Right corkscrew cervical aortic arch

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Received 20 December 2011; received in revised form 28 March 2012; accepted 1 April 2012

Keywords: Aortic arch • Cardiac anatomy/pathologic anatomy • Cerebral circulation • Computed tomography • Magnetic resonance imaging

In a 1-year-old male patient with arterial tortuosity syndrome, CT-scans (Fig. 1) showed the ascending aorta slightly dilated, with a hypoplastic and tortuous right cervical aortic arch distal to the first trunk and without continuity to the second and third supra-aortic vessels, which were communicated with the vertebrobasilar system as shown in an MRI (Fig. 2).

Figure 1: CT image shows the thoracic aorta and supra-aortic trunks seen from anterior (a) and left (b) point of view. The CT measurements are 16 mm for the ascending aorta and 5 mm for the aortic arch and descending thoracic aorta. AA: ascending aorta; AoA: aortic arch; IA: innominate artery; LSA: left subclavian artery; LV A: left vertebral artery; RSA: right subclavian artery.

Figure 2: MRI shows very tortuous great vessels, right aortic cervical arch, with right carotid and subclavian right arising from the innominate artery. The left carotid artery is very hypoplastic and arises from a common trunk with ipsilateral subclavian. Both are nourished by collateral circulation. In the cerebral circulation, the left middle cerebral artery is fed through the left posterior communicating in the Willis polygon. AA: ascending aorta; AoA: aortic arch; IA: innominate artery; LSA: left subclavian artery; LV A: left vertebral artery; WP: Willis polygon.