Intertochanteric fractures type AO/OTA 31A2.2/A2.3 in geriatrics: Primary Total Hip Arthroplasty (THA) vs Internal Fixation (IF)

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INTRODUCTION: Primary Total Hip Artroplasty (THA) in geriatrics affected by unstable intertrochanteric fractures represents a viable option. The technique increases the complexity of the procedure but can optimize functional recovery compared to internal fixation (IF

METHODS:

The following retrospective study includes 200 patients, aged between 65 and 85 years, operated from June 2013 to June 2024, suffering from AO/OTA fractures type 31A2.2/A2.3, A3, divided into two groups: Group A includes 100 patients treated with IF; group B includes 100 patients undergoing to THA, using modular conical revision stems.Patients were evaluated by collecting: HHS (Harris Hip Score) at 3, 6, 12 months, SF-36 (Short form Health Survey 36), BI (Barthel Index), MMSE (Mini Mental State Examination) at 6 and 12 months. During hospitalization, the VAS (Visual Along Scale) was assessed 1 h, 24 h, 48 h, 1 week post-intervention. An average follow-up of 52.2 months was performed (min 12 months, max 120 months).

RESULTS: Scores about 10 year mortality (Group A = 76.4%, Group B = 71.4%), HHS, 10 year implant related complications (Group A = 33.3%, Group B = 25%) recoded no statistically significant difference between the groups. Results about Mortality 5 years (Group A = 64% Group B = 44.4%), complications related to the implant 5 years (Group A = 26.3%, Group B = 20%), recorded statistically significant differences between the groups. Results about Hospital days (group A = 10.2 +/- 3.4 days, group B = 14.4 days +/- 2.2 days), first workout time (Group A = 19.6, Group B = 11, 8), partial weight bearing average time (Group A = 5.2 days, Group B = 2.1 days), full weight bearing time (Group A = 10 +/- 2 weeks, Group B = 4 +/- 2 weeks), reported statistically significant differences between groups. Results about surgical times (Group A = 35 +/- 10min, Group B = 81 +/- 20 min), blood loss (Group A = 204 +/- 50 ml, Group B = 252 +/- 40.5 ml), recorded differences statistically significant between groups. VAS score at 1 week (Group A = 2.4, Group B = 1.4), SF36 (PCS-MCS), BI, MMSE at 6 and 12 months, recorded statistically significant differences, with higher scores in group B.

DISCUSSION AND CONCLUSION: Our case history, in line with the current literature, confirms that the prosthetic treatment allows for early mobilization compared to intramedullary nailing, which can affect the restoration of the patient's self-sufficiency and the prevention of the decline of cognitive functions, there is, furthermore, a higher mortality and reoperation rate in patients treated with intramedullary nailing at 5 years. The prosthetic treatment is technically more complex, involves surgical times and greater blood loss, despite this representing, according to the authors, a surgical choice to be followed in the fracture patterns mentioned above.