

# CHD

When to call a surgeon ?!!

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## General rules

- When or why?
- No guidelines in CHS
- Types of surgery
- Options to repair CHD

## When and why

This is the difference between :  
 Indication of surgery  
 And  
 Timing of surgery

## Guidelines

No guidelines in  
 CHD

Recommendation	Class <sup>a</sup>	Level <sup>b</sup>
It is recommended that the obstetric anomaly scan be performed at 18–22 weeks of gestation	I	C
To increase prenatal detection, it is recommended that outflow tract views, in addition to four-chamber views, be included in obstetric anomaly scans	I	C
It is recommended that the diagnosis be confirmed by a foetal cardiology specialist and that parental counselling should also be provided by a foetal cardiology specialist and other related health professionals (foetal medicine specialists, obstetricians, paediatric cardiac surgeons and neonatologists)	I	C
It is recommended that a detailed foetal anomaly scan be performed by a foetal medicine specialist	I	C
Because the risk for foetal karyotype abnormality is low in cases of TGA IVS, karyotyping may be considered on an individual basis where appropriate	IIb	C
After foetal diagnosis, follow-up to term is recommended for early detection of the development of high-risk features, which may require immediate intervention following delivery	I	C

## Types of surgery

Salvage surgery  
Emergency surgery  
Urgent surgery  
Elective surgery

## Options to repair CHD

Biventricular  
repair

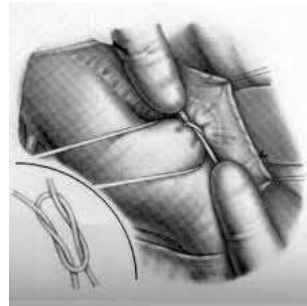
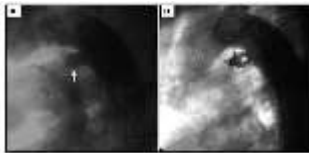
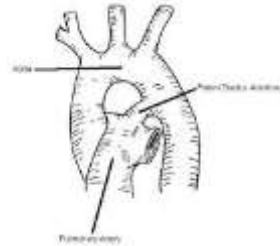
One and half  
ventricle repair

Univentricular  
repair

## PDA

Once hemodynamically significant beyond the time of spontaneous closure.

\* Neonatal closure ???

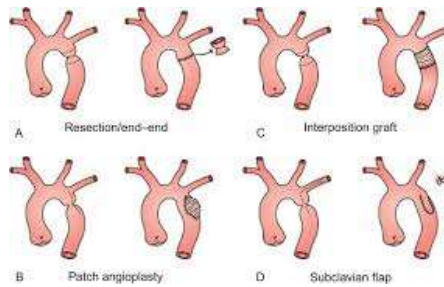


## Aortic coarctation

Indication: once diagnosed

Timing: at any time

\* Neonatal critical Ao.Co.???

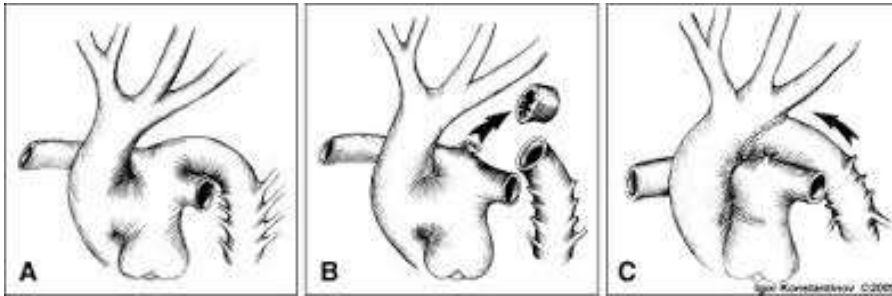
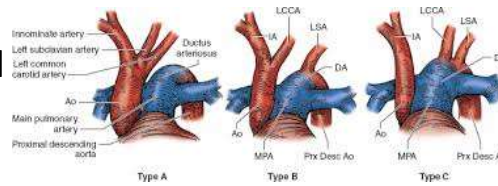


# Interrupted aortic arch

Is it still emergency?

