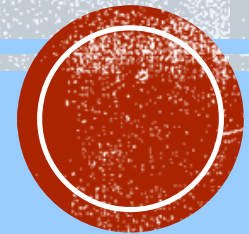


TETRALOGY OF FALLOT

Mohammed Al-Jubouri, PhD
University of Baghdad
College of Nursing
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**Tetralogy (teh-TRAL-o-je) of Fallot (fah-LO)
is a congenital heart defect.**

**Congenital
Heart Defects**



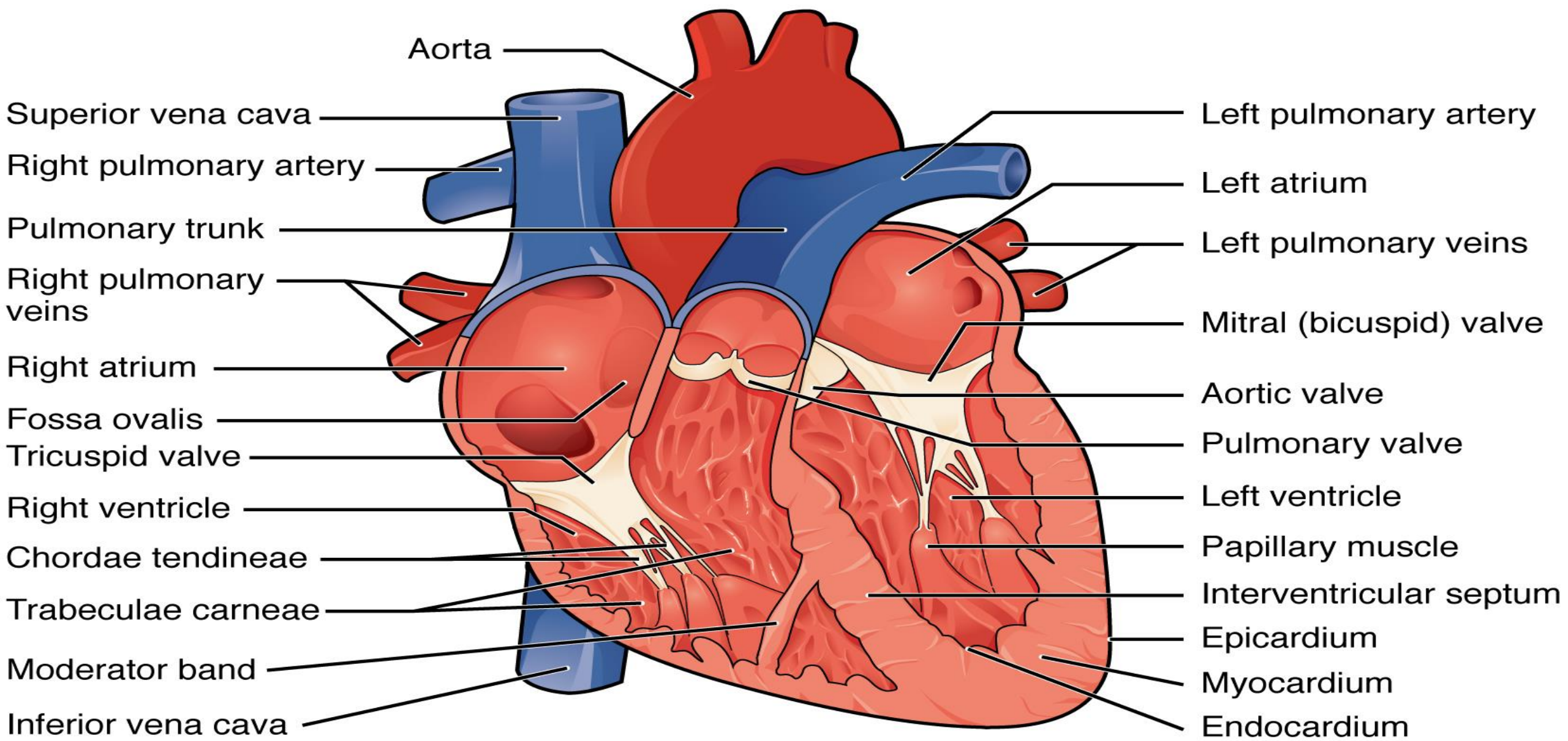
It is rare.

It occurs in about 5 out of every 10,000 babies.



To understand TOF, let's review the normal heart.

