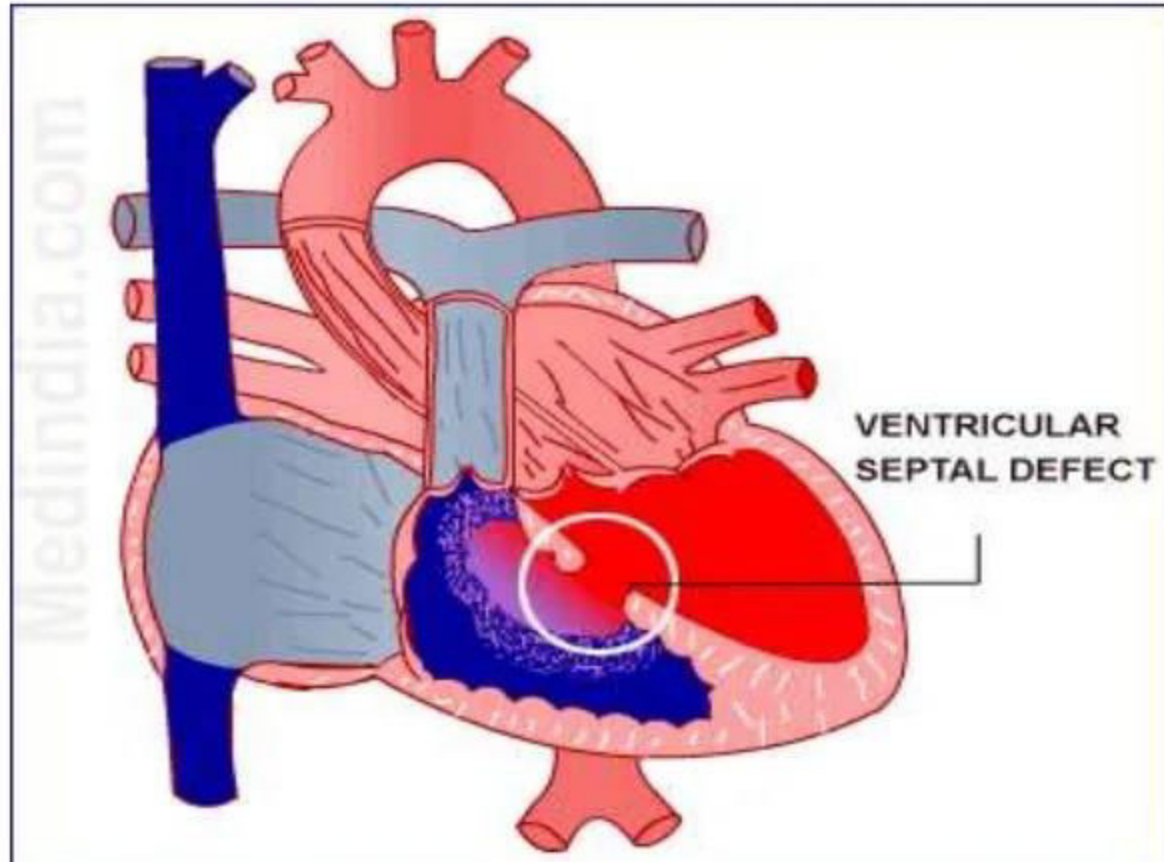


VSD

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VENTRICULAR SEPTAL DEFECT



Overview

- Introduction
- Definition
- Pathophysiology
- Types of VSD
- Classification
- Clinical manifestation
- Diagnostic Tests
- Treatment
- Nursing Management



What is VSD..?

A ventricular septal defect (VSD)

is a congenital defects in the inter-ventricular septum that allow shunting of blood between the left and right ventricles.



