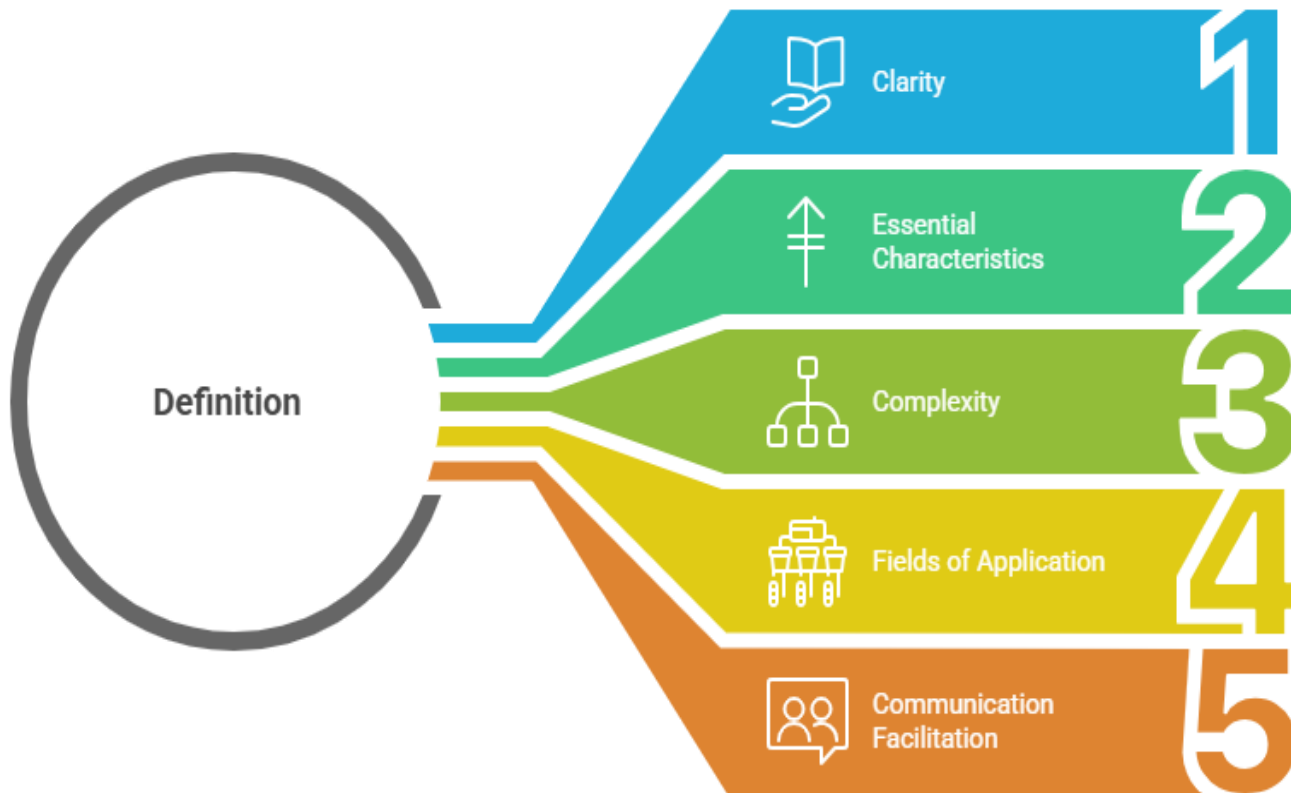


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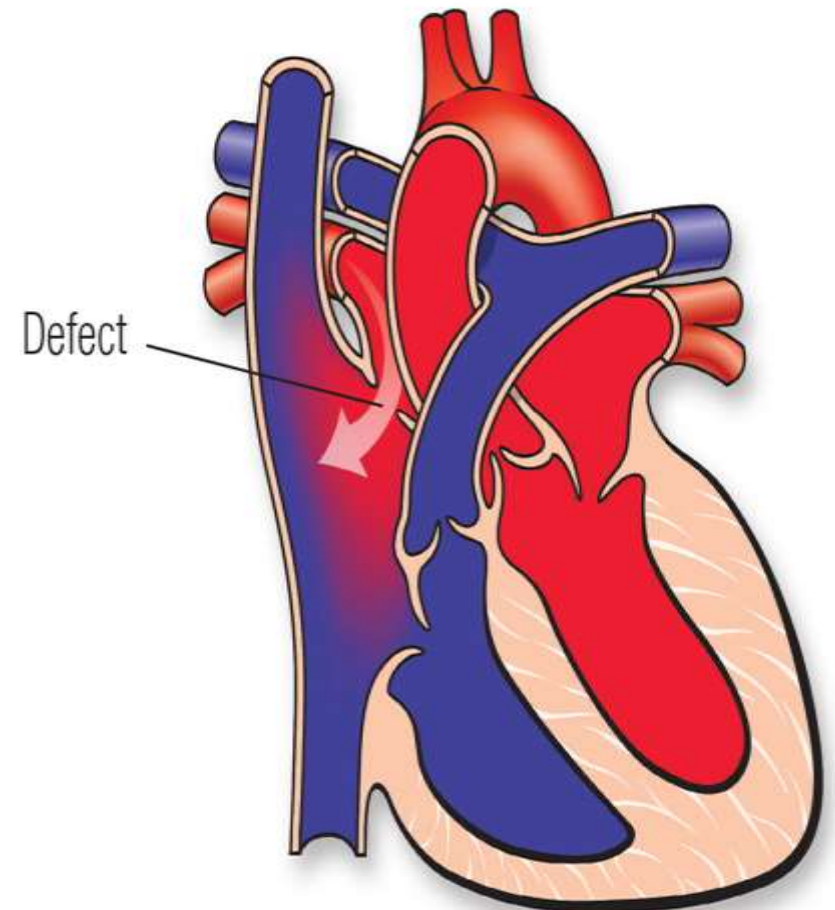


COURSE NAME : BPT., Physiotherapy II Year
SUBJECT : General Medicine
UNIT : 2
TOPIC : Atrial Septal Defect
**PREPARED BY : Dr.R.Rajakrishnan MPT(NEURO)., DYHE.,
CDNT.,CKTP., IASTM PRACTITIONER.,
MARHYTHE PRACTITIONER.,
Assistant professor
SNS College of Physiotherapy**