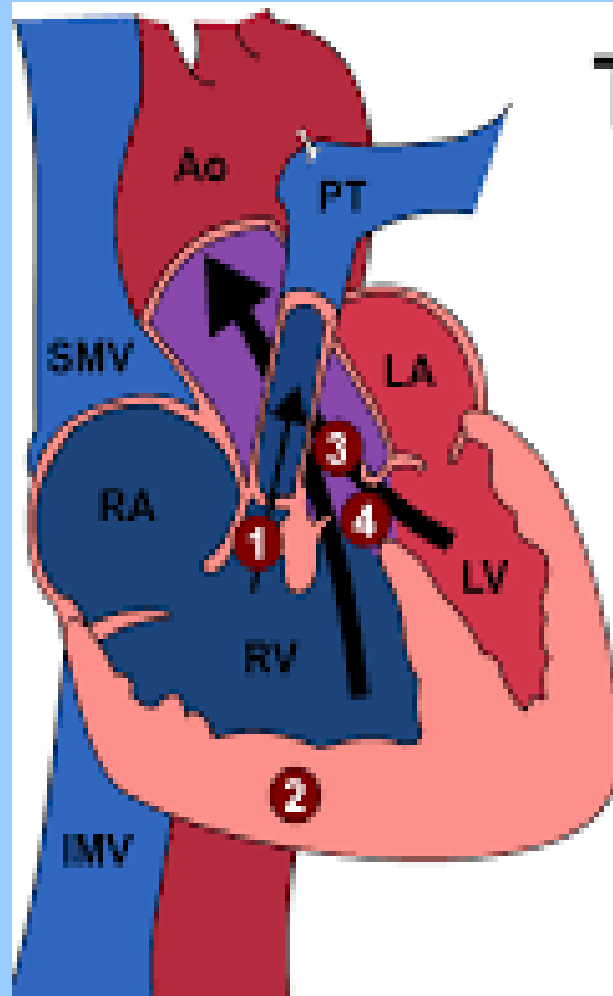




Anterior view

TOF involves four heart defects:

- * Ventricular septal defect (VSD)
- * Pulmonary stenosis
- * Right ventricular hypertrophy
- * An overriding aorta

