Nursing management of Necrotizing enterocolitis in hypoplastic left heart syndrome after Hybrid Procedure

"Di Iorio F", Pirti C, Agati S, Iorio F.S.
Mediterranean Pediatric Cardiologic Center, Bambino Gesù Children's Hospital. Taormina (Italy)

Introduction. Hypoplastic left heart syndrome (HLHS), accounts for 2–3% of all congenital heart defects and is a fatal congenital heart defect if untreated. Early diagnosis and treatment of these neonates is priorital to achieving an optimal outcome. Diagnosis, stabilization, medical treatment, surgical repair and recovery are required within the first few days of life. Nursing care of the neonate with CHD begins with the nurse in the labor and delivery room and continues with the nurse in the neonatal intensive care unit. Necrotizing enterocolitis (NEC) is the most serious and frequently acquired gastrointestinal disorder in neonates. According to available literature the incidence of NEC, is higher in patient with HLHS than general population. It is due to the presence of low flow at splanchnic level. The proposed mechanism for the development of NEC in case of HLHS is the combination of a widened pulse pressure and low diastolic pressure as demonstrated by retrograde diastolic flow in the descending aorta, which may contribute to mesenteric ischemia. We report our experience about nurse praticitioner in HLHS patients after early hybrid approach and early enteral feeding introduction.

Methods. From October 2011 to November 2014, 43 consecutive neonates underwent single stage hybrid procedure for palliation of HLHS and variants at our Institution. Median age and weight at time of procedure was respectively 1 day and 3 Kg. Hybrid procedure was performed during prostaglandines infusion and consisted in bilateral pulmonary artery banding, stenting of ductus arteriosus. All patients survived to the procedure but two neonates died respectively at 9 and 15 days of life for myocardial ischemia. Median ICU and hospital stay was respectively 7 and 16 days. All patients were fed according to our dedicated feeding protocol that is based on initial enteral nutrition with low volume oral feedings. After starting feeding nurse provided to the surveillance of each patients according to Bell’s criteria.

Results: no episodes of NEC occurred in our population.

Conclusions: Our experience indicates that combination of early hybrid approach, dedicated feeding protocol adherence and dedicated nurse surveillance could reduce the incidence of gastrointestinal complication in this group of neonates