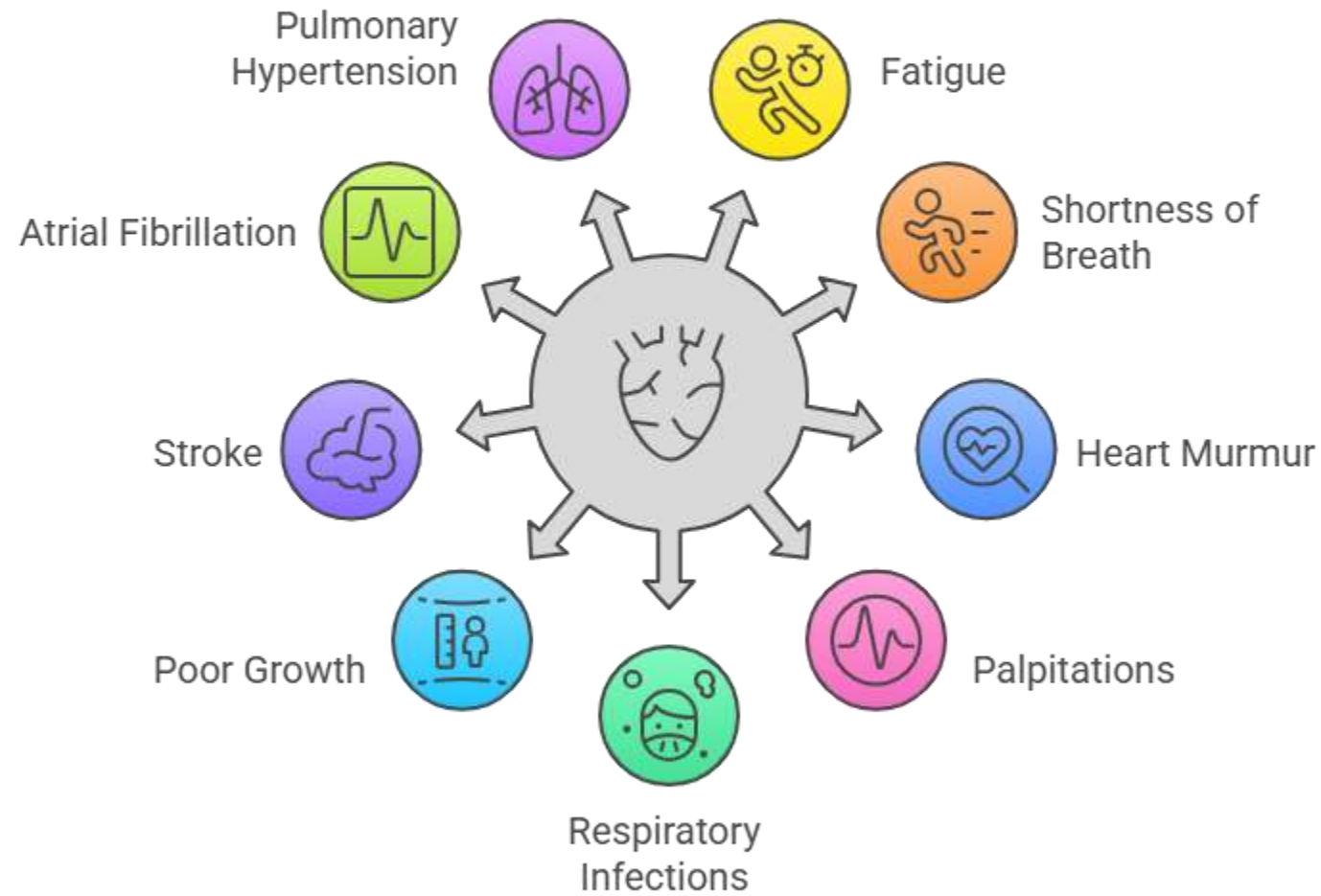
Unveiling the Dimensions of Definitions



Atrial Septal Defect



Clinical Features of Atrial Septal Defect



Made with Napkin

Causes of Atrial Septal Defect

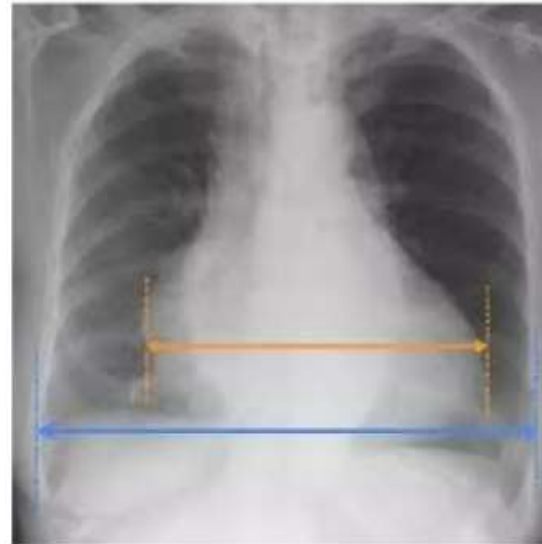
Spontaneous Mutation

Genetic Predisposition

Environmental Factors



Low oxygen levels in the blood cause the lips, fingers, and toes to look blue (cyanotic)



