

## POSTOPERATIVE DEHYDRATION IN HIP-FRACTURE ELDERLY PATIENTS: RISK FACTORS AND CLINICAL CORRELATES

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**Background:** Postoperative dehydration is a prognostic factor for complications after hip fracture surgery

**Aims:** To assess the prevalence of postoperative dehydration (HD) in elderly patients with hip fracture, its associations with frailty, in-hospital complications, length of hospital stay (LOS) and mortality

**Methods:** 599 older ( $\geq 65$  years) patients with hip fracture undergoing surgery were included. Sociodemographic, surgical, functional and biochemical data, LOS and mortality were collected from the hospital records. Serum osmolarity was calculated by a validated formula as well as eGFR. Severity of frailty was scored according to the Multidimensional Prognostic Index (MPI). The primary study endpoint was mortality within 12-months from admission. As secondary endpoint, the association of postoperative HD with postoperative complications was documented.

**Results** The prevalence of postoperative HD was 16.5% without any difference between types of surgery. After stratifying the patients according to severity of frailty, a difference ( $p=0.003$ ) among MPI severity risk categories was found in HD prevalence.

Patients with postoperative HD showed a higher ( $p=0.002$ ) rate of pneumonia and exacerbation of heart failure ( $p=0.011$ ).

Hospital LOS was associated ( $p=0.001$ ) with postoperative HD but not with MPI, age and eGFR.

The cumulative mortality rate was 4.0, 8.1, 9.1, 13.3, and 20.0% at 30, 60, 90, 180, and 365 days.

In multivariable analyses, patients with postoperative HD showed an increased ( $p<0.05$ ) risk of death at 60- to 365-days.

**Conclusions:** Postoperative HD occurrence is higher in frailer patients and it is associated with in-hospital complications, LOS and medium- and long term mortality.