

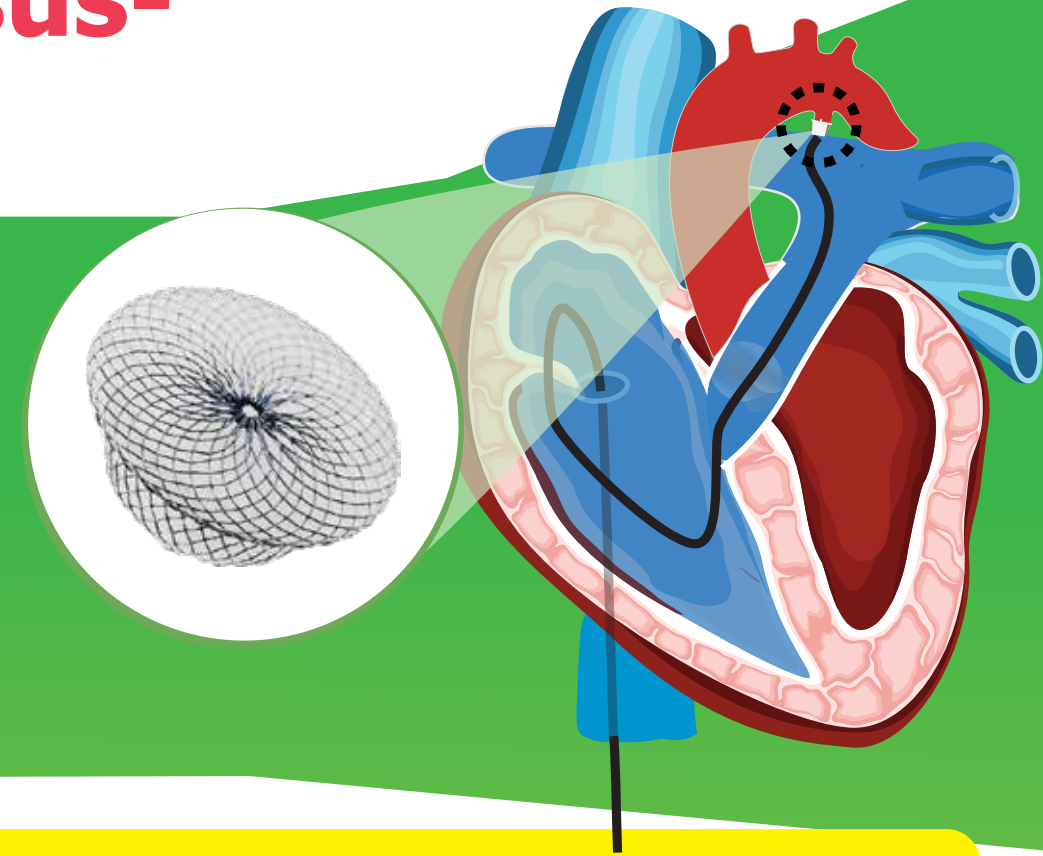
Patent ductus arteriosus- Device closure

Ductus arteriosus is an extra blood vessel that connects the **pulmonary artery** with the **aorta**. It is normally present at birth and closes in **2-3 days** after birth.

If it stays open for long, it is called **patent ductus arteriosus(PDA)**. In PDA, extra blood flows directly from the **aorta** to the pulmonary artery, which causes **pulmonary hypertension**.

PDA can be treated by **surgical ligation** or **minimally invasive device closure**.

PDA is the **first** congenital heart disease in which **trans-catheter closure was used**.