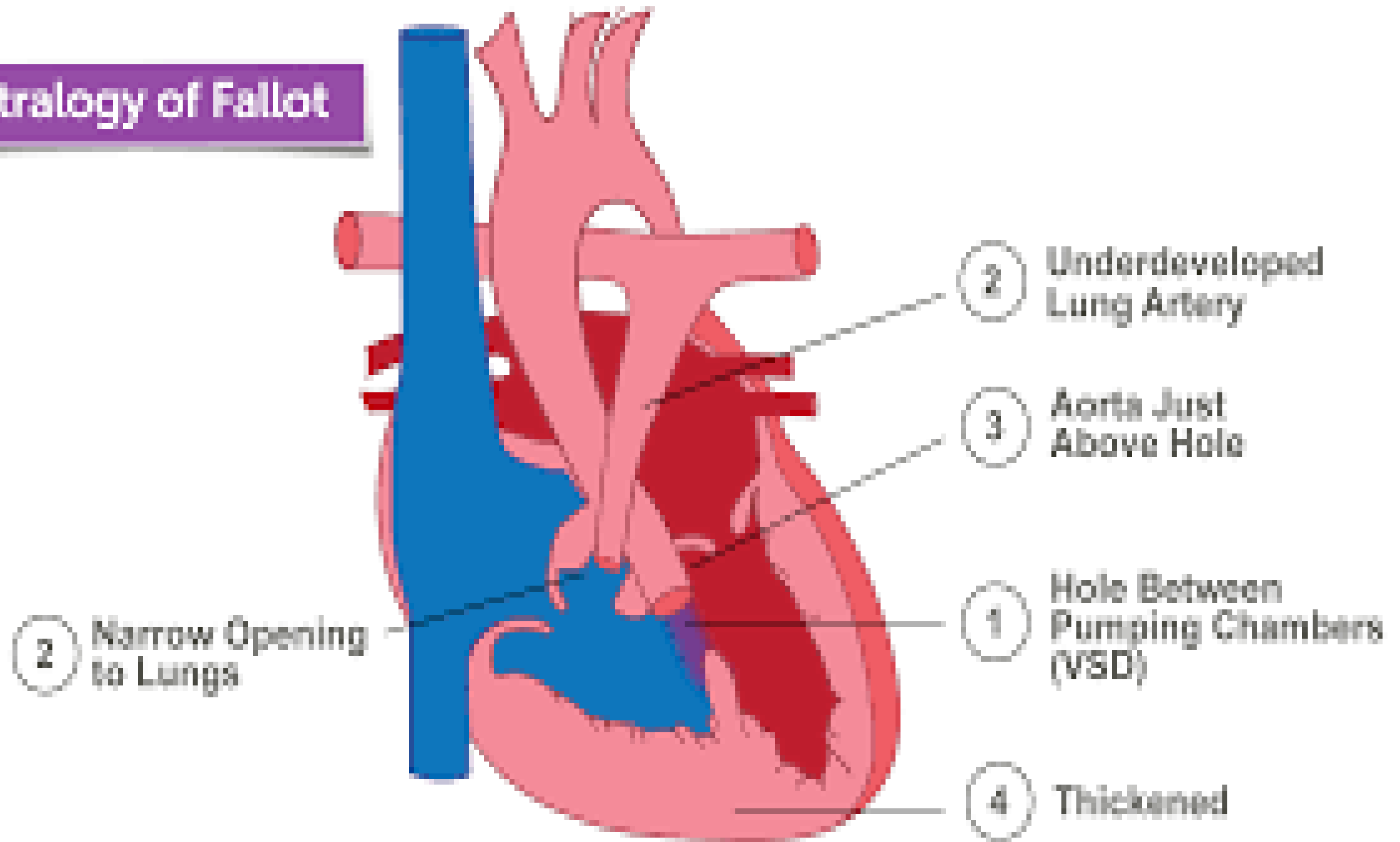


Tetralogy of Fallot

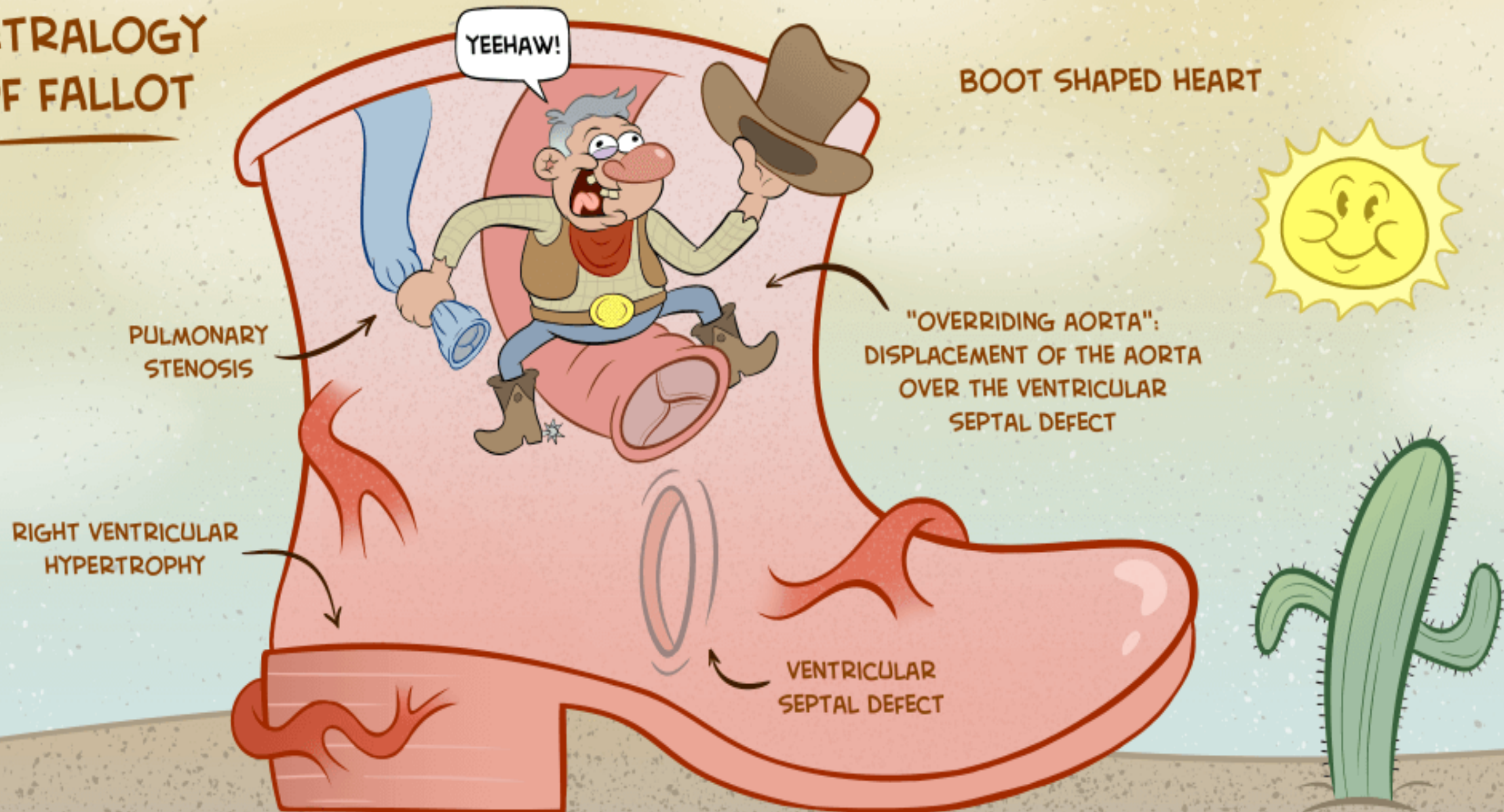
Major Defects

- 1 Pulmonary Stenosis
- 2 Right Ventricular Hypertrophy
- 3 Overriding Aorta
- 4 Ventricular Septal Defect