Indication: once diagnosed

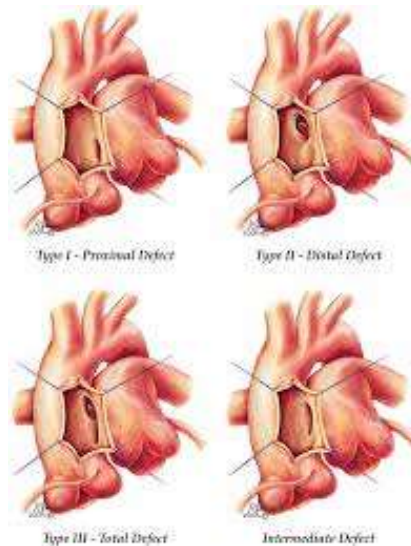
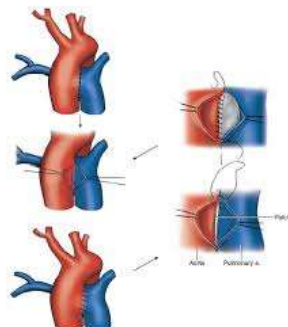
MSCT is recommended



# Aortopulmonary window

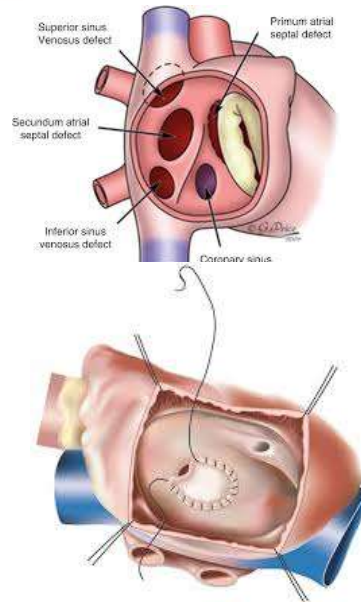
Indication: once diagnosed

Timing: at any time

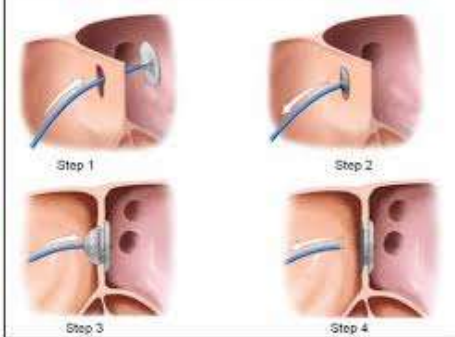


# ASD

Indication: significantly hemodynamic ASD  
 Timing: debatable  
 Caution????

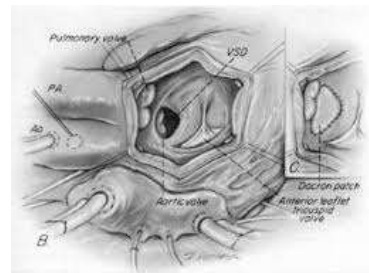
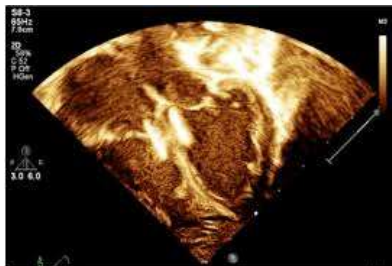
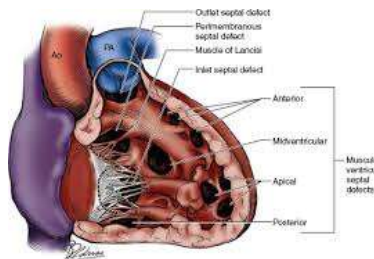


ASD device closure : Is it as simple as it looks ?



