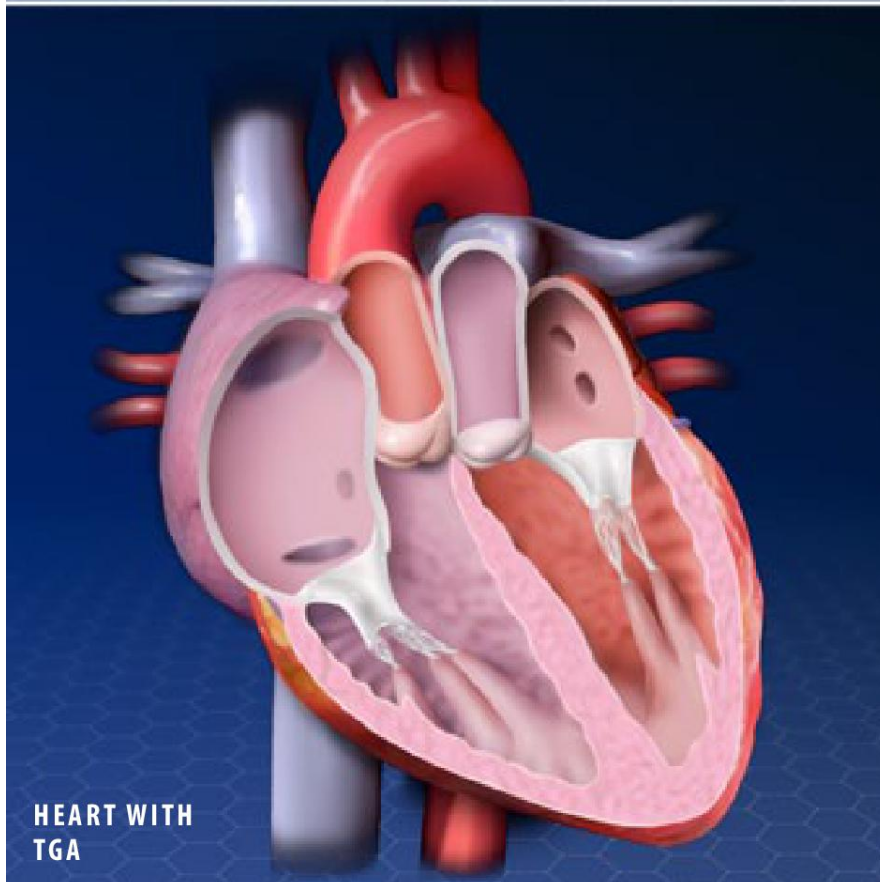
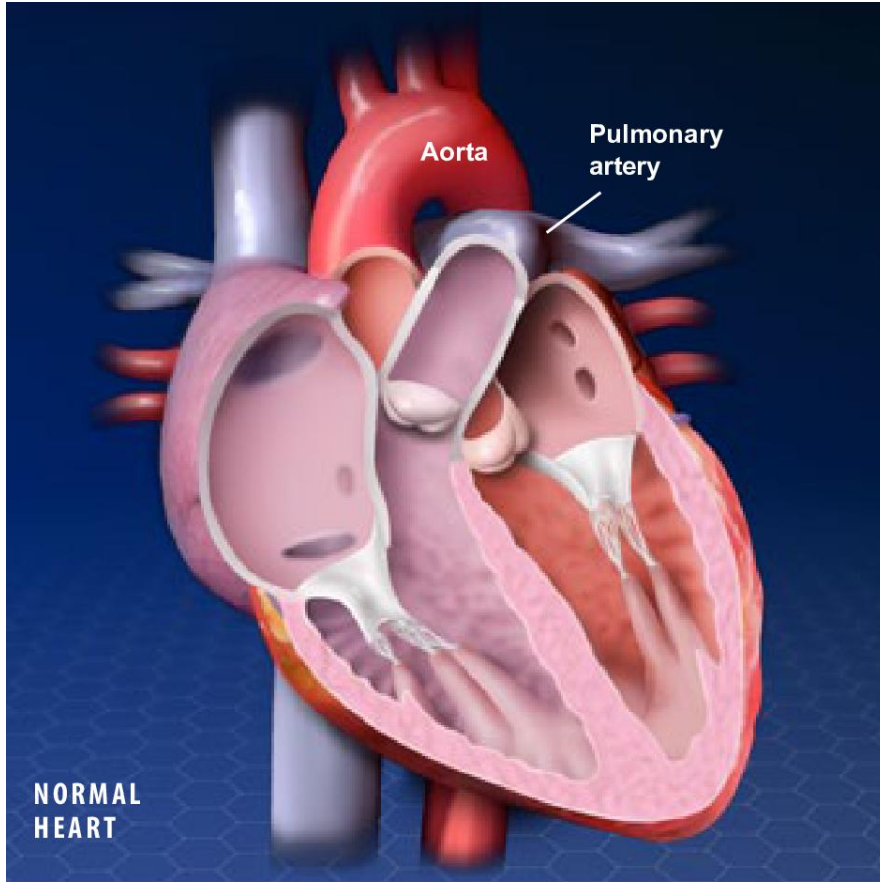




Transposition of the Great Arteries (TGA)



Overview

This condition is a reversal of the two major arteries that carry blood away from the heart. These are the aorta and the pulmonary artery. In a heart with TGA, these arteries switch places during the heart's formation. They connect to the wrong chambers of the heart.

Normal Heart

In a normal heart, oxygen-depleted blood enters the right atrium. It is pumped into the right ventricle, which then pumps the blood through the pulmonary artery to the lungs. Oxygen-rich blood from the lungs enters the heart's left atrium. It is pumped into the left ventricle, and then out to the body through the aorta.

