

The Incidence and Risk Factors of Perioperative Complications Related to Anesthesia in Geriatric Patients

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Background and objective: Number and complexity of elderly patients presenting for anesthesia is increasing. The aims of this study are to identify the incidence and risk factors of perioperative complication in geriatric patients (age ≥ 65 years) who underwent anesthesia in order to improve the quality of anesthesia service.

Methods: Retrospective descriptive study was conducted between January 1, 2010 and December 31, 2011 in Srinagarind hospital. Medical charts and anesthetic records were reviewed. Univariate factors related to perioperative complications were analyzed. Multivariable Logistic Regression for risk ratio was used to investigate independent factors with significant association to perioperative complications. A forward stepwise algorithm was chosen. A p-value < 0.05 was considered as statistically significant.

Results: 4,595 anesthetic records were reviewed. 3,621 geriatric patients underwent surgery receiving anesthesia. Incident reports were 395 (860:10,000). The inci-

dences, after excluded minor complications, were cardiac arrest (19.3%), arrhythmia needed treatment (12.8%) and dental injury (9.2%). Patient's conditions were the most common etiologic factors of perioperative events in severe case. Common period when incidences occurred was 2-24 hours postoperative (58.5%). The most common contributing factor was inexperience, lack of vigilance and emergency condition. Minimizing factors were vigilance, comply with guidelines and having experience.

Conclusions: Overall incidences were higher than previous studies. Risk factors were female gender, ASA 3-5, underlying myocardial ischemia, thrombocytopenia, sulfa-drug allergy, taking antihypertensive drug, perineal-anal operation, combined general anesthesia with regional anesthesia including turning failed regional anesthesia to general anesthesia, operative time > 2 hours, as well as, orthopedic and plastic surgery.

Key words: Geriatric, perioperative complication; incident and risk factors