# VSD

**Emergency** call: None  
**Urgent** call: None  
**Elective** call: at any time

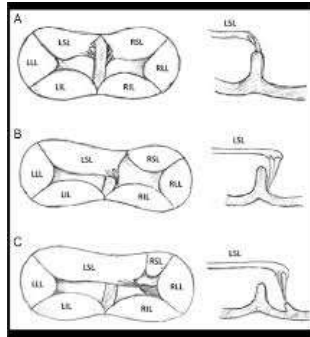


## AVC

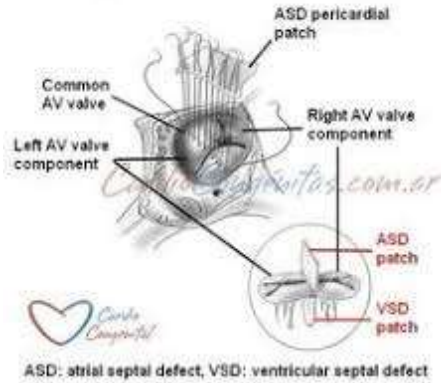
**Emergency** call: None

**Urgent** call: None

**Elective** call: at any time



### Complete AV canal repair

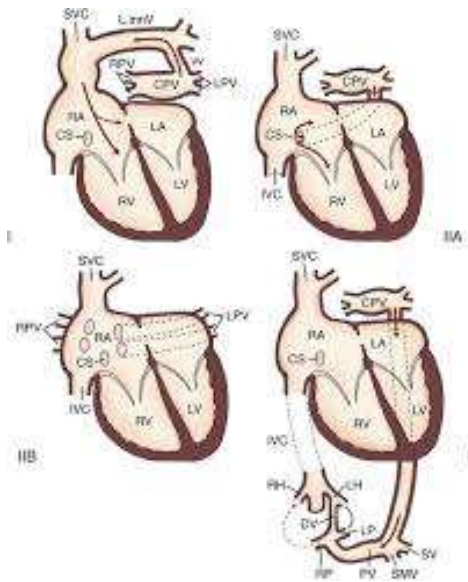


## TAPVC

**Emergency** call: obstructed  
TAPVC

**Urgent** call: infracardiac

**Elective** call: at any time



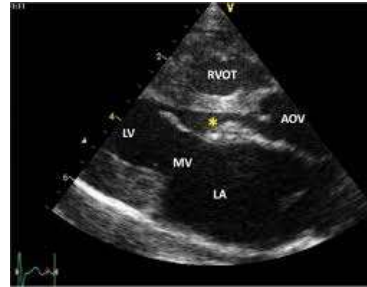
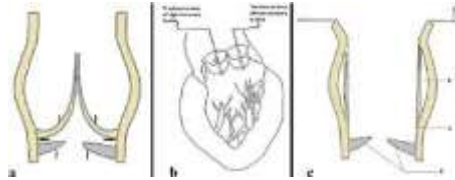


## LVOTO subvalvular

**Emergency** call: None

**Urgent** call: None

**Elective** call: at any time

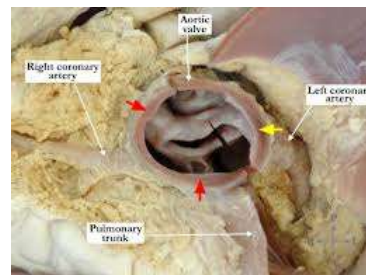
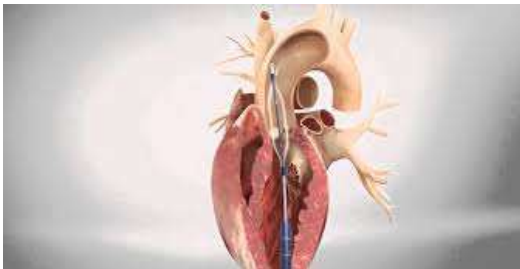