Heart Chamber Anatomy



Septum Secundum

Second septal component to develop

Septum Primum

First septal component to develop

Interatrial Septum

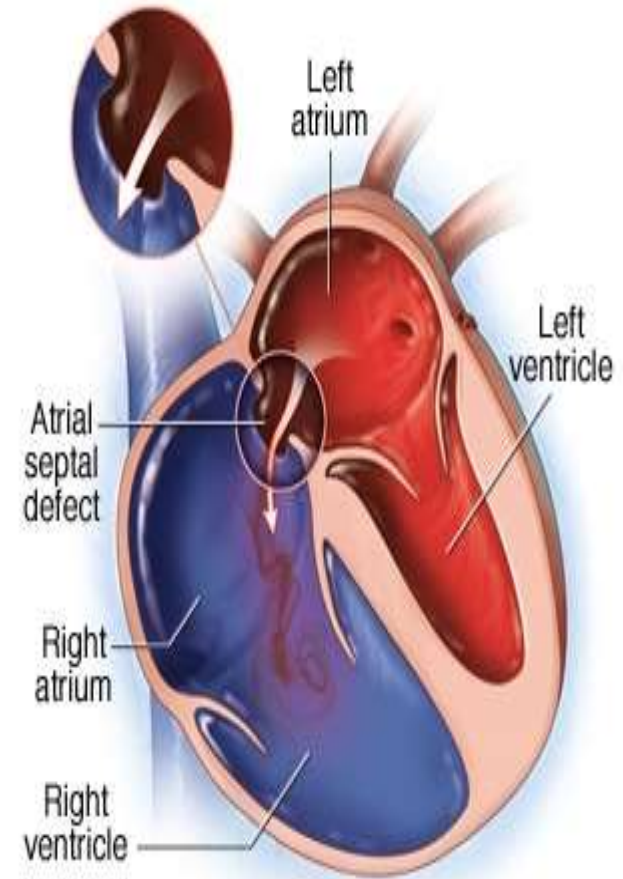
Wall separating atria

Atria

Upper chambers receiving blood

Heart

Central organ of the circulatory system



