

Aortic Dilatation at Different Levels of the Ascending Aorta in Patients with Bicuspid Aortic Valve

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Abstract

Introduction: Bicuspid aortic valve (BAV) is the most common form of adult congenital heart disease. When compared to patients with a normal trileaflet aortic valve, dilatation of the aortic root and the ascending aorta (Asc Ao) are the common findings in patients with BAV, with consequent higher risk of developing aortic aneurysm, aortic dissection and rupture. We aim to determine the site of the Asc Ao where maximum dilatation occurs in Asian adult patients with BAV. **Materials and Methods:** All subjects underwent full echocardiography examination. The diameter of the Asc Ao was measured at 3 cm, 4 cm, 5 cm, 6 cm and 7 cm from the level of aortic annulus to the Asc Ao in 2D from the parasternal long-axis view. **Results:** A total of 80 patients (male/female: 45/35; mean age: 45.3 ± 16.2 years) with congenital BAV and 30 normal control group (male/female: 16/14; mean age: 45.9 ± 15.1 years) were enrolled. The indexed diameters of the Asc Ao were significantly larger than the control group. In patients with BAV, maximum dilatation of Asc Ao occurred around 6 cm distal to the aortic annulus. **Conclusion:** In patients with BAV, dilatation of Asc Ao is maximal at the mid Asc Ao region around 6 cm distal to the aorta annulus.

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