## LVOTO valvular

**Emergency** call: None

**Urgent** call: Critical neonatal AS

**Elective** call: at time



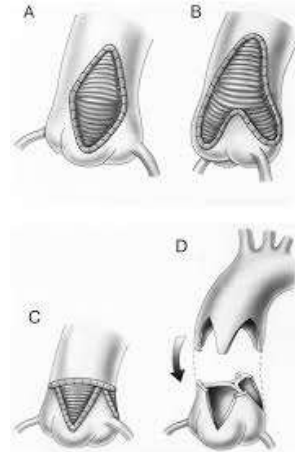


## LVOTO supravalvular

**Emergency** call: None

**Urgent** call: None

**Elective** call: at any time



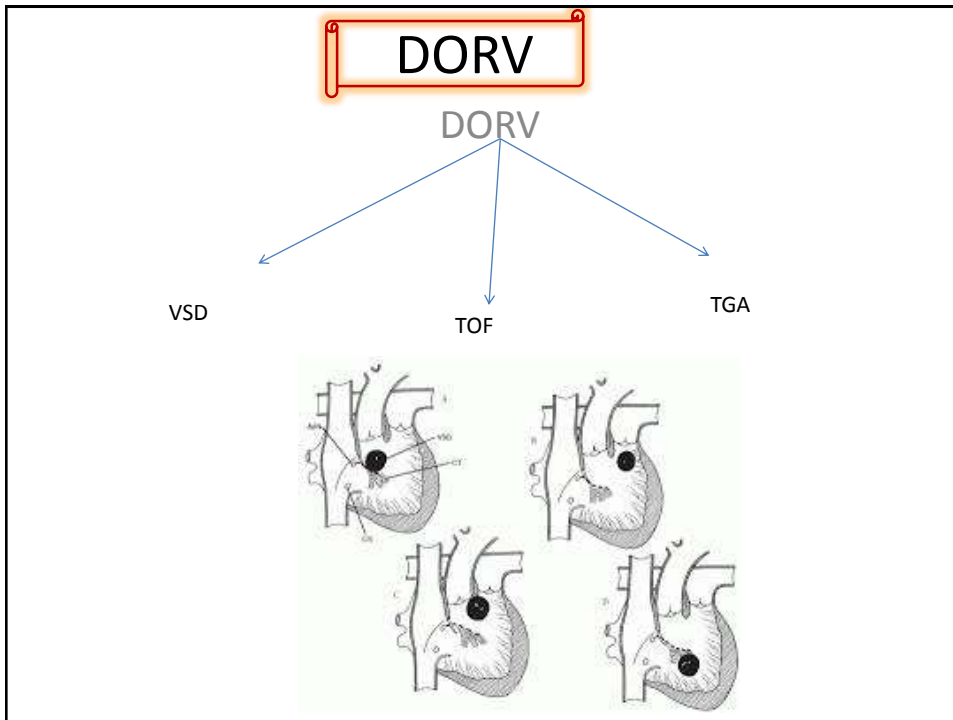
## Fallot tetralogy

**Emergency** call: None

**Urgent** call: frequent  
spells

**Elective** call: at any  
time





## **DORV**

\* All the windows are open

1. Biventricular repair
2. One and have ventricle repair
3. Univentricular repair

**Emergency** call: None

**Urgent** call: may be

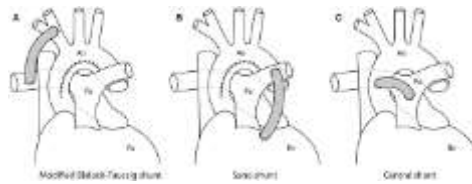
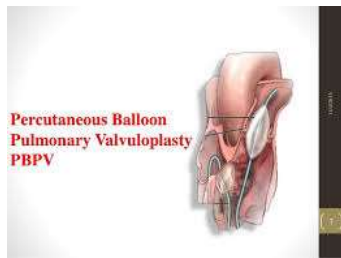
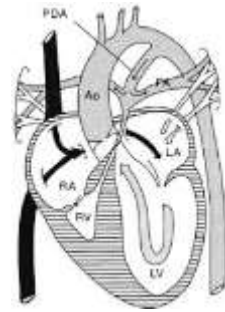
**Emergency** call: None

