Massive Myocardial Ischemia after Blalock-Taussig Shunt

Isquemia miocárdica masiva tras fístula de Blalock-Taussig

ARIADNA AYERZA CASAS, MARTA LÓPEZ RAMÓN, LORENZO JIMÉNEZ MONTAÑÉS

Children affected by pulmonary atresia with intact ventricular septum (PAIS) may have coronary artery anomalies (dysplasia or atresia) even in the absence of coronary sinusoids. The existence of these anomalies may lead to myocardial ischemia and infarction. We describe the case of a newborn affected with PAIS who died as a result of massive myocardial ischemia after undergoing Blalock-Taussig shunt. The ECG tracing in these patients after surgery is typical of blood steal due to the shunt and the ductus arteriosus.

The images correspond to a full-term male infant with prenatal diagnosis of pulmonary atresia with intact septum, hypoplasia of the pulmonary trunk and pulmonary branches and right ventricular hypoplasia. Once postnatal diagnosis was confirmed (Figure 1), perfusion with prostaglandins was initiated, and the Rashkind procedure was performed to enlarge the fossa ovalis. The patient presented a tortuous patent ductus arteriosus, making it difficult to insert the stent, so a Blalock-Taussig shunt was performed at 15 days of age. The patient had a torpid postoperative evolution with severe bradycardia and ventricular dysfunction, unresponsive to inotropic agents or pacemaker. The ECG targeted massive myocardial ischemia (Figure 2), resulting in exitus a few hours later.

Although the univentricular approach as an option for PAIS repair with unfavorable anatomy, as would be our case, often has a relatively good prognosis in the neonatal period, the association of coronary hypoperfusion secondary to diastolic aortic steal of the Blalock-Taussig shunt and the vascular anomalies these patients may have, can result in myocardial ischemia, worsening the prognosis.



Fig. 1. See description in the text.



Fig. 2. See description in the text.

Conflicts of interest

None declared (See authors' conflicts of interest forms on the website/ Supplementary Material).

Rev Argent Cardiol 2017;85:366. http://dx.doi.org/10.7775/rac.v85.i4.9431

Address for reprints: Ariadna Ayerza Casas - Hospital Universitario Miguel Servet - Servicio de Pediatría. Sección de Cardiología Pediátrica - Paseo Isabel la Católica, 1-3; 50009 - Zaragoza (España) - Tel. 00 976 76 55 00 - e-mail: aayerzac@hotmail.com

Pediatric Cardiology Section, Hospital Infantil Universitario Miguel Servet. Zaragoza, Spain