Tetralogy of Fallot



TETRALOGY OF FALLOT





Ventricular Septal Defect

Septum separates the heart chambers on its left and right side.

A VSD is a hole in the septum between the ventricles. The hole allows oxygenated blood from the left to mix with non-oxygenated blood from the right.



Pulmonary Stenosis

The pulmonary valve cannot fully open. Thus, the heart has to work harder to pump blood through the valve. As a result, not enough blood reaches the lungs.



Right Ventricular Hypertrophy

The muscle of the right ventricle is thicker because the heart has to work harder than normal to move blood through the narrowed pulmonary valve.



Overriding Aorta

In TOF, the aorta is located between the left and right ventricles, directly over the VSD. As a result, non-oxygenated blood from the right ventricle flows directly into the aorta and is mixed with the oxygenated blood.



Causes:

Unknown

Risk Factors:

Pregnant women with:

- *German measles (rubella) and some other viral illnesses

- *Poor nutrition

- *Alcohol use

- *Age (older than 40)

- *Diabetes

Infants :

- **Hereditary

- **Genetic disorders such as Down syndrome



Signs and Symptoms

Cyanosis

Tet spell:

response to an activity like crying or having a bowel movement.

A tet spell occurs when the oxygen level in the blood suddenly drops. This causes the baby to become very blue.

Children with Tetralogy of Fallot exhibit bluish skin during episodes of crying or feeding.