Introduction

VSD: are the most common congenital heart defects in infants and children, and VSD is seen in up to 3.5 infants per 1000 live births

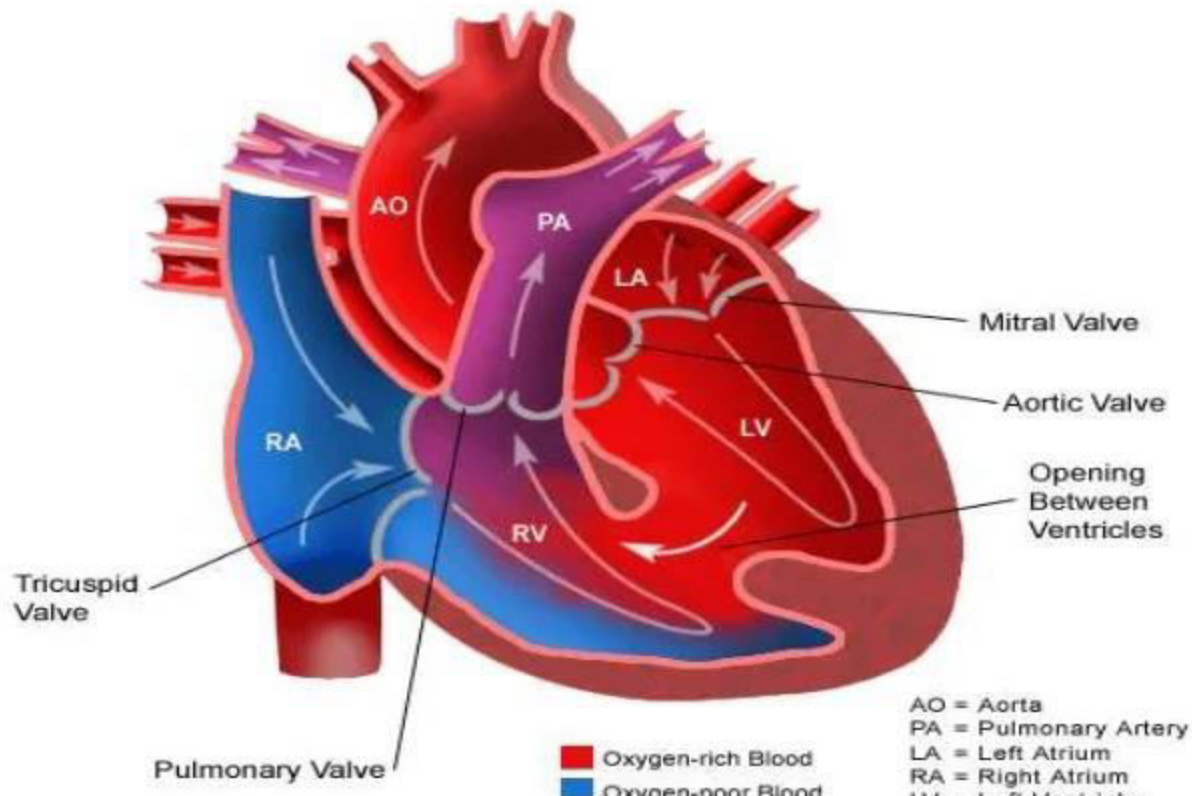
Most of these close spontaneously in childhood.

VSD may also accompany other congenital defects.



Pathophysiology

Ventricular Septal Defect (VSD)

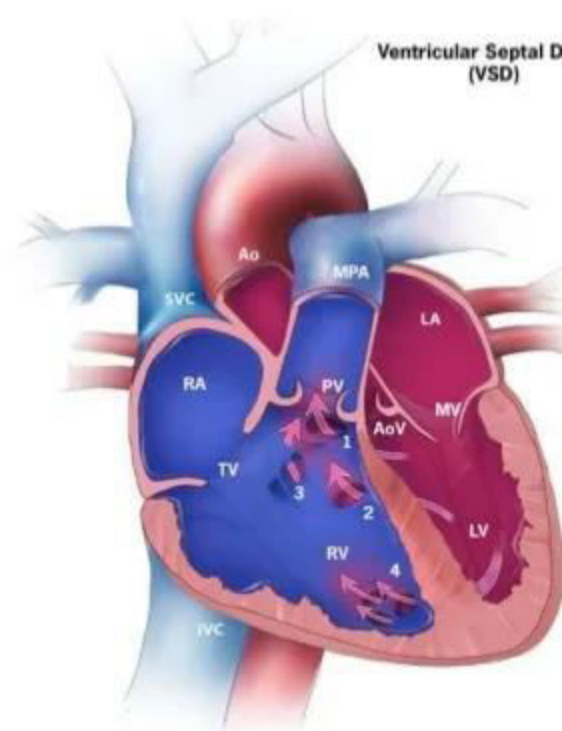


Types of VSD

There are four basic types of VSD:

1- Conal septal VSD. The rarest of VSDs, it occurs in the ventricular septum just below the pulmonary valve.