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Atrial Septal Development

Foramen Ovale
Allows fetal blood flow,
closes after birth



Septum Secundum

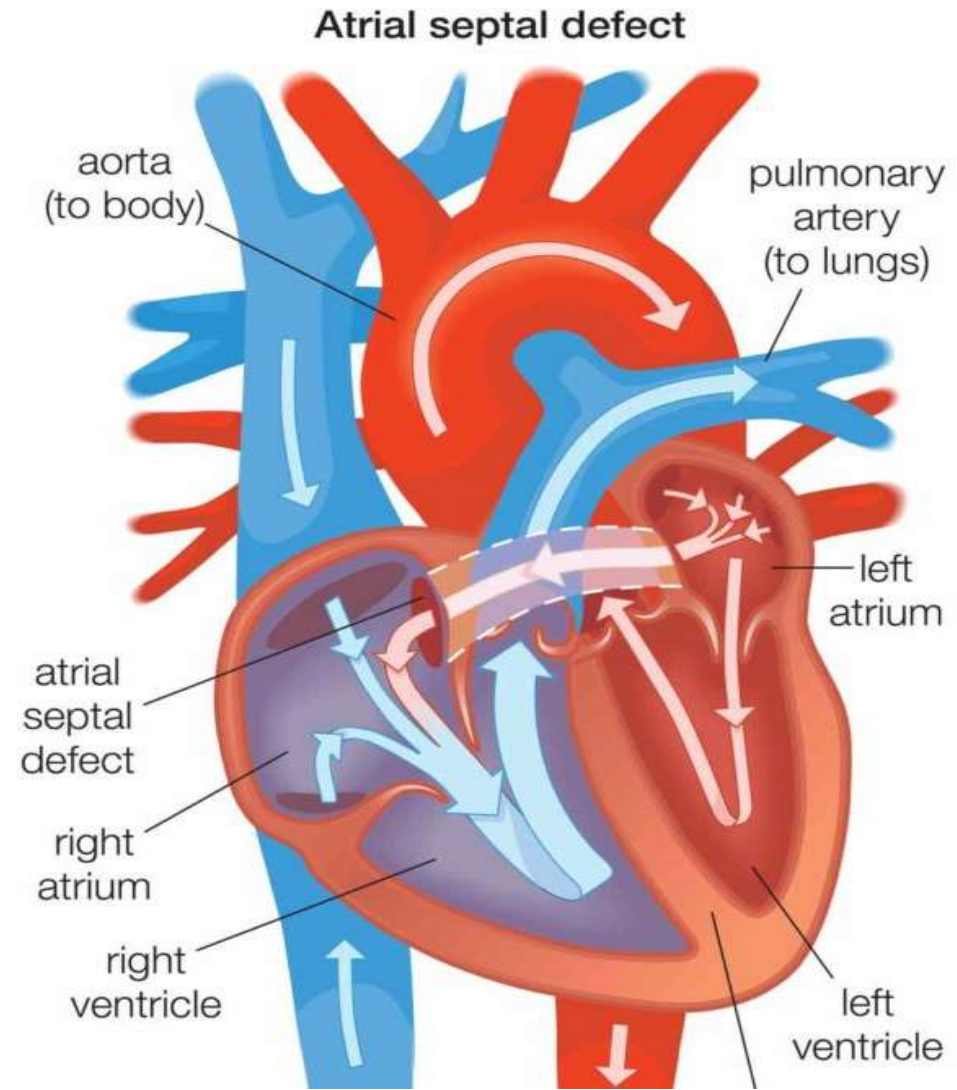
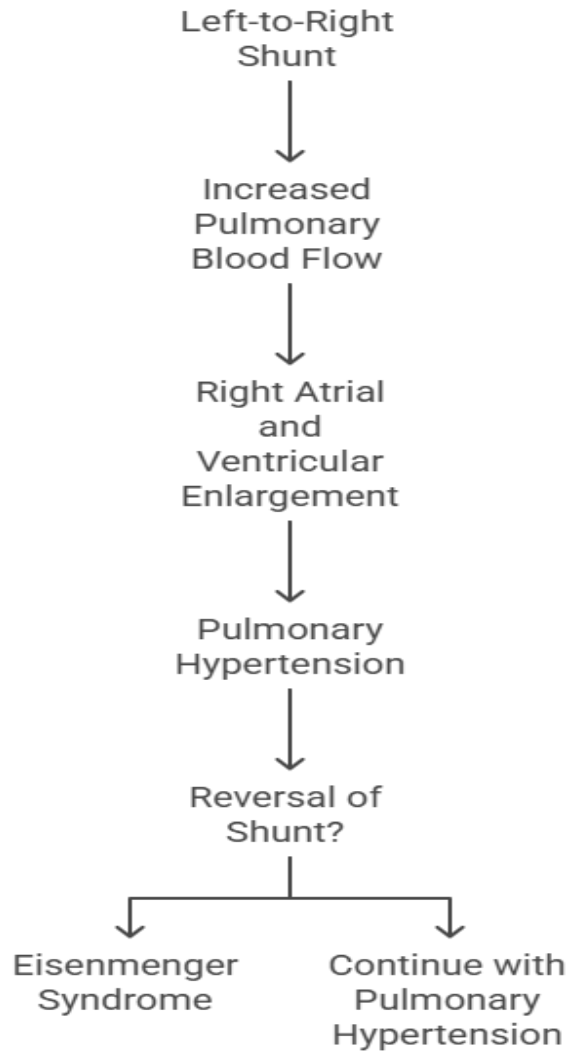
Second septal part to develop