Heart Murmur

Poor Growth



Clubbing Fingers



Normal



Clubbed



Diagnosis

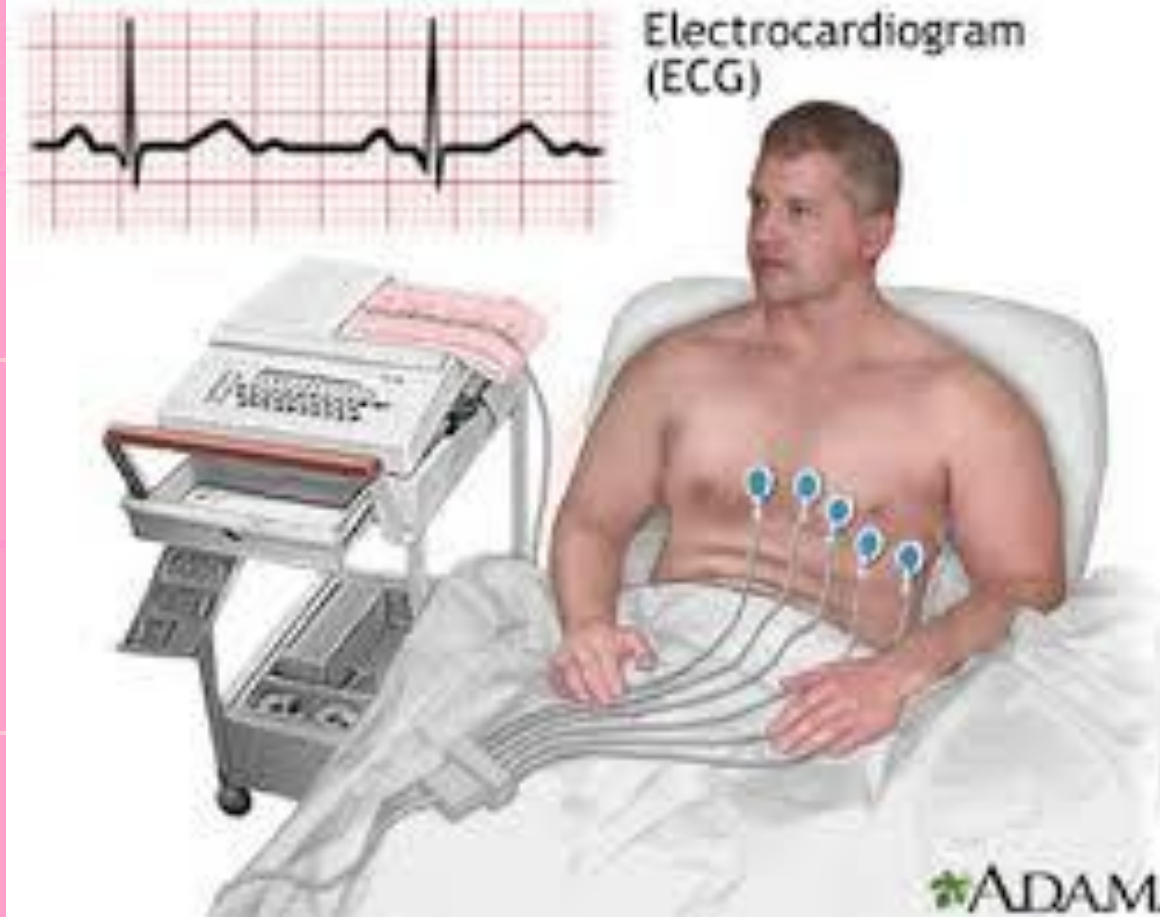
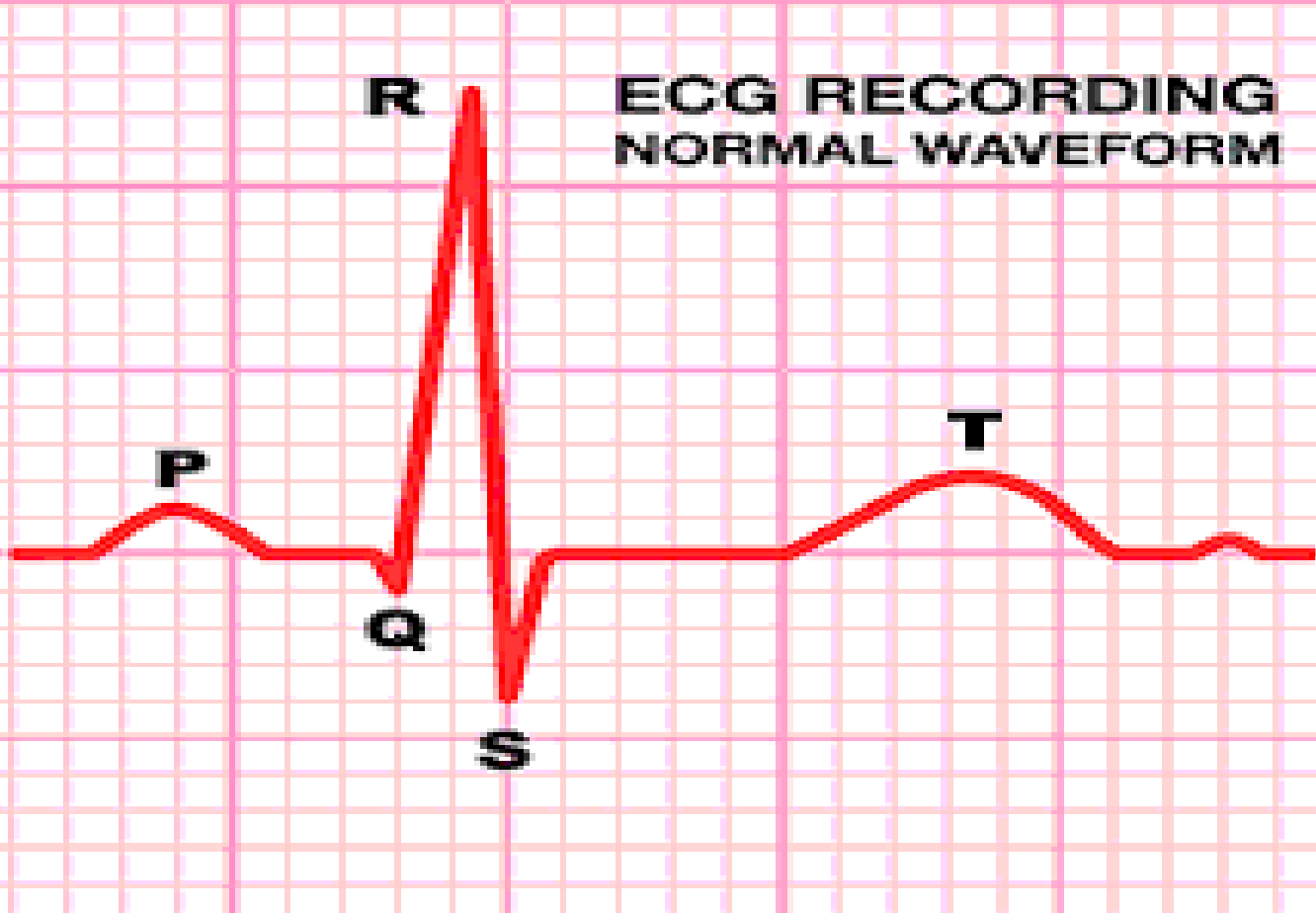
Signs and Symptoms

