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学位論文の題名	Early enteral nutrition is acceptable in cyanotic patients with systemic-pulmonary shunt after cardiovascular surgery 体肺シャントのあるチアノーゼ患者において、心臓血管外科術後早期の経腸栄養は許容できる J Reg Anesth Intensive Care 2017;1:1-4
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Abstract

ABSTRACT

There are few data with early EN in pediatric patients after cardiovascular surgery, and cases with systemic-pulmonary shunt has been reported to be more likely to develop necrotic enterocolitis (NEC). The objective of this study is to examine whether cyanotic patients, particularly with systemic-pulmonary shunt have more risks to gastrointestinal complications than acyanotic patients by early enteral nutrition (EN) after cardiovascular surgery. Retrospective, observational study was conducted in pediatric intensive care unit (PICU) in university hospital during the period of January 2010 to December 2012. 111 infants with congenital heart disease who stayed at PICU for more than 4 days after cardiovascular surgery were divided into two groups: cyanotic and acyanotic groups (n=55 vs. n=56, cyanotic group includes 21 cases with systemic-pulmonary shunt). The timing of first feeding after surgery, infectious complications and gastrointestinal complications were investigated. First feeding was divided into three categories: 1) within 24 hours, 2) 24 to 48 hours, and 3) more than 48 hours respectively after surgery. As for the timing of the first feeding, there were no significant differences between cyanotic and acyanotic groups (1): 20 cases vs.15 cases, 2): 21 cases vs. 25 cases, 3): 11 cases vs. 15 cases, $P=0.45$). As to infectious and gastrointestinal complications, there were no significant differences between two

groups. On the other hand, one case of suspected necrotic enterocolitis as a gastrointestinal complication was seen in cyanotic group. The case was hypoplastic left heart syndrome after pulmonary artery banding with prostaglandin E₁, not a case with systemic-pulmonary shunt.

In this study, patients were well tolerated to early EN even in cyanotic patients with systemic-pulmonary shunt. Early EN would be beneficial for cyanotic patients after cardiovascular surgery if adequately performed, but close attention might be paid for these patients whose systemic circulation is maintained with patent ductus arteriosus pre and postoperatively.