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PREVENTION OF EMERGENCE AGITATION AFTER SEVOFLURAN ANESTHESIA FOR PEDIATRIC CARDIAC ENDOVASCULAR OPERATIONS BY PROPHYLACTIC DOSE OF PROPOFOL

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Relevance. Sevoflurane is a preferred anesthetic agent for induction and maintenance of pediatric anesthesia because of its rapid induction and recovery characteristics, lack of pungency and agreeable odor, and acceptable cardiovascular profile. Agitation often occurs during sevoflurane anesthesia in pediatric patients, which can lead to complications in the postoperative period, including hypertension, hyperglycemia, neurological impairment, risk of postoperative bleeding, and injury. Propofol can be administered as prophylaxis during the final stages of anesthesia.

Aim: to determine whether the administration of Propofol 1 mg/kg at the end of surgery iv reduces the incidence of postoperative agitation.

Materials and methods. After institutional review board approval, informed consent was obtained for 30 ASA II or III patients aged 3 to 10 years scheduled to undergo endovascular cardiac surgery (ECS) at the Republican Scientific and Practical Center for Pediatric Surgery, Minsk from January till December 2025. Induction: N_2O/O_2 = 60/40 + Sevofluran 6 Vol% + Propofol 1 mg/kg IV jet stream. RASS VI - patient asleep, unresponsive to external stimuli. Maintenance: O2/Air = 1:1 + Sevofluran 1.7 Vol% till RASS-V - patient asleep (moderately), responsive to pain stimuli. 3 minutes before the end of the study - Sevofluran is switched off RASS-IV - patient dozing, responsive to touch. Apnea during anesthesia induction was only in 0.3% - required assisted ventilation for 1 minute. Awakening within 10-15 minutes. After recovery from Combined General Anesthesia with Propofol, patient assessment has been provided on Watcha Scale Levels (WSL). The scale classifies the child's arousal state during the emergence from anesthesia: 1 and 2 grades are referred to calm and mild agitation while 3 and 4 are moderate and severe agitation.

Results and their discussion. In the result of comparison postanesthesia's agitation frequency between experimental and control group, the incidence of emergence agitation (3,4 grade on WSL) was significantly higher in control group than in experimental one (58% and 29% respectively) ($p = 0.01$) without prolongation of recovery period.

Conclusions. Using of propofol administration of Propofol 1 mg/kg at the end of surgery significantly decrease the incidence of postoperative agitation after Combine Sevoflurane Anesthesia without prolongation of recovery period.