Anomalous pulmonary venous connection

What is it?

In a normal heart, the pulmonary veins (the veins that bring blood from the lungs back to the heart) are connected to the left atrium. In children with anomalous pulmonary venous connection, these veins connect into the right side of the heart. ('Anomalous' means irregular or abnormal.)

There are several places that the veins may drain into, including the superior vena cava, the right atrium, the coronary sinus and the portal (liver) vein. If all the veins drain abnormally, the condition is called 'total anomalous pulmonary venous connection'. If only some of the veins drain abnormally, it is called 'partial anomalous pulmonary venous connection'.

What are the symptoms?

Total anomalous pulmonary venous connection

If the connection between the pulmonary veins and the right side of the heart is narrow (obstructed) your child will appear blue in the first few days of life (cyanosis). In black children, the blueness may show under the nails or on the inside of the mouth, lips and tongue. Your child will also be breathless because it is more difficult for the blood to return from the lungs to the heart.

If the vessels are wide open (non-obstructed) then the symptoms are breathlessness, difficulty in feeding, poor weight gain and repeated chest infections. It may be a few months before a diagnosis is made.

Partial anomalous pulmonary venous connection

With partial anomalous pulmonary venous connection, there are often no symptoms or the symptoms are very mild. The condition may only be discovered when a heart murmur is picked up at a routine examination in later childhood.

What tests will my child need?

Your child will usually need to have a chest X-ray, an electrocardiogram (ECG) and an echocardiogram to confirm the diagnosis. In some cases, cardiac catheterisation will also be needed. These tests are described on pages 8-9 of the booklet Children with heart conditions.



Continued overleaf

Heart illustrations are based on Heart Children, published by HeartLine Association