a physical exam

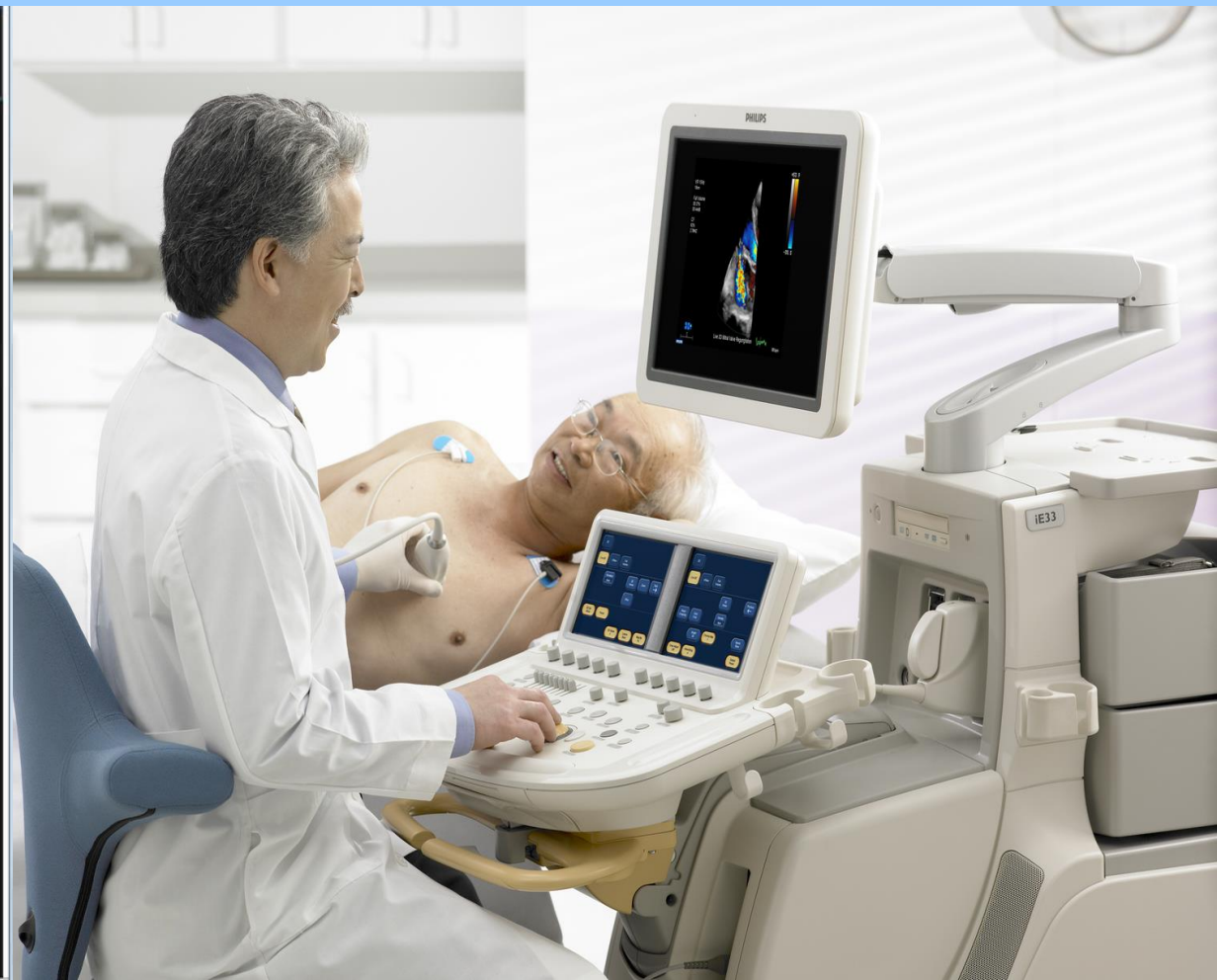
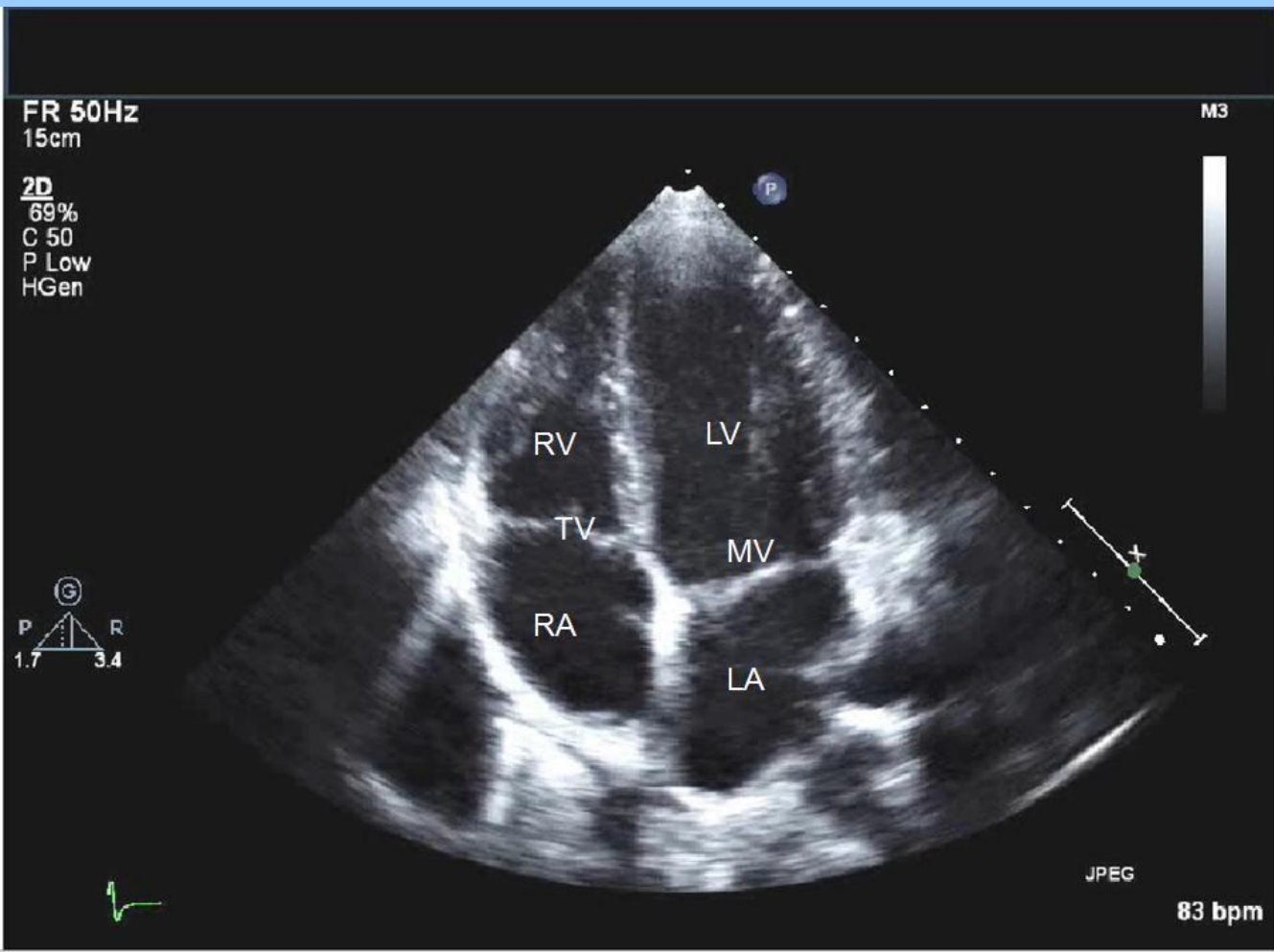
Diagnostic procedures such as:



Electrocardiogram (ECG)



Echocardiography



Chest X Ray



Chest X-ray

Normal



TOF: Boot-shaped heart



1. Pulmonary oligoemia
2. Small pulmonary conus, (concave)
3. Cardiomegaly (RV, RA)
4. Diameter of ascending aorta is larger

Pulse Oximetry



Cardiac Catheterization



Treatment

TOF is repaired with open-heart surgery, either soon after birth or later in infancy.

The timing of the surgery will depend on how narrow the pulmonary artery is.



Complete Intracardiac Repair:

The pulmonary valve is widened or replaced, and the VSD is repaired.



When the right ventricle no longer has to work, it will return to a normal thickness. Fixing the VSD means that only oxygen-rich blood will flow out into the aorta.



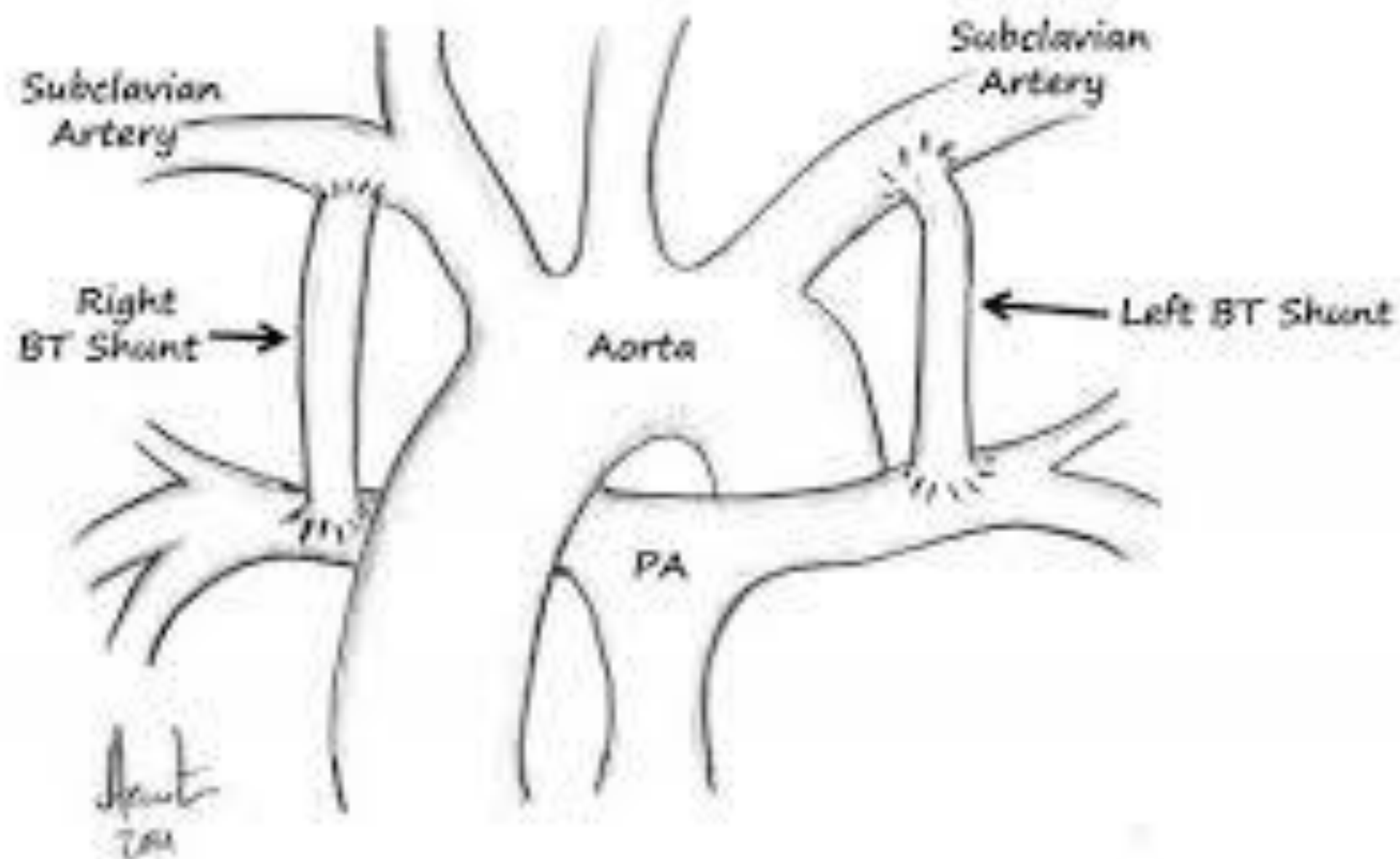
Temporary or Palliative Surgery

Usually was done in the past.

The goal is to increase blood flow to the lung by placing a tube (**shunt**) between the aorta and pulmonary artery.

When the baby becomes older and stronger, the complete repair will be done.





Question:

Does a fetus with TOF have problems like cyanosis, low growth, etc.?



Roles of the Nurse

Small-frequent meals (Feeding or nutrition)

Decrease baby's anxiety or stress

Activity Restrictions

Regular check-ups



KNEE-CHEST POSITION



Place in this
Position
During Tet spell

Knee Chest Position for a Tet Spell



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Squatting Position



A transition plan (childhood to teen) is important to help teens think about important issues, such as future education and employment, birth control and pregnancy planning, and making healthy choices about nutrition, physical activity, and other lifestyle habits.



Additional Surgery:

Pulmonary valve can **narrow** over time or be **regurgitated**



Valve replacement



Complications:

Arrhythmias

CHD



Please **email** me if you have
any questions:

maaljubouri@my.okcu.edu



Lets, watch this video:

<https://www.youtube.com/watch?v=uHv2RHnTpJg>



References

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