2- Perimembranous VSD. located near the valves. This type of VSD is the one that is most commonly treated by surgery because most do not close on their own.



RA, Right Atrium
RV, Right Ventricle
LA, Left Atrium
LV, Left Ventricle

SVC, Superior Vena Cava
IVC, Inferior Vena Cava
MPA, Main Pulmonary Artery
Ao, Aorta

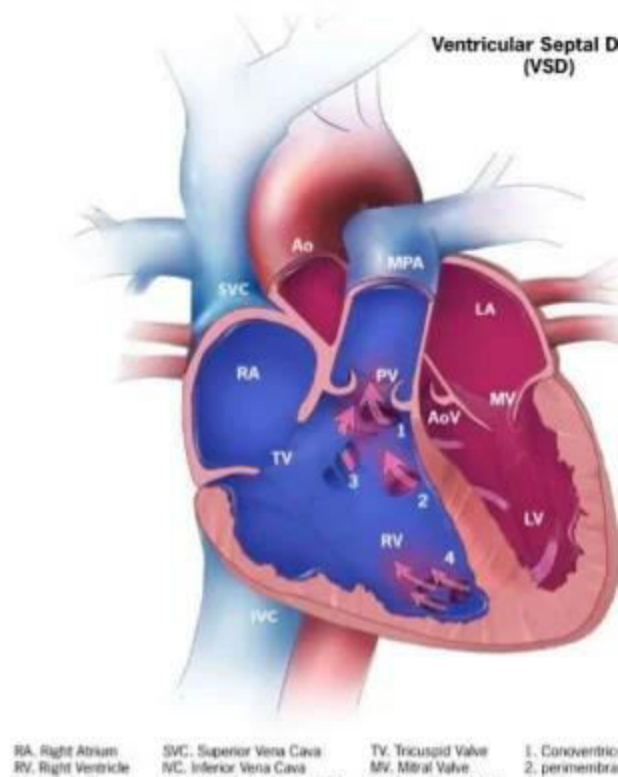
TV, Tricuspid Valve
MV, Mitral Valve
PV, Pulmonary Valve
AoV, Aortic Valve

1. Conoventricular
2. perimembranous
3. inlet
4. muscular

Con.. Types of VSD

3- Atrioventricular canal type (inlet) VSD. This VSD is associated with atrioventricular canal defect. The VSD is located underneath the tricuspid and mitral valves.

4- Muscular VSD. The most common type of VSD, it is an opening in the muscular portion of the lower section of the ventricular septum. A large number of these close spontaneously and do not require surgery



Classification

Small VSD :

(less than 0.5 cm)

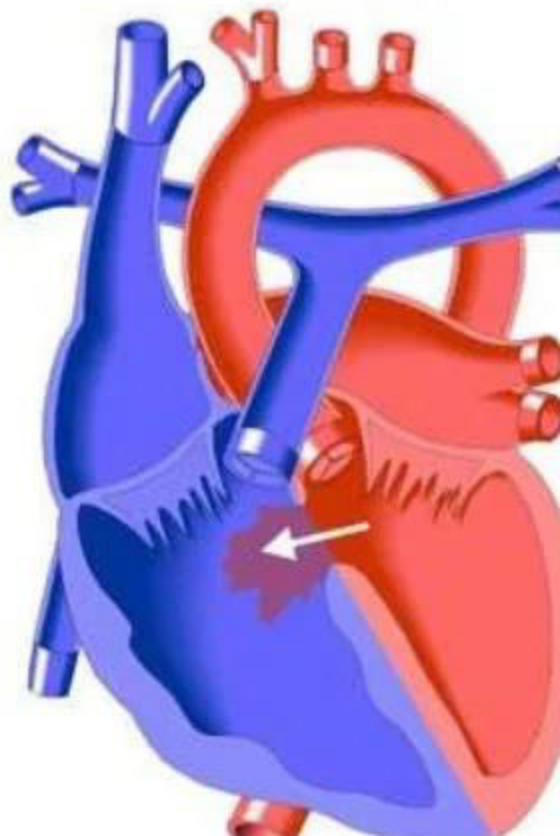
close spontaneously .

