Effects of Perioperative Predictors on Clinical Outcome in Early and Late ICU Discharge After Coronary Artery Bypass Surgery

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OBJECTIVE: In coronary artery bypass surgery patients length of stay (LOS) in intensive care unit (ICU) has an important role in complication rates and costs. For that reason the discharging of the patients from the hospital in shorter period can be provided by taking measures prior to surgical intervention via previously known factors which may affect hospitalization stay. The aim of this study was to determine the role of perioperative risk factors in clinical outcome based on the time of ICU discharge.

METHODS: In this retrospective study of 196 patients undergoing coronary artery bypass graft (CABG) surgery in our clinic, were divided into early (<=2 day) and late (>2 day) ICU discharge groups according to the duration of ICU stay. The preoperative, intraoperative and postoperative risk factors, the complications and the outcome were evaluated.

RESULTS: Age, sex, hyperlipidemia, diabetes mellitus, previous myocardial infarction, renal failure, cerebrovascular accident, hypertension, level of hematocrit and creatinine were not significantly different between the two groups. Patients with hemodynamic instability, respiratory dysfunction, ejection fraction <35%, inotrope administration, left main coronary artery disease, use of intraaortic balloon pump and arrhythmia had significantly higher mortality and longer ICU stay (> 2 day) compared to other group (p < 0.05). The shorter duration of intubation time was the most significant factor affecting early discharge according to late discharge group (7.8 ± 3.8 vs 17 ± 9.9 hours, p < 0.001).

CONCLUSIONS: Time of ICU discharge depends on especially respiratory dysfunction and duration of intubation. Therefore, we assume that preoperative modification of respiratory risk factors may improve clinical outcome on ICU.

Keywords: Coronary Artery Bypass Surgery, ICU, Perioperative Predictors

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