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### Caudal analgesia after ventral hernioplasty: technical difficulties and side effects

**Background.** Patients with ventral hernia after hernioplasty have a hard postoperative pain. Statistically strong and very strong pain had 17–26 % of operated. The most effective way to deal with the pain syndroms is to use epidural analgesia. Caudal anesthesia (CA) is a one of the types of epidural analgesia. CA has a significant advantage in use, such as simplicity and safety performance, reliable analgesic effect, no significant pharmacological burden on the patient, a minimal effect on hemodynamics and respiration of the patient. Single injection has a long effect. The purpose was to improve the quality of postoperative analgesia in patients after ventral hernia hernioplasty by using CA by solution of bupivacaine combined with morphine, and to identify complications and side effects of this method. **Materials and methods.** 40 patients were studied in the Kiev Regional Hospital (24 women and 16 men). The hernioplasty on the ventral hernia was routinely performed to all of the patients. Total anesthesia was carried out. A postoperative analgesia was performed by ketolong at a dose of 30 mg every 8 hours. Patients performed the spacecraft in the side by 0.125% bupivacaine combined with 4 mg of morphine in the volume of 60 ml (patent of Ukraine № 51615). Clinical parameters of patients: age —  $43,0 \pm 3,8$  years, body weight —  $81,5 \pm 4,6$  kg, body mass index —  $26,8 \pm 3,1$  kg/m<sup>2</sup>. All patients monitored blood pressure (BP) — systolic and diastolic, respiration rate (RR), saturation (SpO<sub>2</sub>). Measurements were conducted by the field of functional monitor UTAS. The assessment was performed: after 1, 3, 8, 24 and 48 hours after surgery. **Results.** According to our experience of caudal blockade among technical difficulties we all faced with subcutaneous injection of anesthetic solution. This problem arose in 7.5 % of patients (3 cases). However, after repeated puncture of caudal space, despite some displacement of anatomical landmarks, re injection was successful in 66%. According to the literature, the most frequent complications is vascular puncture of caudal space. However, the performance of our research we have faced with 2,5 % of this kind complication. This complication should pay particular attention to internal-ly vascular infusion of local anesthetic. In re 100 % CA was successful and no other further complications. With the inability of the injection we faced in 5 % (2 patients). In 2,5 % (1 case) was due to the fact that a transferred purulent infection in the patient's coccyx was not possible to reach the caudal space. A 2,5 % (1 case) was not able to differentiate anatomical landmarks due to ob-

city IV degree. In our research we have not experienced respiratory depression. At all stages of the study was not observed significant decrease of respiratory frequency and saturation. Nausea and vomiting after the injection was observed in 7 patients (17,5 %). It should be noted, that it was conducted in patients with early postoperative period. We can not separate it from postnarcosis effects. Itchy skin was observed in 10 % (4 cases) and subjectively was moderate and did not cause complaints by the patients. Itching disappeared own without medication correction by  $6,4 \pm 1,9$  hours. Delay urinating in our study we observed in 7.5 % of patients (3 cases). This side effect disappeared without medication correction by  $5,7 \pm 1,1$  hours. **Conclusions.** So once carried cargo for postoperative analgesia has the following significant advantages: simplicity and safety performance, reliable and long lasting analgesic effect, no significant pharmacological stress patients and a small number of technical difficulties.

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### Water and electrolytes disbalance in patients with acute stroke and concomitant diabetes

**Background.** Water-electrolyte disturbances that occur in patients with acute stroke (AS) is one of the reasons complications of AS [1]. Concomitant diabetes mellitus (DM) affects the stroke severity and increased mortality rates. The purpose was to investigate the frequency of electrolyte disorders in patients with AS against a background of concomitant diabetes. **Materials and methods.** A analysis of 416 patients with the treatment of AS was conducted. All patients were divided into three groups: 1) patients with established diabetes before the stroke, 2) patients with newly diagnosed diabetes and 3) patients without diabetes. The second phase was conducted a pilot study with an analysis of the frequency of magnesium and phosphate metabolic