Septum Primum

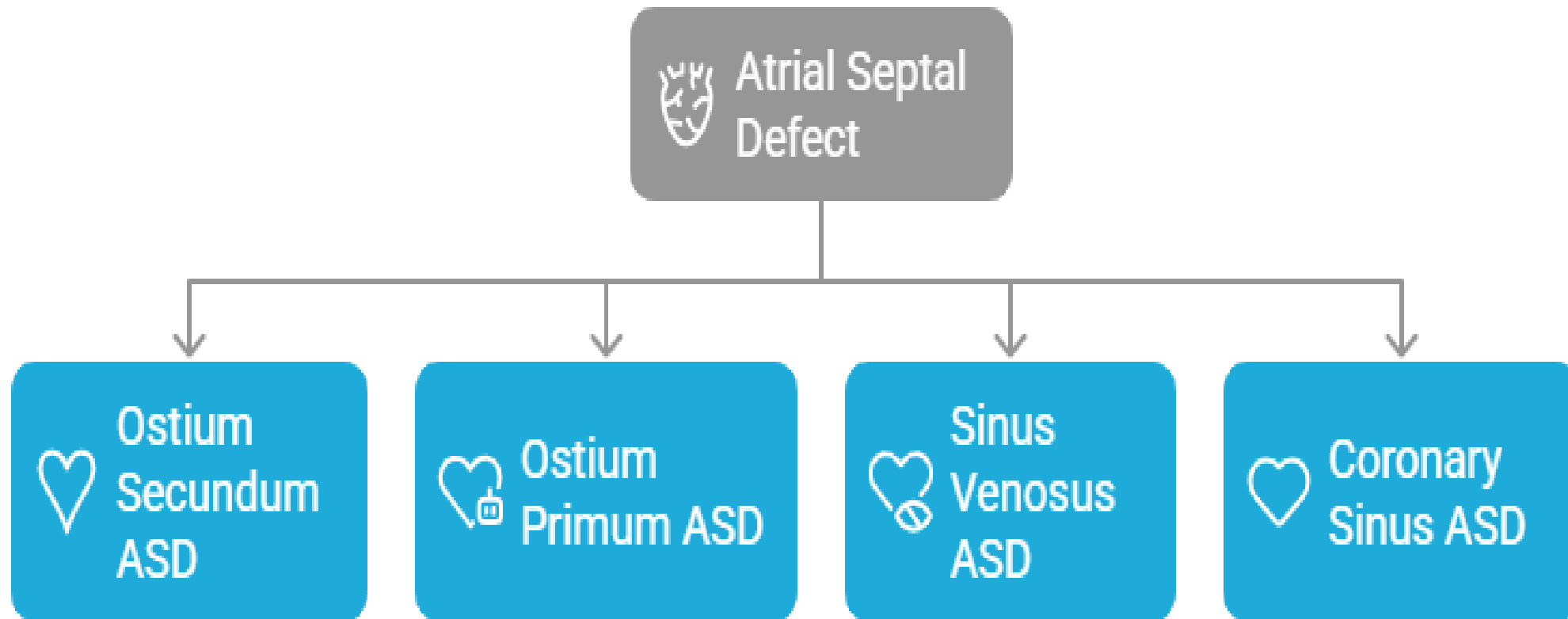
First septal part to develop

Made with  Napkin

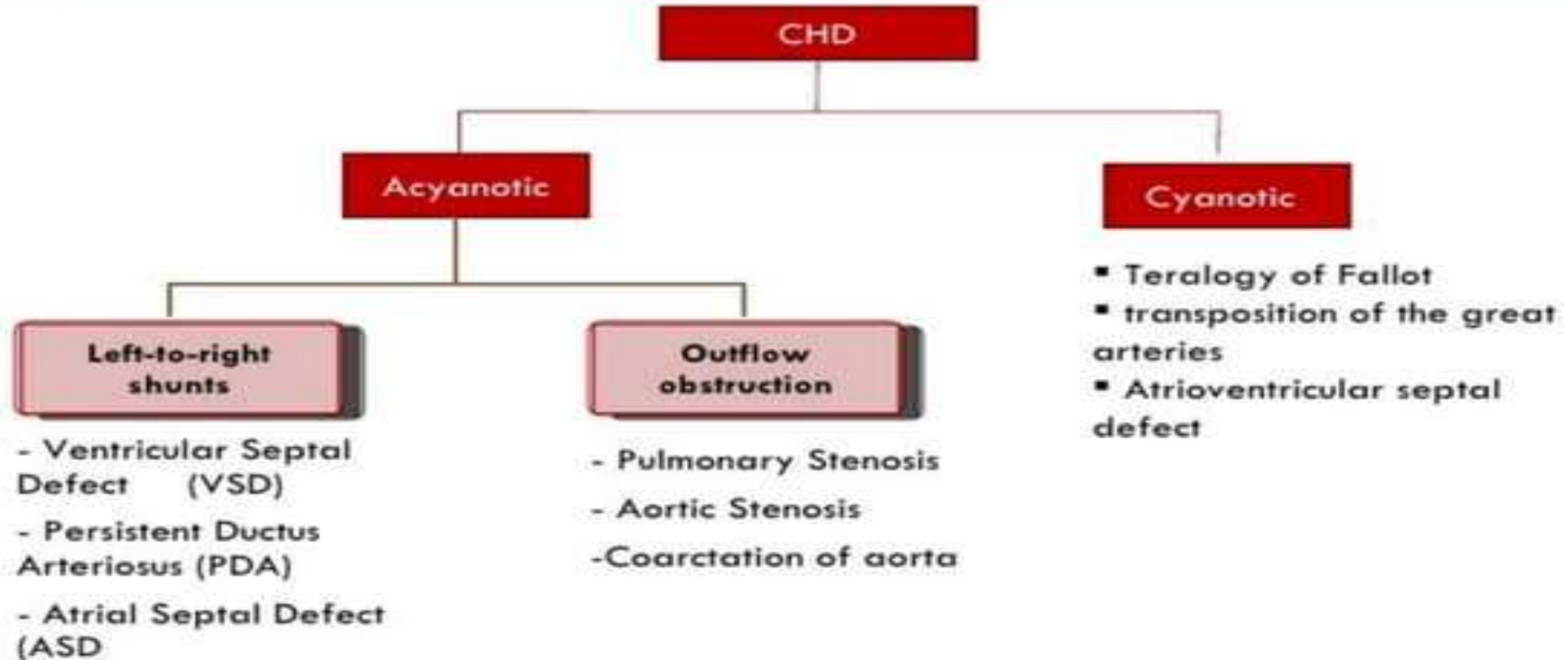
Hemodynamic Consequences of Atrial Septal Defect



Types of Atrial Septal Defects



Classification



Diagnostic Tools for ASD



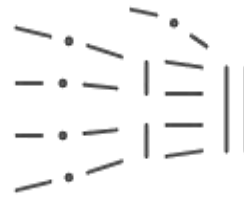
Echocardiography

Primary tool, visualizing the ASD and assessing shunt size. TTE and TEE provide different levels of detail.



Electrocardiogram (ECG)

May show signs of right atrial enlargement and right ventricular hypertrophy.



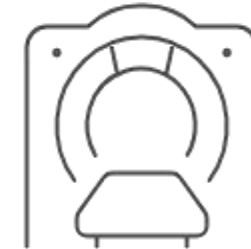
Chest X-ray

May show cardiomegaly and increased pulmonary vascular markings.



