

A case report of vascular ring and bronchial compression by posterior displaced aorta

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A one month old female baby was referred to our OPD due to abnormal prenatal echo study. She was born to a healthy young woman (G2P2, GA=38+5 weeks, BBW=3130g, delivered via NSD). After birth smooth breathing pattern, normal feeding and good body weight gain were noted. There was even no heart murmur when she first visited our OPD. The echocardiography was arranged and showed stenosis of LPA orifice with mild PPS of LPA (PG=33 mmHg). The double aortic arch or vascular ring were suspected at first. MDCT was arranged and showed left main bronchus compression by right main pulmonary artery and descending aorta. The vascular ring was highly suspected. The cardiac cath showed counter-clockwise rotation of heart and great vessels. The vascular ring should be between rotated MPA-LPA, AAO and ductus ligamentum). MRI study showed a tubular structure between the distal aortic arch (just distal to left subclavian artery) and right pulmonary artery.

After completing all the study, the open heart surgery was arranged and showed LPA stenosis at PDA insertion site, narrowed aortic angle and which resulting compression of left bronchus by RPA below aortic arch. (Such as a "aortic arch nutcracker").

The post operation course was smooth and the patient was discharged two weeks after surgery.