Vascular ring and coarctation of the aorta associated with oesophageal atresia

Bertrand Stos a,*, Ghazal Adler b, Emmanuel Lebreta a, Jean-François Paul b

a Paediatric Cardiac Surgery Unit, Centre Chirurgical Marie Lannelongue, 133 avenue de la résistance, 92350 Le Plessis Robinson, France
b Radiology Unit, Centre Chirurgical Marie Lannelongue, 133 avenue de la résistance, 92350 Le Plessis Robinson, France

Received 15 April 2008; received in revised form 16 July 2008; accepted 23 July 2008; Available online 26 September 2008

Keywords: Congenital heart; Coarctation; Aorta; Tracheo-oesophageal fistula; Vascular ring

We report the case of a newborn with congenital heart disease and oesophageal atresia related to a CHARGE association. Cardiac computed tomography with 3D reconstructions helped us to precise the diagnosis (Figs. 1 and 2). Abstention was decided and baby died rapidly on his third day of life.

Fig. 1. Upper left oblique view using a volume rendering technique from heart and great vessels. Ascending aorta (AA) is medial and gives rise first to left carotid artery (LCA), then to right carotid artery (RCA) and right subclavian artery (RSCA), left subclavian artery (LSCA) arising from the upper part of the descending aorta. The aortic arch is right sided (RAA) and its distal portion is very hypoplastic (*). Most of the left sided descending aorta’s (DA) blood flow comes through a large persistent ductus arteriosus (PDA). LPA: left pulmonary artery; PAT: pulmonary arterial trunk; RPA: right pulmonary artery.

Fig. 2. Posterior view: AA, RAA, PDA and LSCA describe a vascular ring, encircling trachea (T) and oesophagus (Oe). Upper part of the oesophagus is interrupted (white arrow). The lower part of oesophagus communicates with trachea by a fistula (F). AV: azygos vein.