

The patients were contacted either by telephone or the questionnaire was sent by post.

Results: There were 2 males and 22 females. The left side was affected in 15 patients. The age group ranged from 71 to 91 (average 79 years). There were 10 lateral alveolus 8 bimalleolar and 6 trimalleolar fractures. All the patients were followed up at 6 weeks, 12 weeks, and after 6 months. The average time for fracture union was 8.7 weeks. There were no wound breakdown or any deep infections. The average OAMS was 57 (range 30–65).

Conclusion: The use of fibular locking nails to treat these difficult fracture are quite crucial to achieve early mobilisation and at the same time maintaining good fracture position. In our study fibular nails is a very useful and successful way of treating fragility fractures with very low risk of complications. It also helps to restore function and patient satisfaction.

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Treatment of hip fractures using a minimal invasive approach for bipolar arthroplasty—a randomized trial

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Introduction: It is known that early postoperative mobilization after hip fractures directly influences morbidity and mortality. We conducted a randomized clinical trial comparing a standard approach (Watson-Jones, WJA) with a minimal invasive approach (Direct Anterior Approach, DAA). The main outcome parameter was mobility measured by the 4-item Barthel-Score.

Patients: Randomization of 60 consecutive patients was performed. After ethical committee approval, patients that were not able to perform informed consent were included. Of the 60 patients, 53 were female (88%), the mean age was 84.3 years. There was no significant difference in the study arms regarding sex, age and BMI.

Methods: Study design was prospective, blinding was not performed. Three surgeons performed the operations after at least 30 minimally invasive procedures had been performed. Implants used were the cemented ABGII stem (Stryker) with a standard bipolar head in all cases. For the DAA-approach, the MIS-toolset of Stryker was used. The four-item Barthel-index (focused on lower extremity function) was determined pre-trauma and assessed at day 1, 5, 16 and 40 after surgery. Assessment was performed by an independent physiotherapist.

Results: The procedure time was mean 64.8 min (min. 40, max. 94, SD 17.1) for the WJA and mean 73.6 min (min. 48, max. 90 min, SD 14.4) for the DAA group ($p=0.18$). The results of the Barthel-Index showed a higher score at day 5, 16 & 40 for the DAA approach ($p=0.009/p=0.05/p=0.013$). Evaluation of the postoperative pain showed a significant difference with a lower pain-score for the DAA at day 16 & 40. There was a tendency towards higher Hb values in the DAA group without reaching significance level.

Discussion: We could show in our study that the use of this approach positively influences the postoperative mobilization in a geriatric population. Due to the study size it is not possible to determine if this positively influences the long term social and functional outcome.

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Early results for treatment of unstable petrochanteric fractures in an elderly population with a new Proximal Femoral Locking Compression Plate

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Introduction: Comminuted and unstable inter or subtrochanteric fractures are usually fixed with a choice of sliding hip screws, fixed angle blade plates or intramedullary devices. None has proved ideal; each having weaknesses and limitations in use. The Proximal Femoral Locking Compression Plate (Synthes, Switzerland) has been marketed as a device that can be widely used to treat such complex fractures in osteoporotic bone. It is a fixed angle anatomically contoured stainless steel plate with the benefit of proximal and distal locking screws. To date there are no published results in the literature of UK experience with the proximal femoral locking compression plate in unstable inter and subtrochanteric fractures. We present the experience of the first 11 months of use of the system.

Methods: A retrospective study of all proximal femoral locking compression plates carried out at Royal Shrewsbury Hospital over an 11-month period. All cases were identified from theatre records and inpatient database. Pre-operative radiographs were reviewed to evaluate the fracture pattern. Age, gender, pre-operative mobility, length of hospital stay, anaesthetic time & transfusion requirements were recorded. Intra operative imaging was evaluated for the adequacy of fracture reduction and correct placement of metalwork. Complications, final walking ability and union were assessed clinically and radiographically at final follow up.

Results: 14 patients (9:5, female:male) with a mean age of 80 years (range 52–97 years) were treated with six AO 31-A2 and eight A3 fractures. A minimum of 6-month follow-up was achieved on 11 patients (range 6–11 months). Three cases died before fracture union, of the remaining cases all fractures had united on clinical and radiographical assessment by final follow-up. Four metalwork complications were detected; these consisted of backing out, bending or fracturing of the 7.3 mm proximal cannulated locking screws during the early postoperative period. No patient required a further operative intervention. Other complications included anaemia, stroke, urosepsis and venous thrombosis. Nine patients required post-operative blood transfusion (mean 2.8 units). The mean anaesthetic time was 103 min (range 60–180 min). Reductions in mobility were within expectations.

Discussion: The Synthes Proximal Femoral Locking Plate has been used with success in most cases, however there have been some significant early metalwork complications in four cases perhaps related to surgeon learning curve with a new system in osteoporotic bone. We recommend further long term studies and a randomised control trial to compare this fixation with other fixed angle, sliding hip screw and intramedullary devices for these types of fractures.

Keywords: Locked plating; Locking plate; Petrochanteric femur fractures; Proximal femoral fractures; Hip fractures; PFLCP; Internal fixation

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