A 7-day-old boy with D-transposition of the great arteries and ventricular septal defect underwent CT for evaluation of aortic arch and airway anatomy because of angiogram suggestive of vascular ring. CT showed double aortic arch with dominant left arch (Figs. 1 and 2).

Fig. 1. Volume-rendered image from CT (Somatom Sensation 16; Siemens Medical Solutions, Forchheim, Germany) demonstrates double aortic arch with dominant left arch. The aorta originates from the right ventricle. Only six cases of double aortic arch associated with D-transposition of the great arteries have been previously reported. RV: right ventricle, AA: ascending aorta, LSA: left subclavian artery, LCCA: left common carotid artery, RSA: right subclavian artery, RCCA: right common carotid artery.

Fig. 2. Composite volume-rendered image clearly depicts the relationship between cardiovascular structures and the airways. The patient underwent arterial switch operation and ventricular septal defect repair. Vascular ring was non-tight with anatomy similar to the left aortic arch with aberrant right subclavian artery; the ligamentum arteriosum was left-sided. The symptoms of tracheoesophageal constriction were absent. For these reasons, decision not to divide the right aortic arch was made. Abbreviations as in Fig. 1.