

Infusion therapy during knee and hip arthroplasty operations in patients with diabetes

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Conflict of interest: none

BACKGROUND. Hip and knee arthroplasty (HKA) are common surgical interventions that require balanced infusion therapy (IT), especially in patients with concomitant diabetes mellitus (DM).

OBJECTIVE. To determine the effectiveness of balanced IT in the perioperative period for HKA in patients with diabetes.

MATERIALS AND METHODS. A retrospective analysis of the inpatient charts of 50 patients who underwent HKA operations against the background of concomitant DM was performed. All patients were divided into two groups: 1) patients with hip arthroplasty; 2) patients with knee arthroplasty. The course of the perioperative period, the need for infusion support, and the development of complications were analyzed.

RESULTS. All patients were aged from 38 to 86 years, had increased weight (body mass index – 26.0-29.4 kg/m²). There were no differences in general and anthropometric indicators between patients of the groups ($p>0.05$). IT was performed in all 50 patients (100.0 %) and consisted of crystalloids and polyionic drugs based on polyatomic alcohols and organic anions. Clinical and anamnestic data, the course of the perioperative period and the development of complications were of the same type in patients regardless of the location of the intervention ($p>0.05$).

CONCLUSIONS. The IT program during HKA operations should include simple and balanced solutions of crystalloids and polyionic preparations based on polyatomic alcohols and organic anions. Colloidal solutions and blood preparations should not be included in the infusion program, except in cases of special indications. The use of such a program helps to reduce the number of perioperative complications and carbohydrate metabolism disorders.

KEY WORDS: hip joint replacement, knee joint replacement, infusion therapy, diabetes.