



Aortic Valve Stenosis

Definition:

Normally, the aortic valve allows for blood to pass from the left ventricle in the heart to the main body via the aorta.

Stenosis is when there is a narrowing of the valve that makes the left ventricle pump harder to get blood past the narrowing.

A normal aortic valve has 3 cusps, while a stenotic valve may have only one or two cusps, and they are usually deformed (thick and stiff) as opposed to being thin and flexible.

What Causes It?

Cause is usually unknown. It can also be associated with other heart defects.

How Can it Affect the Heart?

In a child with AS, the pressure in the left ventricle is much higher than normal so and the heart must work harder to pump blood out into the aorta. This will eventually cause thickening and damage to the overworked heart muscle.

How does the aortic stenosis affect my child?

If the obstruction is mild, there will be no symptoms. When stenosis is severe, symptoms occur in infancy. In some children chest pain, easy tiring, drowsiness or fainting attacks may occur.

Management options:

Children with severe aortic stenosis will need treatment even if there were no symptoms). In most children the obstruction can be relieved during cardiac catheterization by balloon dilatation. In this procedure, a special balloon, is placed across the aortic valve. The balloon is inflated for a short time to stretch open the valve.

Some children with stenosis may need surgery. The surgeon may be able to enlarge the valve opening if it's too small. Some valve leakage may develop after a balloon or surgical treatment for obstruction.

What activities can my child do?

If there is no significant obstruction there are no special precautions needed, if the obstruction is severe or causing symptoms, then some limitation to activity will have to be accounted for. This will vary per patient and will require a more in depth conversation with your pediatric cardiologist, as the physical activity may vary per patient.

Following Up in the Future:

Children with aortic stenosis need lifelong medical follow-up. Even mild stenosis may worsen over time. Also, balloon or surgical relief of a blockage is sometimes incomplete, or sometimes resulting in valvular leak. After treatment the valve keeps working in a mildly abnormal way, so the pediatric cardiologist will follow up with your child according to his or her condition (can be every 6 months or even every year)

Children may need to receive antibiotics before any surgical or dental procedures to prevent infective endocarditis.