

ATRIOVENTRICULAR SEPTAL DEFECT (AVSD)

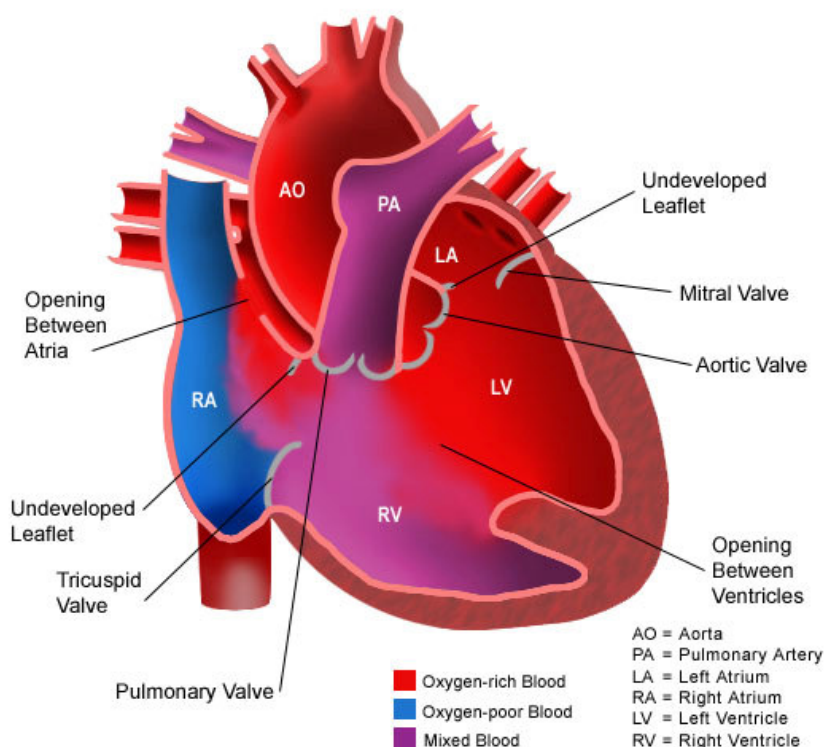
What are an atria and a ventricle?

There are four chambers in the heart. The two small chambers are called atria and the two large chambers are called ventricles. The right atrium receives deoxygenated blood from the body where it drains in to the right ventricle which pumps the blood to the lungs to be oxygenated. The left atrium receives oxygenated blood from the lungs where it drains in to the left ventricle which pumps the oxygenated blood to the body. Atria and ventricles are separated by valves, and the left and right side of the heart separated by muscular walls (septa).

What is a septal defect?

A septal defect is a hole in the membrane separating the two atria and ventricles. In an atrioventricular septal defect (AVSD) the defect occurs between both of the two atria and the two ventricles. This defect can involve the mitral and tricuspid valves. These valves separate the atria and ventricles on the left and right side of the heart respectively.

Atrioventricular Canal Defect



http://www.schneiderchildrenshospital.org/peds_html_fixed/peds/cardiac/avc.htm

Do they occur commonly?

An AVSD is a common type of congenital heart defect, and accounts for about 5% of all congenital heart defects. It is the most common defect to occur in children with Down Syndrome (Trisomy 21).

How will this affect my baby?

The size of the hole and which parts are involved (atria, ventricle, mitral and tricuspid valves) will determine how your baby will be affected. If the defect only involves the atria this small defect will often not cause many symptoms but may require closing later in childhood. If the defect involves the ventricles as well as the atria, this large hole in the middle of the heart allows oxygen rich blood from the left side of the heart to pass into the right side of the heart. This causes more blood than usual to go to the right side of the heart to the lungs to be oxygenated. This in time can lead to the left side of the heart working too hard and failing (congestive heart failure), as well as the lung blood vessels becoming damaged due to the high pressure (pulmonary hypertension). If the valves are affected as well, they will allow blood to flow backwards rather than forward when the heart is pumping. This increases the risk of the heart failing and causing it to enlarge

How is an AVSD diagnosed?

In many babies with this condition, the diagnosis is made on an antenatal scan. This helps prepare the medical and nursing staff when your baby is born and to ensure that appropriate care is obtained.

After birth, when medical or nursing staff listen to your baby's heart they may hear a heart murmur. A murmur is a noise. Like water flowing in a river, when it comes to a bend the water then makes noise. Blood is similar. When blood flows along smooth surfaces it makes little noise, but if it then flows through an opening such as a septal defect or a poorly functioning valve, it will make sound. If a murmur is heard an echocardiogram (ultrasound of the heart) will be performed which will show the defects.

How are AVSDs treated?

The majority of AVSD's will require surgical management in infancy and/or childhood.

Large AVSDs require close observation. Signs of heart failure include a fast heart rate, fast breathing and poor weight gain. Your baby may be treated with medications that improve the function of the heart until the baby grows big enough to have heart surgery.

Sometimes the defects are so large that they cause significant heart failure which cannot be controlled with medications. In these cases early surgery may be required to band the pulmonary artery to decrease the amount of blood flowing to the lungs. This is a temporary measure until the baby is then big enough for more complex heart surgery. This will be discussed with you by the medical staff. Surgery to close AVSDs is done in Sydney by paediatric heart surgeons.

Until the hole is closed there is a slight risk of infected blood clots attaching to the edges of the hole (bacterial endocarditis). This can make a baby or child very unwell. These infected clots are usually associated with dental or other surgical procedures. You should inform your dentist or surgeon of the AVSD and your baby should be given antibiotics at the time of the procedure. When the AVSD has closed following surgery, antibiotics may no longer be required.

If you have any further questions please ask the medical and nursing staff.

Approved by the Canberra Hospital Neonatal Intensive Care Unit 2012
Revision Date 2015