

Summary

Objectives:

1. To provide a comprehensive review of current state of art of hypotension after introduction to general anesthesia (GAIH)
2. Describe the epidemiology of GAIH
3. Critically evaluate the obtained information and compare them with literature

Methods: Systematic literature review. Epidemiological data were obtained from a multicenter prospective cross-sectional observational study. Patients from five Czech Anesthesiology Departments of various sizes were included.

Results: 661 patients were included in the study. Our results indicate a high incidence of GAIH (36.5%) from hypnotics to 10 minutes after ETI. In some patients (2.9 %) hypotension occurred in the entire observed interval. The highest incidence of GAIH was observed at 5 and 10 minutes after ETI. The risk of GAIH increases with age, the degree of decompensation of hypertension and the presence of type II diabetes mellitus. We have shown that the risk of GAIH increases with increasing dose of propofol.

Conclusion:

1. The occurrence of hypotension affects the recovery of a patient undergoing surgery under general anesthesia (GA). An effect on perioperative mortality and morbidity has been demonstrated. The risk of organ damage increases with the severity and duration of hypotension.
2. GAIH is a common problem. Our work demonstrated the occurrence of GAIH in 36.5% of patients undergoing scheduled surgery in GA experienced GAIH. The risk is increases with age, the presence of type 2 diabetes mellitus and the level of chronic hypertension decompensation.
3. Currently, there is only a limited number of studies focused on hypotension after the introduction of GA. The results of studies focused on IOH can be extrapolated to GAIH to a very limited extent. In the absence of these data, the key questions are: "What is the safe value of BP reduction" and "When and how to intervene therapeutically" These questions remain unanswered. Optimization of BP values represents one of the few potentially modifiable risk factors in the perioperative period. Consistent prevention (hydratation, optimization of chronic medication and efforts to maximize compensation for chronic diseases) and treatment

of GAIH can significantly reduce the risk of serious complications such as stroke, myocardial infarction, acute kidney injury. Further research in this area is needed.