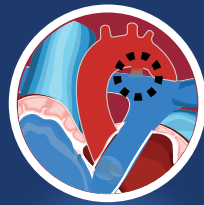
Complications of surgical PDA closure



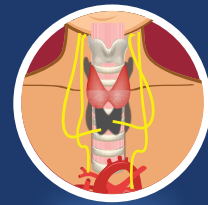
Bleeding



Inadvertent left pulmonary artery ligation



Residual shunting



Recurrent laryngeal nerve damage

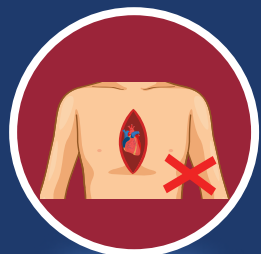
Interesting facts of PDA

PDA affects **1 in 2500** to 5000 live births

PDA accounts for **5-10%** of congenital heart diseases



Benefits of device closure over surgical ligation



Less complicated



Less morbidity outcome



Short hospital stay

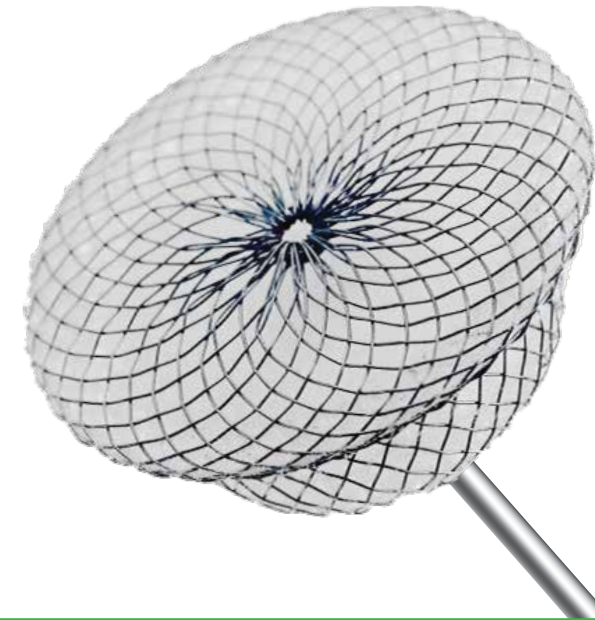
Indications for PDA device closure

- Pulmonary vascular disease
- Volume overloading of the left atrium and left ventricle
- Risk of endocarditis
- Aneurysm of PDA

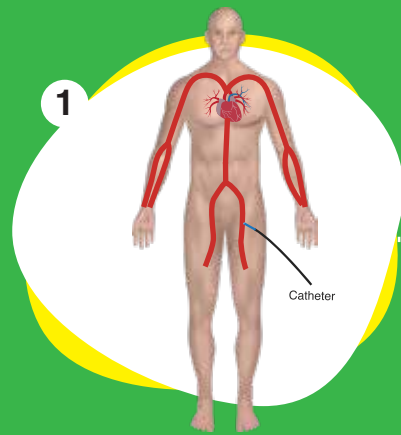
Device closure can be performed using Amplatzer septal Occluder or coils (not preferred nowadays)

Advantages of Duct Occluder device

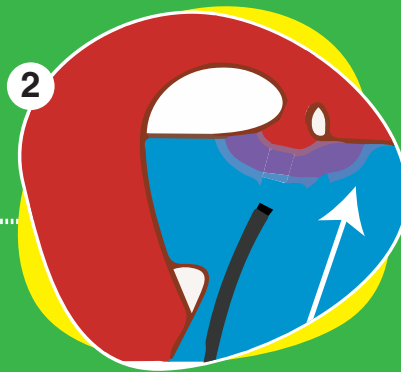
- User-friendly delivery system
- High complete closure rate
- Small delivery system (allowing its use in infants)
- Ability to adapt to various PDA sizes and types
- Transvenous delivery route
- Ability to retrieve or reposition the device prior to release



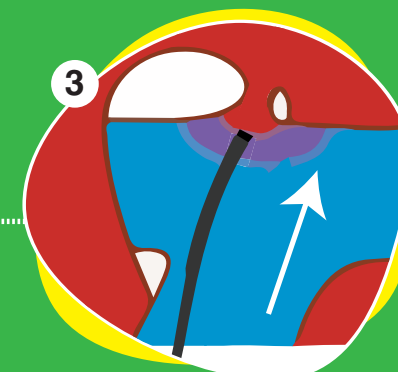
Procedure of PDA device closure



1 A catheter is inserted into the femoral artery in the groin region



2 The catheter is guided to the heart and positioned near the PDA



3 The closure device is inserted through the catheter and the PDA is plugged



4 The catheter is then removed.

Contact Us

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