Large VSD :

(usually greater than 1 cm)

90% require surgical

Intervention



Clinical Manifestation

- Murmur sound during auscultation
- Fatigue
- Sweating
- Rapid breathing
- Congested breathing
- Anorexia
- Poor weight gain
- Cyanosis

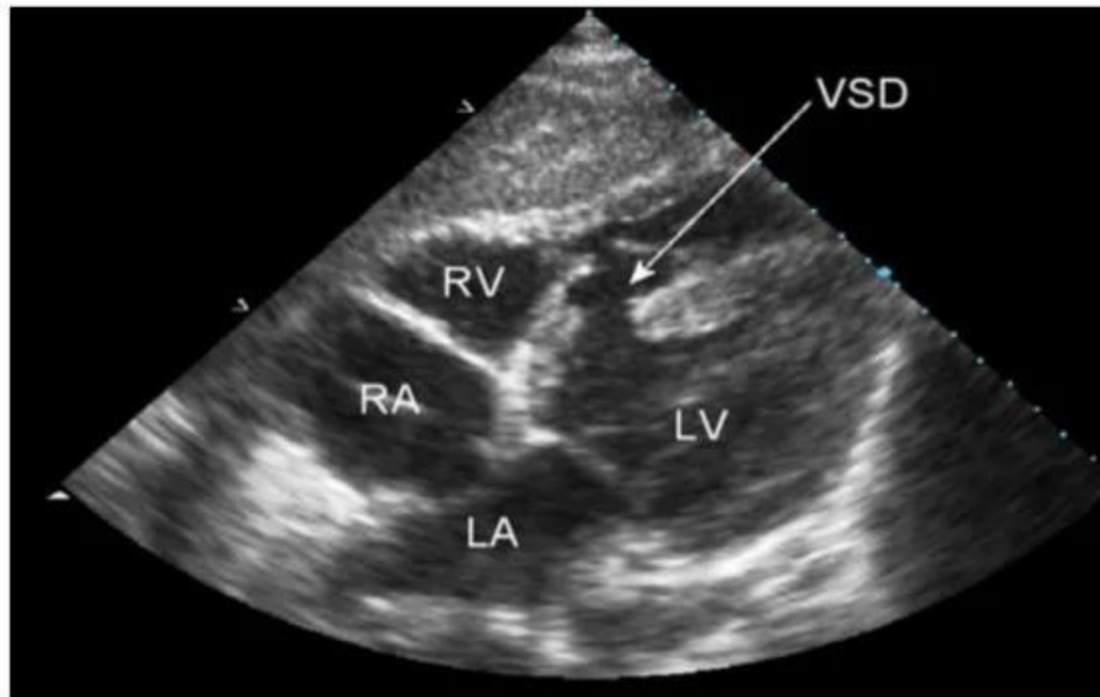


Diagnostic Test's

Echocardiogram :

used to define the anatomy and characteristics of the shunted blood.

