**Introduction:**
Delirium is a serious and common complication and in some cases it treatment is difficult. Aim of the study was an evaluation of the prevalence, structure of delirium and efficacy of dexmedetomidine and haloperidol sedation in geriatric patients after femur fracture.

**Methods:**
After local ethic committee approval 207 case-records of geriatric patients with femur fracture in the period from 2017 to 2018 in the Institute of traumatology and orthopedics in Astana were analyzed. Patients was divided for 2 groups: in D – patients with delirium treated by i/v dexmedetomidine (0,2-1,4 mkg/kg per hour), in G group patients with delirium treated by i/v galoperidol (0,10-0,15 mkg/kg). Delirium was assessed by RASS at day of permission and every day at 8 a.m. The prevalence, structure of delirium and efficacy of sedation were analysed.

**Results:**
By anthropometric and gender characteristics of the group did not differ. The average age in the D-group with delirium was 81,8±0,9 years old, which was comparable to the G-group — 79,7±0,7 years old (p = 0.06). All study participants had similar comorbidities. Delirium in all patients debuted at 2,0±1,4 days, with an average duration of 2,2±1,2 days. The effect of dexmedetomidine was better and expressed in 52% decrease in the duration of delirium in compare to haloperidol (p <0.05). Dexmedetomidine provided a more controlled and safe sedation compared with haloperidol. The average consumption of narcotic analgesics in the subgroup with dexmedetomidine was two times less than in the subgroup with haloperidol. Thus, the average consumption of trimeperidine hydrochloride in patients of group D was 6.9 mg versus 14.1 mg in group G (p = 0.004).

**Conclusion:**
In gerontological patients with femur fracture treatment delirium by dexmedetomidine was more effective in compare with haloperidol. When using dexmedetomidine, the consumption of narcotic analgesics in postoperative period was 50% less than with haloperidol.