Heart with Transposition of the Great Arteries

In a heart with TGA, this process does not work correctly. Oxygen-depleted blood from the body is carried to the aorta and sent back to the body without flowing through the lungs. Oxygen-rich blood from the lungs is carried through the pulmonary arteries and sent back to the lungs instead of flowing out to the rest of the body. The body's cells quickly become starved of oxygen.

Causes and Risk Factors

TGA is present at birth, and it is more common in males. In most cases, doctors don't know why the arteries become reversed. Some factors increase the risk for TGA. A mother who is older than 40, who has diabetes, or who contracts a viral infection during pregnancy is at an increased risk of giving birth to a baby who has this condition.

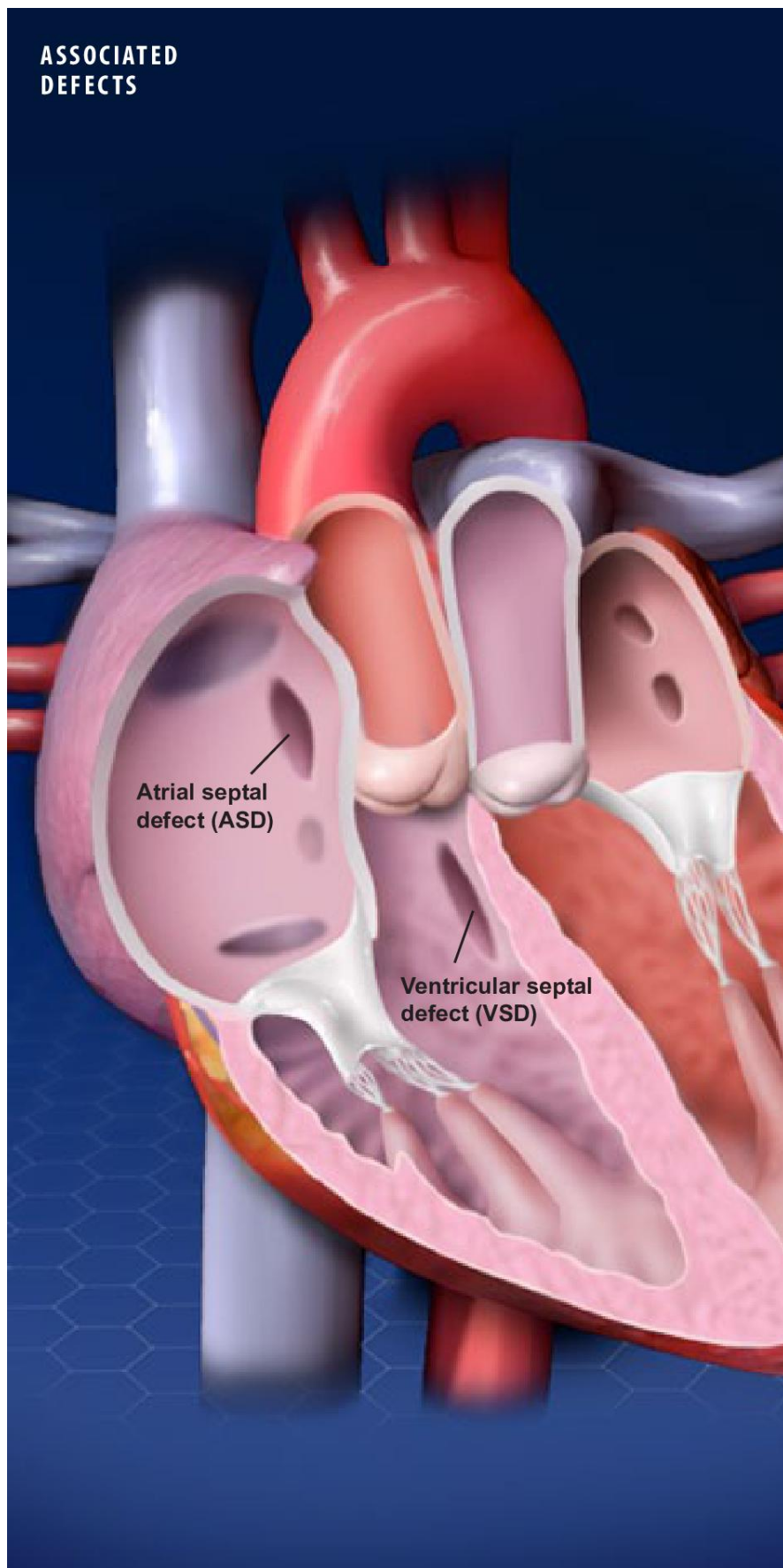
Symptoms and Complications

Symptoms of TGA may be noticed just after the birth, or within the first week of life. The baby's skin may turn a blue color, and the skin may feel cool and clammy. The baby may be short of breath, and may have a faster-than-normal heart rate. And, the baby may have trouble feeding and gaining weight. Without proper treatment, TGA can result in complications such as heart failure, lung damage and death.



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ASSOCIATED DEFECTS



Associated Defects

A baby with TGA may also have other heart problems. These may include defects of the atrial or the ventricular septum. These types of defects can actually be helpful, because they allow blood to mix within the heart. This lets some oxygen-rich blood get out to the body. Other problems associated with TGA include narrowing of the arteries that supply blood to the heart, leaky heart valves, irregular heart rhythms and weakness of the heart muscle.

Treatment

TGA is corrected with surgery, often in the first week of the baby's life. The specific procedures required will depend on the patient's need. In some cases, the patient may need to be stabilized with medications, a temporary shunt or a balloon catheter before the surgery can be performed.