Introduction:
Total hip arthroplasty THA is one of the most common major surgical procedures associated with significant postoperative pain that can adversely affect patient recovery and could increase morbidity. Effective perioperative pain management allows an accelerated rehabilitation and improve the functional status of these patients. Multimodal analgesia MMA combines analgesics with different mechanism of action which by synergistic and additive effects enhance postoperative pain management and reduce complications. The aim of our study is to assess if perioperative association of very low dose of ketamine, a potent NMDA antagonist and dexamethasone, by antiemetic and antiinflammatory properties could decrease opioid consumption and postoperative morbidity of patients with THA.

Methods:
After informed consent, 58 patients scheduled for primary hip joint replacement surgery aged 55-91 yo ASA I-III were prospective randomized in two groups. Both groups were operated under general anesthesia fentanyl/sevoflurane. Supplementary, patients in group A received 12 mg iv dexamethasone and 8mg at 12 h and ketamine 10 mg iv bolus at induction and 10mg/h iv during surgery. Postoperative analgesia was done according to VAS, 0-30 mm paracetamol 1 g iv at 8 h, 30-60 mm ketoprofen 100 mg iv at 12h, VAS>60 mm morhine 0,1 mg/kgBW iv. We recorded perioperative opioid consumption, the number of intraoperative cardiac events, VAS score at the end of surgery and at 24 h, the incidence of PONV and persistance of chronic pain at 3 months.

Results:
We obtain a significant less pain score at the end of surgery p<0,05 in group A, no significant difference at 24 h, a significant less chronic pain at 3 months , a fewer NPVO and cardiovascular events in group A, p<0,05

Conclusion:
A multimodal approach with very low doses of ketamine and dexamethasone could be efficent in the treatment of pain for elderly patients with hip arthroplasty, decreasing postoperative side-effects and reducing chronic pain persistance.
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