



A retrospective study of unstable intertrochanteric femoral fractures: Comparing both Primary Hemiarthroplasty or PFNA

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Abstract

Unsteady intertrochanteric femur cracks (IFF) have generally been diminished and inside fixed with either a hip screw and a side plate or all the more as of late with the proximal femur nails. To check the confusions of delayed prostration, a few specialists pushed utilizing an essential hemiarthroplasty of the hip to treat such patients.

Aim: Present review is being done to introduce the information at our establishment to additional our comprehension of treatment of unsteady IFFs in the old.

Material & Methods: A review correlation concentrate on where information of 32 patients with unsteady IFF (AO type 31 A2 and A3), who fulfilled the incorporation and rejection rules and who went through either a PFNA obsession or an essential hemiarthroplasty of the hip from the time of June 2018 to Jan 2019 was gathered. Follow up was for at least a year. Benchmark information, perioperative information and post-employable information was gathered. Measurable investigation was finished by an analyst utilizing SPSS programming Ver 21.0.

Results: PFNA bunch showed altogether better Harris hip scores toward the finish of a year than the PHH bunch. Indeed, even the careful time, intra-employable dying, measure of blood bondings and length of stay was fundamentally less in PFNA bunch than PHH bunch.

Conclusions: Proximal femur obsession with PFNA gadget with its more modest entry point, lower blood misfortune, quicker working time and more limited clinic stay enjoys authoritative upper hands over an essential hemiarthroplasty hip.

Keywords: Unstable Intertrochanteric Femur Fractures, PFNA, Primary hemiarthroplasty Hip, Bipolar modular prosthesis, Proximal femur fixation

Received 08 Dec, 2021; Revised 21 Dec, 2021; Accepted 23 Dec, 2021 © The author(s) 2021.

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I. INTRODUCTION

Intertrochanteric femoral fractures are regularly found in older populace, being perhaps the most widely recognized fracture found in the crisis ward. Traditionally, intertrochanteric femoral fractures (IFF) have been treated with a unique hip screw and side plate get together [1]. As of late, this has been outperformed by the utilization of proximal femoral nail antirotation (PFNA) gadgets. Stable fixation with prompt post-employable activation of older patients is by and large prescribed to stay away from intricacies of immobilization. While the intramedullary fixation is the treatment of decision in stable IFF, the unstable IFF (e.g., the AO type 2 and type 3) presents a critical test to early weight bearing assembly [2]. A few specialists like to offer such patients a primary hemiarthroplasty of the hip either mind cemented bipolar prosthesis or an Austin Moore prosthesis [3]. A few examinations have archived that the solidified bipolar hemiarthroplasty of the hip showed preferable outcomes over those treated with a hip screw and plate gadget, name the DHS get together [4, 5]. Be that as it may, correlation studies between those unstable IFFs treated with an intramedullary gadget and those treated with primary hemiarthroplasty are not many and as such conclusive proposals are

deficient. Present review is being done to introduce the information at our foundation to additional our comprehension of treatment of unstable intertrochanteric femoral fractures.

II. MATERIALS AND METHODS

The review study was directed in a tertiary foundation by aggregating the information of 39 patients, who experienced an unstable IFF (AO type 31 A2 and AO type 31 A3) and were dealt with either with a PFNA gadget (n = 21) or an established hemiarthroplasty (n = 18) during the time span of Jun 2018 to Jan 2019. Consideration rules were precisely fit patients with ASA Grades II and III, age over 65 years with a background marked by tumble from standing tallness and determined to have unstable intertrochanteric femoral fractures (AO type 31 A2 and A3). Unstable examples included comminuted fractures, fractures with sidelong divider comminution, split more noteworthy trochanters, single or numerous posteromedial pieces, basicervical examples, and break examples of opposite obliquity. Patients with more established or attendant contralateral fractures, fractures related with polytrauma and neurotic fractures, as likewise carefully ill-suited patients were barred from the review. Patients who were lost to follow-up and the individuals who had nonunion in the PFNA bunch for reasons unknown were rejected from the review. All patients were followed for a base time of a year. The patients' standard information, perioperative information, and post-employable inconveniences were gotten and recovery convention was followed according to sort of treatment given. All patients were guided with regards to the system they were encouraged and assent was taken. AO grouping was utilized for determination. An aggregate of 32 patients (PFNA = 17 and Hemiarthroplasty = 15) were viewed as qualified and were broke down for the review.

Surgical method

Patients were worked by one of the three experienced specialists in our organization. Patients were given either broad sedation or spinal sedation. All patients were given intravenous anti-microbial Cefuroxime 1.5 g 30 minutes before medical procedure. Patients treated with PFNA were set on a crack table. Foothold was given and shut decrease was done under fluoroscopy control. The appendage was then adducted to around 10 degrees and kept in nonpartisan turn. A proximal cut was made only proximal to the more noteworthy trochanter in accordance with the longitudinal hub of the femur. An aide wire was embedded and the proximal femur was reamed. A fitting estimated PFNA was then passed intramedullary and the crack was fixed with a helical sharp edge, coming to around 5–10 mm from the subchondral bone. This sharp edge was generally situated in the lower half of the femoral neck in the AP view while it was focal or somewhat back in the sidelong view. The PFNA as distally locked with static and dynamic locking bolts. The size utilized was as per the preoperative templating in many occasions.

