

# Adults with aortic valve disorder do not experience reduction in survival rate

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Young adults with a bicuspid aortic valve, a congenital heart abnormality, experience subsequent cardiac events but do not appear to have lower survival rates compared to the general population, according to a study in the September 17 issue of *JAMA*.

A bicuspid aortic valve in the heart is a valve that has only two flaps (cusps) that open and close, instead of three, and is the most common congenital cardiac abnormality in the adult population. Prior studies have reported significant death and illness in patients with bicuspid aortic valve related to the development of aortic valve dysfunction and inflammation of the heart valves, according to background information in the article. Cardiac outcomes in a contemporary population of adults with bicuspid aortic valve have not been determined.

Nikolaos Tzemos, M.D., of the University of Toronto, and Samuel C. Siu, M.D., S.M., of the University of Western Ontario, Canada, and colleagues examined the cardiac outcomes and disease progression in 642 adults, average age 35 years, with bicuspid aortic valve who were followed up for an average period of 9 years.

One or more primary cardiac events (cardiac death, intervention on the aortic valve or ascending aorta [first section of the aorta], aortic tearing or aneurysm, or congestive heart failure requiring hospital admission) occurred in 161 patients (25 percent), which included intervention on aortic valve or ascending aorta in 142 patients (22 percent), aortic tearing or aneurysm in 11 patients (2 percent), or congestive heart failure

requiring hospital admission in 16 patients (2 percent).

Independent predictors of primary cardiac events were age older than 30 years, moderate or severe aortic narrowing, and moderate or severe aortic regurgitation (flowing of blood back into the heart).

There was a total of 28 deaths (4 percent), of which 17 were cardiac-related (3 percent) and 11 were not related to a cardiac cause. The cardiac death rate was 0.3 percent per patient-year of follow-up. When compared with age- and sex-matched population estimates, the overall mortality was not significantly different between the bicuspid aortic valve group and in the population estimates. The 5-year average survival was 97 percent in both the bicuspid aortic valve group and in the population estimates. The 10-year survival was similar in both the bicuspid aortic valve group (96 percent) and in the population estimates (97 percent).

"Outcome differences between present and prior studies can be attributed to differences in the era that patients were examined, the population that was examined, the frequency of cardiac events associated with high mortality (aortic [tearing] and endocarditis [inflammation of the endocardium and heart valves]), and advances in perioperative management," the authors write.

Source: JAMA and Archives Journals

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