THE CRITICAL INCIDENTS DURING MAJOR ABDOMINAL SURGERY IN ELDERLY AND OLDER PATIENTS: ROLE PREOPERATIVE LEVEL OF WAKEFULNESS

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Background and Goal of Study: To determine frequency of critical incidents depending on initial level of wakefulness and patient age.

Materials and Methods:

Retrospective study of 368 patients after elective abdominal surgery for colon tumors were performed. The physical condition of patients corresponded to 3 class of ASA. Patients were divided into two groups:

1-elderly (n=224),

2- older patients (n=144).

Each group was divided into 3 subgroups, depending on level of wakefulness, estimated by the direct current potential level: low, average and high levels of wakefulness. The measurement was conducted in a continuous recording for 10 minutes from the active electrode located in the middle of the forehead, and the reference electrode - in the tenor region. Relations of age and level of wakefulness with a frequency of critical incidents were studied. Critical incidents included cardiovascular-related: hypotension, hypertension, bradycardia, arrhythmia and tachycardia; respiratory incidents: hypoxemia, hypercapnia, the need for prolonged postoperative mechanical ventilation; metabolic incidents: hypothermia, slow recovery of neuromuscular conduction, slow postoperative awakening.

Results and Discussion:

The most frequent critical incidents in our study were cardiovascular-related incidents (38%), mainly hypotension (18,2%) and hypertension (9%). Among of the respiratory incidents (32%) the most frequently hypoxia (21%) and hypercapnia (8%) were observed. In the group of elderly patients the most incidents occurred in the subgroup with low level of wakefulness (68% of all), with cardiovascular-related - 49%; respiratory - 34%. The lowest rate of critical incidents was at average level of wakefulness (22%), with cardiovascular-related - 14%, respiratory - 8%. While in the group of oldest patients statistically significant differences between the groups were not observed.

Conclusion(s):

Critical incident rate does not only depends on age but also on the preoperative level of wakefulness. And the highest rate of critical incidents was observed at the low level of wakefulness, and the lowest - at average level of wakefulness.