## Pulmonary atresia with IVS

**Emergency** call: None

**Urgent** call: closing PDA

**Elective** call: at any time



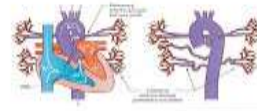
## Pulmonary atresia with VSD

**Emergency** call: None

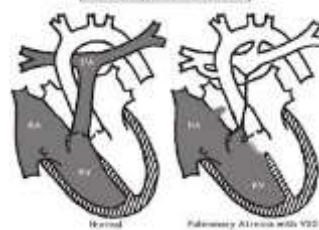
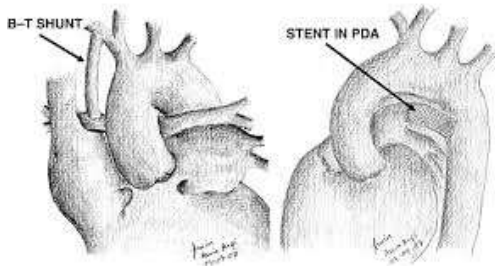
**Urgent** call: PDA dependent

**Elective** call: at any time

Pulmonary atresia with VSD and multiple non-coronary collaterals (MCC)



Pulmonary Atresia with VSD

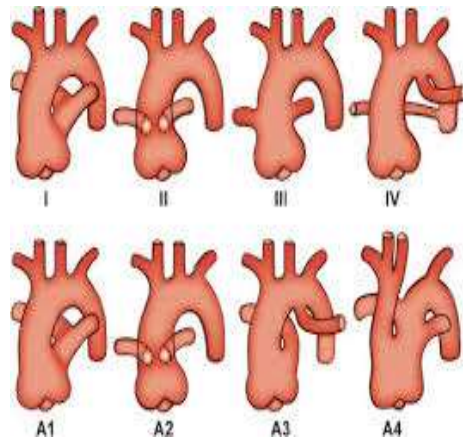


## Truncus arteriosus

**Emergency** call: None

**Urgent** call: None

**Elective** call: at any time

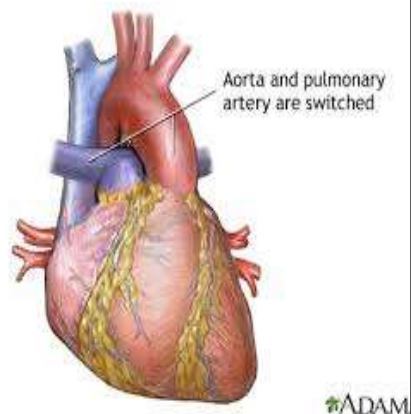


## TGA with IVS

**Emergency** call: None

**Urgent** call: search for mixing

**Elective** call: ??????

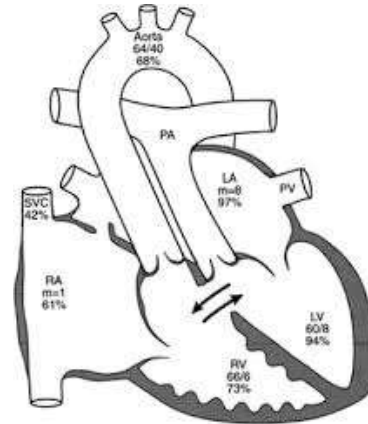


## TGA with VSD

**Emergency** call: None

**Urgent** call: None

**Elective** call: ??????

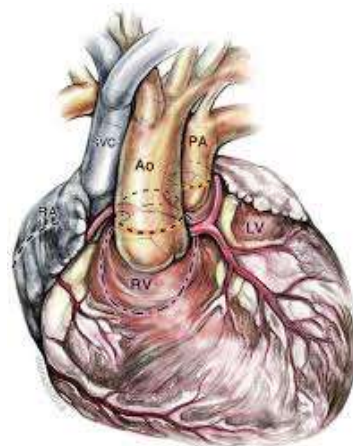


## TGA with VSD and LVOTO

**Emergency** call: None

**Urgent** call: None

**Elective** call: look at saturation

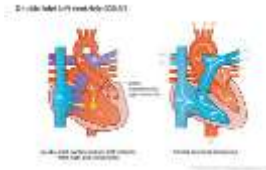