X-RAY : to roll out
The size of the heart

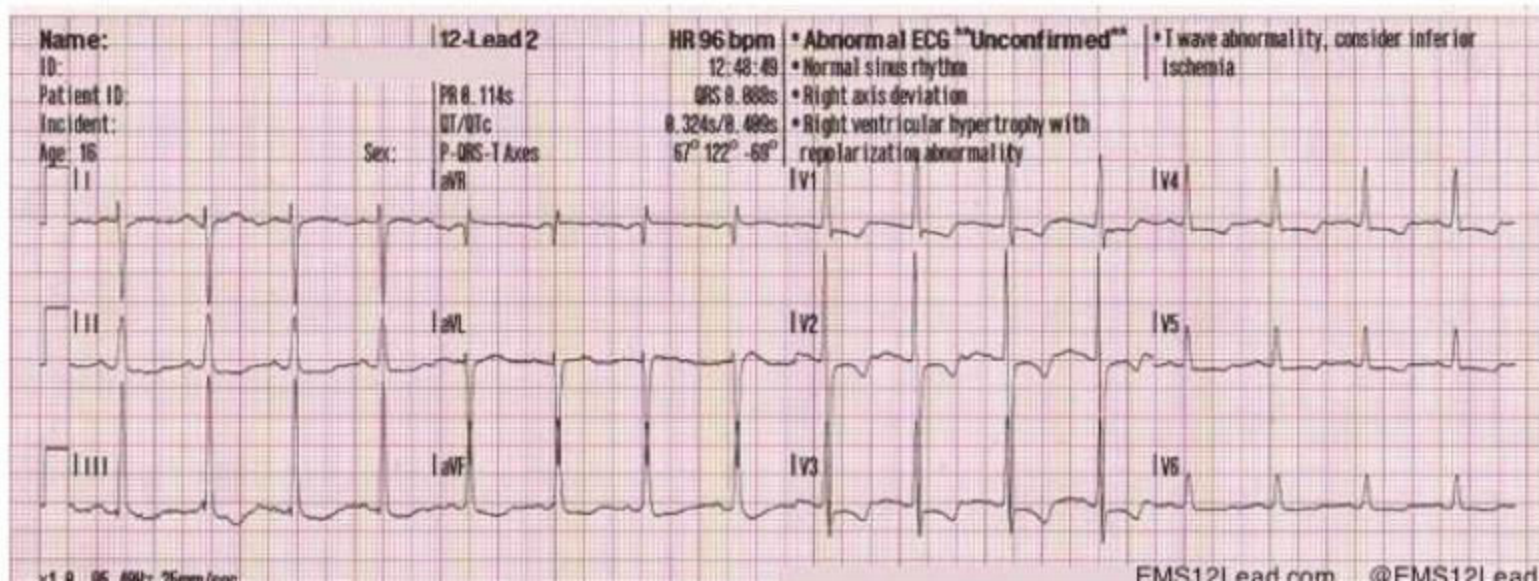


Con.. Diagnostic Test's

ECG : - Right ventricular hypertrophy (RVH).

- large biphasic (equiphasic) QRS complexes.

-biventricular hypertrophy develops.



Treatment

Medical management:

Digoxin (Lanoxin).

Increase the strength of the heart's contractions.

furosemide (Lasix).

Decrease the amount of fluid in circulation and in the lungs.

Bisoprolol (concor)

Keep the heartbeat regular.



Con.. Treatment

Surgical management:

Catheter Procedure:

inserts a catheter into the femoral vein and threads it to the heart's septum.

the device is positioned so that it plugs the hole between the ventricles

Open-heart surgery:

Rarely used in VSD



Preoperative & postoperative care

- Prophylactic antibiotic are often required to prevent infectious endocarditis.
- The child should be assessed postoperatively for dysrhythmia, since edema in the septum may interfere with condition.

Nursing management

Nursing Diagnosis:

Decrease in cardiac output associated with heart malformations.

Nursing goal:

to improve cardiac output.

Nursing Intervention:

Observe the quality and strength of the heartbeat, peripheral pulses, skin color and warmth.

Assess the degree of cyanosis (mucous membranes, clubbing).

Monitor signs of CHF (anxiety, tachycardia, tachipnea, shortness of breath, periorbital edema, oliguria and hepatomegaly).

Con.. Nursing managment

Nursing Diagnosis:

Impaired gas exchange related to pulmonary congestion.

Nursing goal:

improved gas exchange.

Nursing Intervention:

Monitor the quality and rhythm of breathing.

Adjust the position of the child with Fowler position.

Avoid child of an infected person.

Give adequate rest.

Give oxygen as indicated.



THANK YOU

Alicia & Paul