Persistent ductus arteriosus (PDA) is a heart defect that occurs when the ductus arteriosus, a blood vessel that connects the pulmonary artery to the aorta in the developing fetus, fails to close after birth. This can cause blood to flow in the wrong direction, leading to increased blood flow to the lungs and decreased blood flow to the rest of the body.

In normal fetal development, the ductus arteriosus is necessary to bypass the lungs, as the fetus receives oxygen from the mother's placenta. After birth, the lungs take over and the ductus arteriosus should close within a few hours to a few days.

Symptoms of PDA can include:

A heart murmur Rapid breathing Difficulty feeding or poor weight gain Fatigue Shortness of breath Sweating PDA can be diagnosed with a physical exam, and further testing such as echocardiography may be done to confirm the diagnosis and assess the severity of the condition.

In many cases, PDA can be managed with medications such as indomethacin or ibuprofen, which can help to close the ductus arteriosus. In some cases, however, surgical intervention may be necessary to close the PDA. The surgical procedure typically involves the placement of a patch or ligature to close the ductus arteriosus.

With appropriate treatment, most infants with PDA can have a good prognosis and lead normal lives. However, without treatment, PDA can lead to complications such as pulmonary hypertension, congestive heart failure, and endocarditis.