

# People with common heart defect also more likely to have brain aneurysms

May 3 2010

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A new study shows that people with a common heart defect may also be more likely to have brain aneurysms. The study is published in the May 4, 2010, print issue of *Neurology*, the medical journal of the American Academy of Neurology.

Up to two percent of the population is born with the heart defect called a bicuspid aortic valve (BAV). The aortic valve allows blood to flow from the heart to the [aorta](#). It normally has three flaps that open and close to regulate blood flow. In people with a bicuspid aortic valve, the valve does not develop fully during gestation and there are two flaps instead of three.

Some people with BAV never have any problems, but many develop narrowing or leakage of the aortic valve, especially as adults.

Recent research has shown that the artery problems with BAV may also occur in the brain, and that BAV may be a [connective tissue disorder](#). Brain aneurysms are a weakening in a brain artery that causes a bulge in the artery.

"Since brain aneurysms are a treatable problem that can lead to death and disability if they rupture, we wanted to find out how common they are in people with BAV," said study author Wouter Schievink, MD, Director of Microvascular Neurosurgery at Cedars-Sinai Medical Center in Los Angeles, Calif.

For the study, 61 people with BAV were screened for brain aneurysms, along with 291 people who did not have BAV but were undergoing scans for a suspected stroke or brain tumor during the same time period.

Six of the 61 people with BAV had brain aneurysms, or 9.8 percent, compared to three of the 291 people who did not have BAV, or 1.1 percent. Studies have shown that 0.5 to two percent of the general adult population has brain aneurysms.

"While more research needs to be done to confirm these results, these findings show a significant increased risk of brain aneurysms in people with bicuspid aortic valves," Schievink said.

Schievink said the heart defect has been shown to cluster in families, and screening is generally recommended for close family members of people diagnosed with bicuspid aortic valves.

Provided by American Academy of Neurology

Citation: People with common heart defect also more likely to have brain aneurysms (2010, May 3) retrieved 3 May 2024 from

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