Cardiac Catheterization

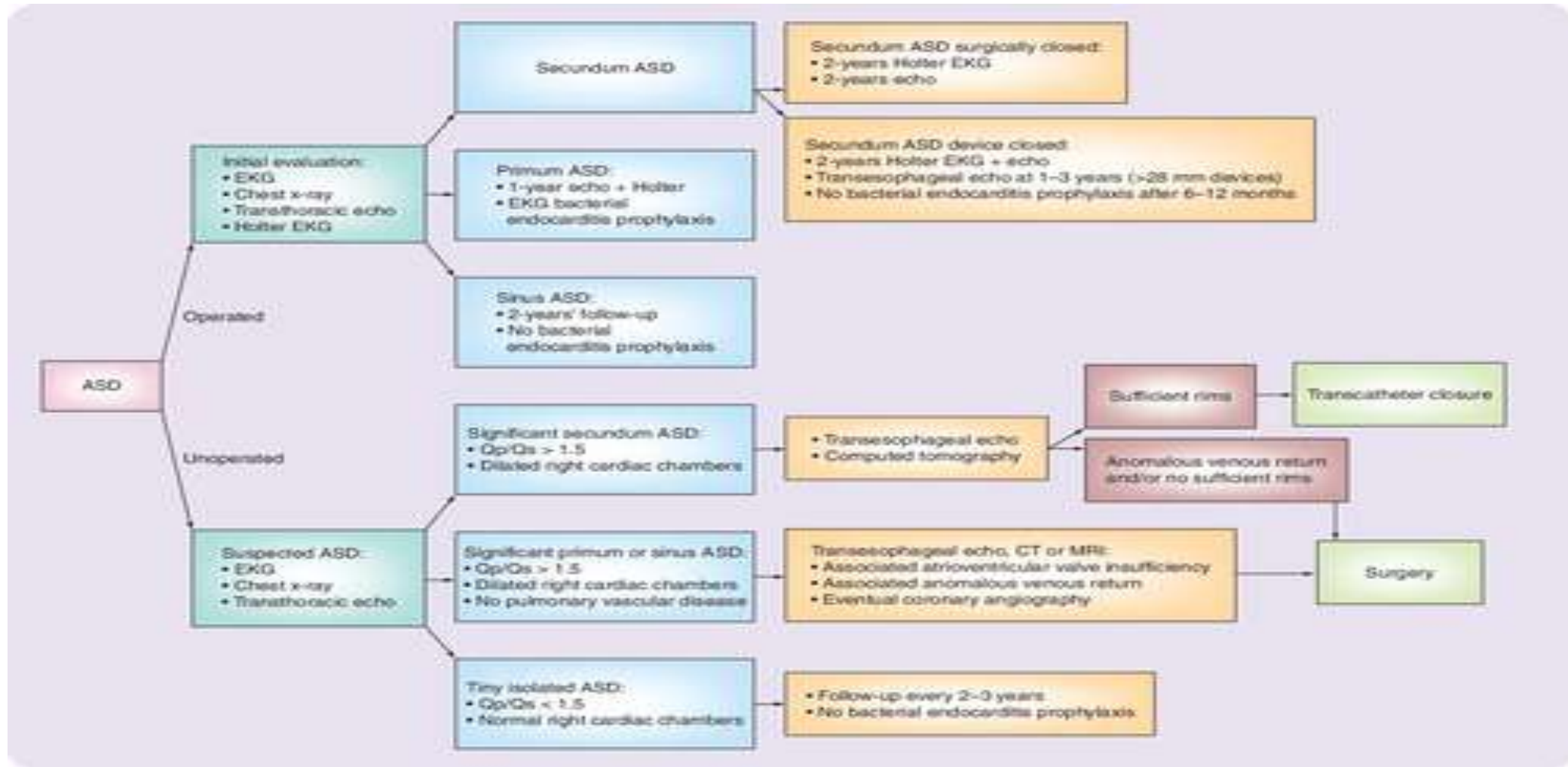
Measures pressures and assesses shunt size, evaluating pulmonary hypertension.



