

Tetralogy of Fallot

The tetralogy of Fallot has four components. The first major one is a ventricular septal defect. This is a large hole between the two ventricles that lets venous (bluish) blood pass from the right ventricle to the left one. From there it goes to the aorta and on to the body without passing through the lungs to be re-freshed with oxygen.

The second major component of tetralogy of Fallot is a stenosis (narrowing) at, or just beneath, the pulmonary valve. The narrowing partly blocks the flow of venous blood into the lungs. This varies in severity from child to child.

The last two components of tetralogy of Fallot are: (1) the right ventricle is more muscular than normal; and (2) the aorta lies directly over the ventricular septal defect.

This results in blueness (cyanosis), which may appear soon after birth, in infancy or later in childhood. These “blue babies” may have sudden episodes of severe cyanosis with rapid breathing. They may even become unconscious. During exercise, older children may become short of breath and have fainting spells. These happen because not enough blood flows to the lungs to supply the child’s body with oxygen.

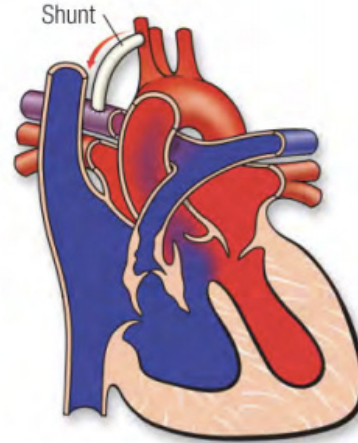
Repairing Tetralogy of Fallot

Tetralogy of Fallot is treated surgically. A temporary operation may be done at first if the baby is small or if other problems also require

treatment. In such cases, complete repair comes later. Sometimes the first operation is a complete repair.

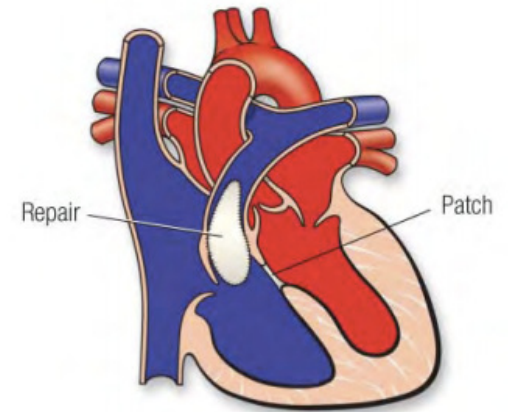
Temporary Operation

In some infants, a shunt operation may be done first to provide adequate blood flow to the lungs. This is not open-heart surgery and doesn’t fix the inside of the heart. The shunt is usually a small tube of synthetic material sewn between a body artery (or the aorta) and the pulmonary artery. The shunt is closed when a complete repair is done later.



Complete Repair

Complete repair tends to be done early in life. The surgeon closes the ventricular septal defect with a patch. The right ventricular outflow tract is opened by removing some thickened muscle below the pulmonary valve, repairing or removing the obstructed pulmonary valve and, if needed, enlarging the branch pulmonary arteries that go to each lung.



After the surgery the long-term outlook varies a great deal. Usually it’s quite good, but it depends largely on how severe the defects were before surgery, especially in the amount of pulmonary narrowing.

Lifelong follow-up is needed to be sure that any remaining defects or problems are treated properly. Children with tetralogy of Fallot risk an infection of the heart’s walls or valves (endocarditis) before and after surgery. To prevent endocarditis your child should be given antibiotics such as amoxicillin before dental work and certain surgeries. Good dental hygiene lowers the risk of endocarditis. For more information about dental hygiene and preventing endocarditis, ask your pediatric cardiologist.

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