 1010 hip fracture patients across 14 NHS hospitals in England. 50 out of 1010 (4.95%) patients were treated conservatively. We reviewed the

Results: There were 17 males and 33 females patients managed conservatively in our study. During hospitalisation, 4 became bedridden and 30 died. Amongst these 50 patients, 8 were deemed physically unfit for surgery by anaesthetists and 2 by medical consultants. The decision was made by orthopaedic consultants in 10 cases and by multidisciplinary team in 4 cases. Five patients refused surgery and five patients were palliative due to terminal illnesses. Patients who did not proceed to surgery had significantly higher mortality rates (overall mortality rate 60%) suggesting that they were physiologically much worse group of patients.

Conclusion: As the average life span of our population increases, some hip fractures are now treated non-operatively because of the possibility of severe or fatal complications due to surgery. Often, refusal of surgery by the patient or the patients' family obligates the need for non-operative treatment. It might be acceptable not to opt for the surgery if the patients are medically very high risk because of these reasons (e.g. acute cardiac event, severe aortic stenosis, multi-organ failure, etc.).

Keywords: Non-operative management; Hip fractures

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5B.6**Cancellation of orthopaedic trauma cases**

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Background: Cancellation of orthopaedic trauma cases is a major problem. The effects of delay are pertinent to proximal femoral fractures, in which operative intervention beyond 48 h leads to increased mortality, morbidity and length of stay. Identification of reasons for cancellation could allow strategies to improve efficiency of care.

Aims: To establish reasons for the cancellation of orthopaedic trauma operating in patients with proximal femoral fractures and other skeletal trauma. To evaluate impact of cancellation on delay to procedure and length of stay.

Patients and methods: 1356 patients were listed for orthopaedic trauma procedures at Whiston Hospital between January and October 2006. 143 patients were excluded, most frequently due to institution of non-operative management. Data was recorded retrospectively on a standardised proforma.

Results: 100 (8.24%) cases were cancelled. 49% of cancelled cases were proximal femoral fractures, with the remainder an even split between other skeletal trauma. 41% of cancelled cases were medically unstable patients, whilst 39% were for avoidable reasons.

The sub-analysis of proximal femoral fractures revealed that 44.9% of cancelled cases were potentially avoidable. 20.4% of cancellations were patients taking anticoagulants, which had not been reversed. 8.2% were in anaemic patients who had not been transfused. Other skeletal trauma was more commonly cancelled due to a lack of operating time (39.2%).

In cancelled patients with proximal femoral fractures, mean delay to surgery was 5.05 days and mean length of stay 30.25 days. Anticoagulated patients had a mean delay of 5.1 days and mean length of stay of 23.1 days. The impact of cancellation on other skeletal trauma was less.

Conclusion: Cancellations are common in orthopaedic trauma. Many are avoidable, particularly in proximal femoral fractures, leading to operative intervention beyond 48 h of injury. Strategies including protocols for anticoagulation reversal may be helpful in reducing the burden of cancellations.