

ECHOCARDIOGRAPHIC ASSESSMENT OF MORPHOLOGY AND BLOOD FLOW PATTERNS IN CONGENITAL BICUSPID AORTIC VALVE IN CHILDREN

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In this study the morphology and blood flow patterns in congenital bicuspid aortic valve (BAV) in children were investigated.

Subjects and methods: This paper reports a survey on complete segmental echocardiographic analysis of heart and great blood vessels in 145 pediatric congenital BAV patients, mean age 9.02 +/- 4.11 years. The morphology and blood flow patterns of systolic left ventricular outflow tract, especially aortic valve, were assessed with two dimensional echocardiography and pulse continual color Doppler. All the examinations were carried out using Toshiba SSH 160A with 5MHz, 3.7 MHz and 2.5 MHz transducer, as a standard procedure.

Results: The leaflets had an anterior-posterior orientation in 87 (60%) patients and right and left orientation in 58 (40%). Aortic valve stenosis was found in 94 (64.83%) patients, fused leaflet or raphe were found in 82 (56.55%), insufficient valves in 63 (43.45%), diastolic prolapse in 55 (37.93%) and valvular "doming" was noted in 22 (15.7%) patients.

Conclusion: Congenital bicuspid aortic valve is often functionally inadequate and can be easily subjected to various complications; therefore it is necessary to establish an early diagnosis, an evaluation of morphological features and blood flow patterns in order to follow its evolution, prophylaxis and prediction of possible complications.