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POSTOPERATIVE SEDATION AND ANALGESIA IN PEDIATRIC CARDIAC SURGERY

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Introduction. As is known, postoperative analgesia is the main part of intensive care in pediatric cardiac surgery. In recent years, many scientists and practitioners have paid attention to safe methods of anesthesia and sedation after surgical interventions, while non-opioid analgesics and anxiolytics play an important role.

Purpose of the study. To evaluate the efficacy and safety of the use of neo-ioids for pain relief and prevention of postoperative delirium in children after cardiac surgery.

Materials and methods. The study included 30 children aged 2 to 4 years with a diagnosis of ventricular septal defect, atrial septal defect, tetralogy of Fallot, operated on for radical correction of congenital heart defects under cardiopulmonary bypass. Patients received postoperative analgesia with paracetamol injectable form (15 mg/kg). Postoperative observation and therapy were carried out in the intensive care unit with the continuation of mechanical ventilation and constant monitoring of vital signs of the body. Before extubation, all patients received dexmedetomidine, a highly selective α_2-adrenergic agonist with a powerful sedative effect (1.0 μg/kg). Pain relief with non-opioid analgesics was carried out in the early postoperative period and every 8 hours for 3 days. Accordingly, patients were examined in 4 stages. Stage 1, early postoperative period (before extubation), Stage 2 8 hours after surgery, Stage 3 one day after surgery, Stage 4 before transferring the child from the intensive care unit. The children were identical in anthropometric and age parameters. All patients underwent standard endotracheal anesthesia (propofol + fentanyl + arduan + sevoflurane for low gas flow, MAC = 1). Conducted a study of systemic hemodynamics, the level of cortisol and glucose in the blood, assessed the intensity of pain on a visual analogue scale at the main stages.

Results. The use of an injectable form of paracetamol in combination with dexmedetomidine showed its high efficiency in the postoperative period, without causing any special complications from organs and systems. However, the small range of examined patients does not give us a conclusion about the uniqueness of this combination, which requires further thorough

and extensive research. The terms of treatment of children in the ICU were different. For example: in children with an uncomplicated form of congenital heart defects 1–2 days, in children with VSD (11 children) complicated by pulmonary hypertension, postoperative blockade using a pacemaker (9 children), this period ranged from 4 to 8 days, depending on the child's condition.

Conclusions. This method can significantly reduce the use of narcotic drugs, early recovery of the child's body and prevent the development of postoperative delirium.

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PROSPECTS FOR MINIMALLY INVASIVE CORONARY BYPASS SURGERY

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Aim. Comparative assessment of long-term results of the harvesting of the internal mammary arteries by endoscopic method and under visual control.

Methods. Us were retrospectively analyzed 364 patients, who underwent minimally invasive coronary artery bypass grafting — MIDCAB (n = 328), MICS CABG (n = 36) February 2014 to July 2021. Depending on the method harvesting internal mammary artery (IMA) patients were divided into groups: harvesting under direct vision, through a left minithoracotomy (n = 130) and group endoscopic harvesting (n = 234). The primary end-point was major adverse cerebrocardiovascular events (MACCE) and secondary was graft thrombosis at 1 year. The groups of patients were comparable for all baseline demographic, clinical and angiographic parameters.

Results. Minimally invasive coronary artery bypass grafting was performed in all patients. No there was to conversion to sternotomy or to on-pump procedure. There was one in-hospital mortality in the under direct vision group, which was due to graft dysfunction in the early postoperative