MRI

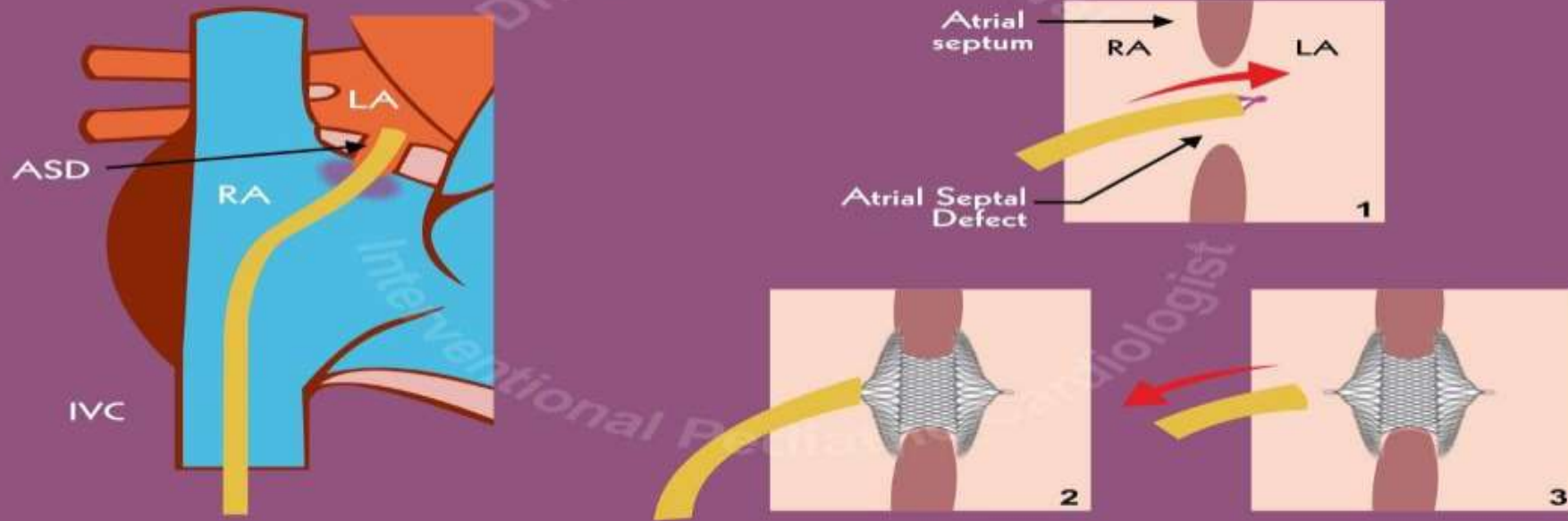
Assesses ASD size and location, as well as right ventricle function.

MEDICAL MANAGEMENT



SURGICAL MANAGEMENT

Steps of Atrial Septal Defect Device Closure



RA : Right Atrium
 LA : Left Atrium
 IVC : Inferior Vena Cava
 ASD : Atrial Septal Defect

In Class Assessment

Case Study

A **12-year-old child** is brought to the outpatient department with complaints of **easy fatigability, exertional dyspnea, and recurrent respiratory infections** since early childhood.

There is **no history of cyanosis**.

On physical examination:

- Pulse: normal

- Blood pressure: normal

- Wide and fixed splitting of second heart sound (S2)**

- Systolic ejection murmur** heard at the **left upper sternal border**

Chest X-ray shows **increased pulmonary vascular markings**, and ECG reveals **right axis deviation**.

Case-Based MCQs

1. The most likely diagnosis in this child is:

A. Ventricular septal defect B. Patent ductus arteriosus C. Atrial septal defect D. Tetralogy of Fallot

2. The clinical finding MOST characteristic of this condition is:

A. Loud P2 B. Continuous machinery murmur C. Wide, fixed split S2 D. Diastolic murmur at apex

3. The direction of blood flow across the defect in this patient is:

A. Right-to-left shunt B. Left-to-right shunt C. Bidirectional shunt D. No shunt

4. The systolic murmur heard in this patient is due to:

A. Flow across the atrial septal defect B. Mitral regurgitation C. Increased flow across pulmonary valve
D. Turbulent flow in the aorta

5. The MOST common type of atrial septal defect is:

A. Ostium primum B. Sinus venosus C. Coronary sinus defect D. Ostium secundum

6. The investigation of choice to confirm this diagnosis is:

A. Chest X-ray B. ECG C. Echocardiography D. Cardiac enzymes

7. If left untreated, the MOST serious long-term complication is:

A. Left ventricular failure B. Pulmonary hypertension leading to Eisenmenger syndrome C. Infective endocarditis D. Acute myocardial infarction

8. Which ECG finding is commonly associated with ASD?

A. Left ventricular hypertrophy B. ST elevation C. Right axis deviation D. Atrial fibrillation only