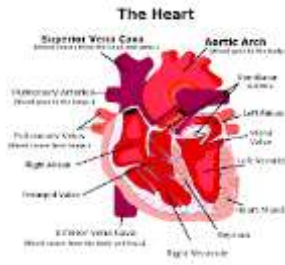
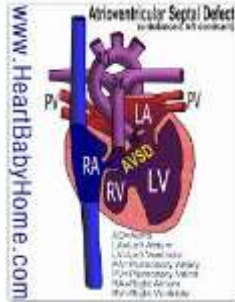
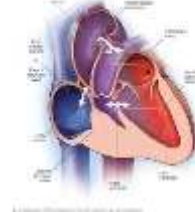
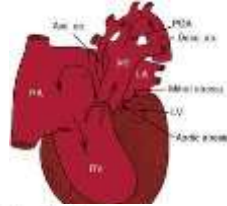


# Single ventricle

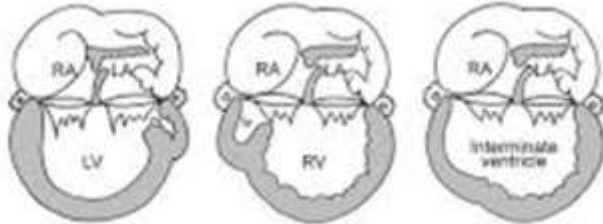
**Emergency** call: None

**Urgent** call: may be

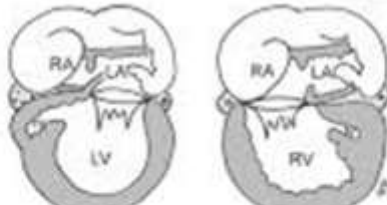
**Elective** call: ???



# Single ventricle



Double inlet left ventricle      Double inlet right ventricle      Double inlet indeterminate or common ventricle



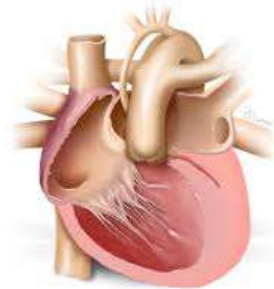
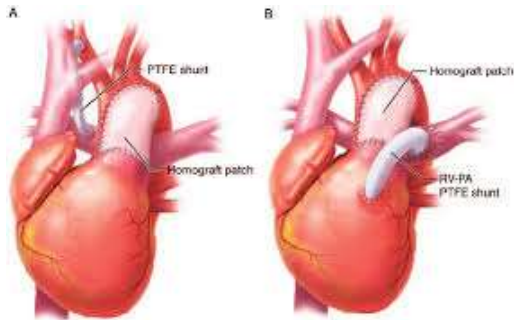
Absent right atrioventricular connection      Absent left atrioventricular connection

## HLHS

**Emergency** call: None

**Urgent** call: the rule

**Elective** call: None



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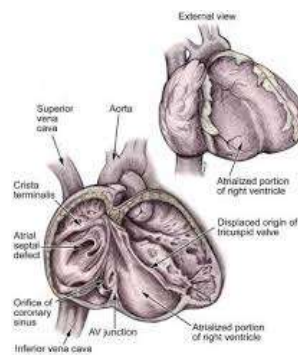
## Ebstein anomaly

**Emergency** call: None

**Urgent** call: rare

**Elective** call:????

All the doors are opened,,,,,,





## Cardiac tumors

**Emergency** call: mechanical  
obstruction

**Urgent** call: potentially  
obstructing

**Elective** call:????



THANK YOU