



PATENT DUCTUS ARTERIOSUS

Background

Patent ductus arteriosus (also called PDA) is a common congenital heart defect. It can occur by itself or together with other abnormalities. In this section, only PDA without other heart defects is discussed.

A PDA is a blood vessel that connects two very large blood vessels, the aorta and pulmonary artery (see The Normal Heart). This connection is present at birth in all babies, but normally closes within days after birth. When a PDA does not close, it allows extra blood to flow from the aorta to the pulmonary artery. This results in extra blood being delivered to the lungs (medical term: volume overload).

A PDA can be found when a doctor hears a heart murmur or orders an ultrasound of the heart (medical term: echocardiogram). The size of the PDA determines how it will affect the heart. Small PDAs usually do not affect the heart. If the PDA is large, the amount of extra blood can be enough to affect the heart and lungs. Larger PDAs can put stress on the heart and can lead to heart enlargement, heart weakening and increased blood pressure in the lungs (medical term: pulmonary hypertension).

If high blood pressure in the lungs develops, this can result in low oxygen levels. This is a more serious condition called Eisenmenger syndrome and is discussed elsewhere. (see Eisenmenger Syndrome)

How safe is it for me to become pregnant?

Pregnancy does require your heart to work harder and pump more fluid (see Cardiovascular Changes during Pregnancy). In women with small PDA, these changes are usually well tolerated and pregnancy is not a problem. Women with medium or larger PDAs can develop weakening of the heart muscle (medical term: heart failure). Women with large PDAs may have high blood pressures in the lungs and low oxygen levels. Pregnancy is very risky for these women (see Eisenmenger syndrome).

Every pregnancy carries some risk for complications and this risk may be increased by underlying heart disease. All women have to consider the safety of a pregnancy, taking their underlying heart disease into account. Every person's heart condition is different and therefore the safety of pregnancy differs too. Before proceeding with trying to have a baby you should discuss your specific condition and the details of your situation with a heart specialist who knows about the care of women with heart disease in pregnancy.

Issues for the mother

Which forms of birth control are safe?

For women with a small or moderate sized PDA, all forms of birth control (medical term: contraceptives) are safe. If there is any doubt about the safety of a contraceptive, it should be discussed with a doctor who has an understanding of your underlying heart condition (see Birth Control).

Contraception choices are more limited in women with a large PDA associated with high blood pressure in the lungs. (see Eisenmenger Syndrome)

What are my risks if I become pregnant?

Most women with PDAs tolerate pregnancy well. There is a small risk of heart related complications, such as heart rhythm abnormalities (medical term: arrhythmias) or weakening of the heart muscle (medical term: heart failure). Other medical conditions can have an impact on outcomes (see General Considerations).

If a woman has a larger PDA with high blood pressure in the lungs and low oxygen levels, the risks of pregnancy are much higher (see Eisenmenger syndrome).

Issues for the baby

If you have a PDA, the risk of the unborn baby having a heart defect varies between 5-10%, compared with the background risk of about 1% for the general population.

Women will often be offered ultrasound screening of the baby's heart (fetal echocardiogram) at the end of the fifth month (20 weeks gestation) of pregnancy. The ultrasound will detect most major cardiac defects in the developing baby, though a PDA itself cannot be recognized or predicted by this stage. Minor defects may not be detected until after birth.

Medical care during pregnancy and delivery

Where should I be followed?

Many women with small PDA will have follow-up and will deliver at their local hospital. However, if you have weakened heart muscle, low oxygen levels or heart problems before pregnancy, you should be followed in a center that specializes in high-risk pregnancy. Your specialists will determine how often you need to be seen through your pregnancy.

What can I do and expect during pregnancy?

Your heart specialist will arrange for visits during your pregnancy. The frequency of visits will depend upon the size of your PDA and your health during pregnancy. In addition to your clinic visits, your doctor will arrange an ultrasound of your heart (medical term: echocardiogram) to help determine how your heart is adapting to the pregnancy.

Most women with PDA do well throughout pregnancy; however, you need to pay attention to symptoms related to your heart. Notify your doctor if you develop symptoms such as shortness of breath, swelling of the legs, or fast heart beats.

If your symptoms are worrying you and you cannot get in touch with your doctor, go to your nearest emergency department. It is helpful to keep a letter from your doctor explaining your condition so that other health care professionals can better help you in an emergency situation.

A vaginal delivery is usually recommended.