Patients who went through primary hemiarthroplasty were put in the parallel decubitus position. Openness was finished utilizing the anterolateral way to deal with the hip. The head and neck pieces were extracted. The more noteworthy and lesser trochanter sections alongside their connections were protected. The femur was ready with introduces. A suitable size femoral stem, in agreement to the preoperative templating over the contralateral ordinary hip, was embedded and solidified utilizing gentamycin concrete. All patients remembered for the review had an established modular bipolar prosthesis embedded. Anteversion of the stem was somewhere in the range of 10 and 15 and was determined utilizing the 0 lesser trochanter position or in instances of comminution of lesser trochanter, it depended on pre-employable templating and intra-usable preliminaries with various counterbalances. The more noteworthy trochanter section was decreased over the proximal piece of the femur stem and stitched with the proximal bone utilizing Ethibond™ stitches. The injury was shut in a normal way over a channel.

Post-operative and rehabilitation protocol

All patients were given three dosages of intravenous anti-toxins postoperatively. Low molecular weight Heparin, Dalteparin, was given subcutaneously to all patients for thromboprophylaxis. All patients were begun on motivating force spirometry and lower leg siphon practices from the day of medical procedure. PFNA patients were assembled non-weight holding on for a walker on the first post-usable day and accordingly to toe contact weight bearing from post-usable day 15. Full weight bearing for PFNA patients, was typically begun solely after positive indications of mending were seen on radiographs. Hemiarthroplasty patients were assembled full weight bearing from first postoperative day with the assistance of walker. Sitting and prostrate knee and hip scope of development practices were begun from post-employable day 1 for all patients. Channels were eliminated after 48 h and dressing was changed. Stitches were taken out on post-employable day 15.

III. RESULTS

Seventeen patients in the PFNA gathering and 15 patients in the Primary Hemiarthroplasty of the Hip (PHH) bunch were investigated in the review. Two patients in the PFNA bunch showed nonunion and two patients were lost to follow-up, while the PHH bunch had two patients who kicked the bucket over the span of the review and one patient was lost to follow-up. A correlation of standard attributes. There was no huge contrast in the two gatherings in the greater part of the gauge attributes. In any case, a huge contrast was noted in the time from injury to medical procedure which was 2.05 days for the PFNA bunch and 4.26 for PHH bunch. It was hazy to us why this distinction was critical however one theory is that the incorporation of seven patients in the PHH bunch, who were on twofold antiplatelets which needed to stand by at least 5 days prior to working may have made the distinction on schedule from injury medical procedure. Examination of results between the two gatherings in classified in Table 2. The PFNA bunch was found to have altogether lesser working time ($P < 0.00001$), intra-usable blood misfortune ($P < 0.00001$), and perioperative blood bondings ($P = 0.00536$) when contrasted with the PHH bunch. Our investigation discovered that the patients in the hemiarthroplasty bunch had fundamentally higher term of emergency clinic stay ($P < 0.00001$) and a lower post-employable hemoglobin esteem ($P = 0.00018$). Harris hip scores toward the finish of at least 1 year follow-up additionally showed altogether better outcomes with a PFNA fixation than that after a primary hemiarthroplasty ($P = 0.017$). Indeed, even the subgrouping showed more superb scores in the PFNA bunch when contrasted with the PHH bunch. 13 out of 17 patients from the PFNA bunch (76.4%) showed superb outcomes, while six out of 15 patients from the PHH bunch (40%) showed phenomenal outcomes toward the finish of 1 year.

IV. Discussion

Unstable intertrochanteric fractures in the old present a helpful quandary considering the complexities related with them. Sexson et al. showed that unstable intertrochanteric femoral fractures are related with altogether high pace of mortality [6]. A few examinations announced and suggested better outcomes with such patients being offered a primary hemiarthroplasty of the hip joint [7, 8]. The premise of such a proposal was the reality the inward fixation of the unstable IFFs was regularly connected with difficulties because of bone quality, embed disappointment, embed cut out, nonunion and malunion, and femur head hole [9]. Moreover, a primary hemiarthroplasty of the hip permitted the patient to activate quicker with the counteraction of the inconveniences of supineness. With the development of inserts utilized for fixation, a few investigations came out contrasting fixation and hemiarthroplasty following unstable IFFs. Our review results don't uphold the primary job of a primary hemiarthroplasty in instances of unstable IFFs. Faster assembly is considered as the primary motivation to choose a primary hemiarthroplasty. Nonetheless, it is conceivable that grimness related with the medical procedure in blend with the lower post-employable hemoglobin demonstrating bigger blood misfortune may be one reason why patients in our review in the PFNA bunch would in general move around nonweight bearing or halfway weight bearing as fast as those in the PHH bunch. In our review, there were more patients with astounding scores in the PFNA bunch (13 out of 17) when contrasted with the PHH bunch (six out of 15). This was practically identical to a review by Tang et al. [10], who announced no huge contrast between the two gatherings generally however tracked down a huge distinction in the pace of great to fine utilitarian outcomes (PFNA 90.2% and Hemiarthroplasty 79.6%).

V. CONCLUSION

Unstable intertrochanteric femoral fractures are better treated by inner fixation utilizing the PFNA. Primary job of hemiarthroplasty in such patients actually needs further review as they are related with higher paces of horribleness and mortality. PFNA, with its more modest cut necessities, lower blood misfortune, quicker working time, and more limited term of stay enjoys authoritative upper hands over a primary hemiarthroplasty hip.

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