



# Case Presentation

## Congenital and structural HD team

Presented by

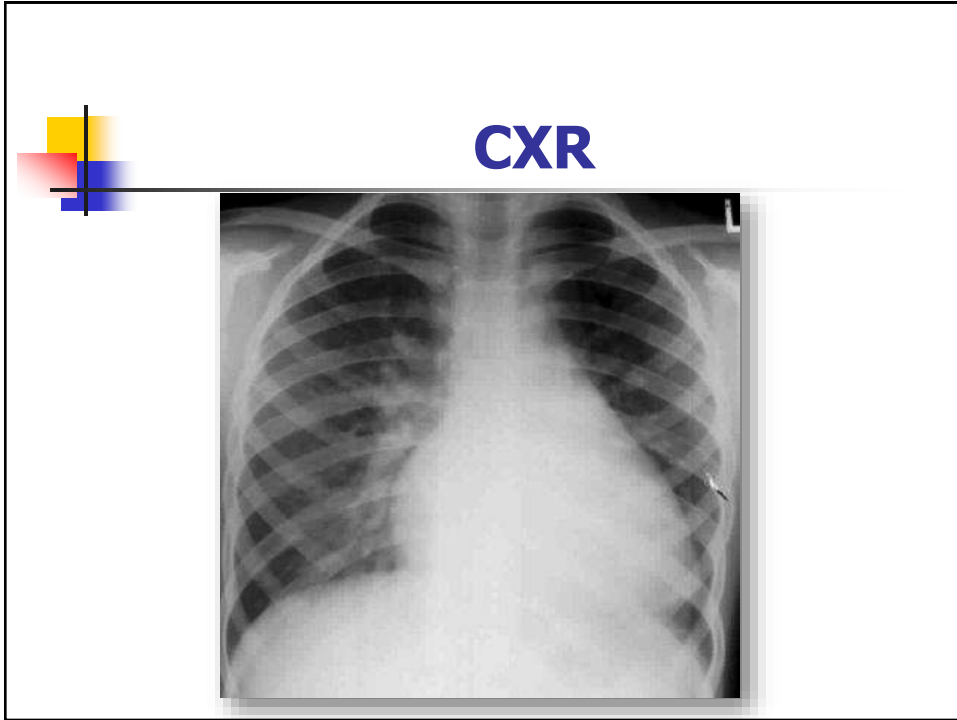
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## History & Physical examination

- a 7-years-old girl patient presented with dyspnea on exertion (NYHA FC III) and palpitation .
- O/E
  - General examination  
**underweight**
  - Local cardiac examination  
**reveal apex shifted downwards & outwards, hyper dynamic, LV S3 gallop, a grade-III continuous murmur most loudly at the Rt sternal border.**







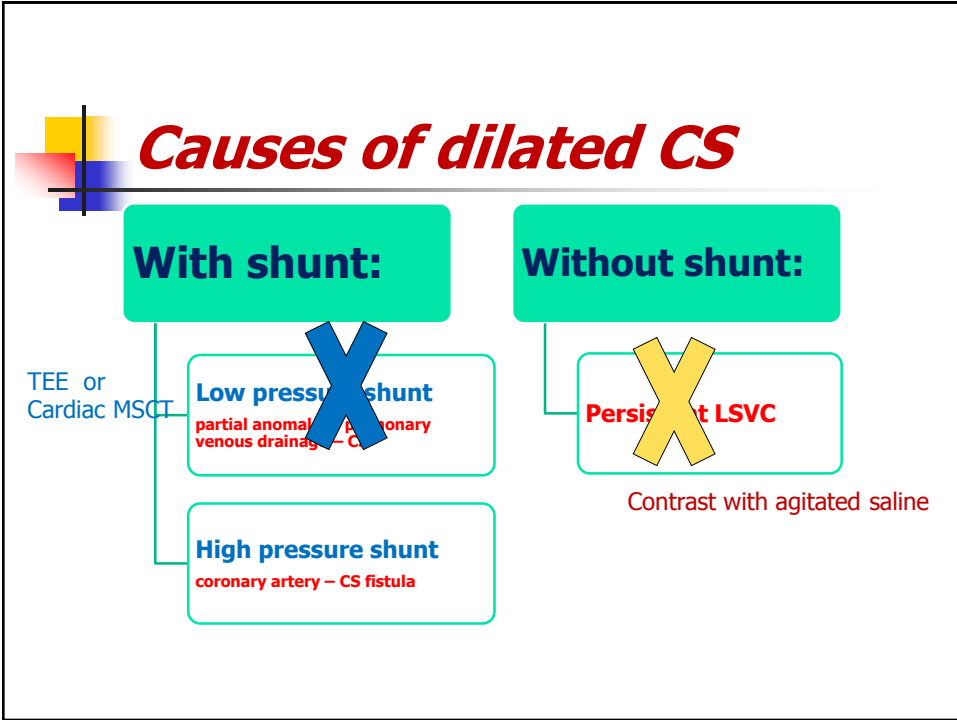
## CORONARY SINUS

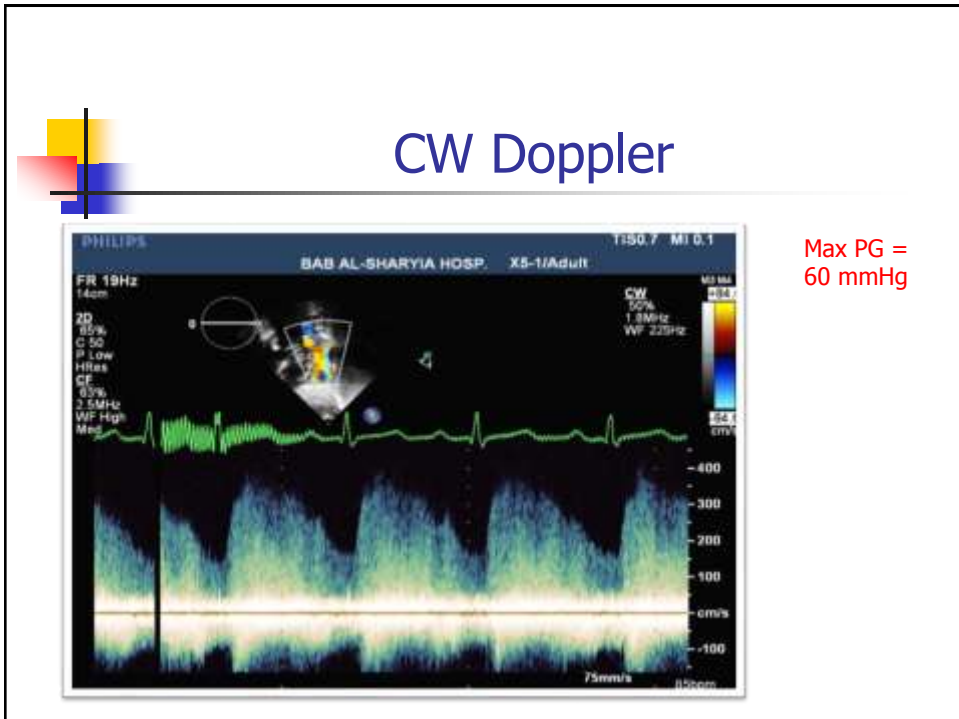
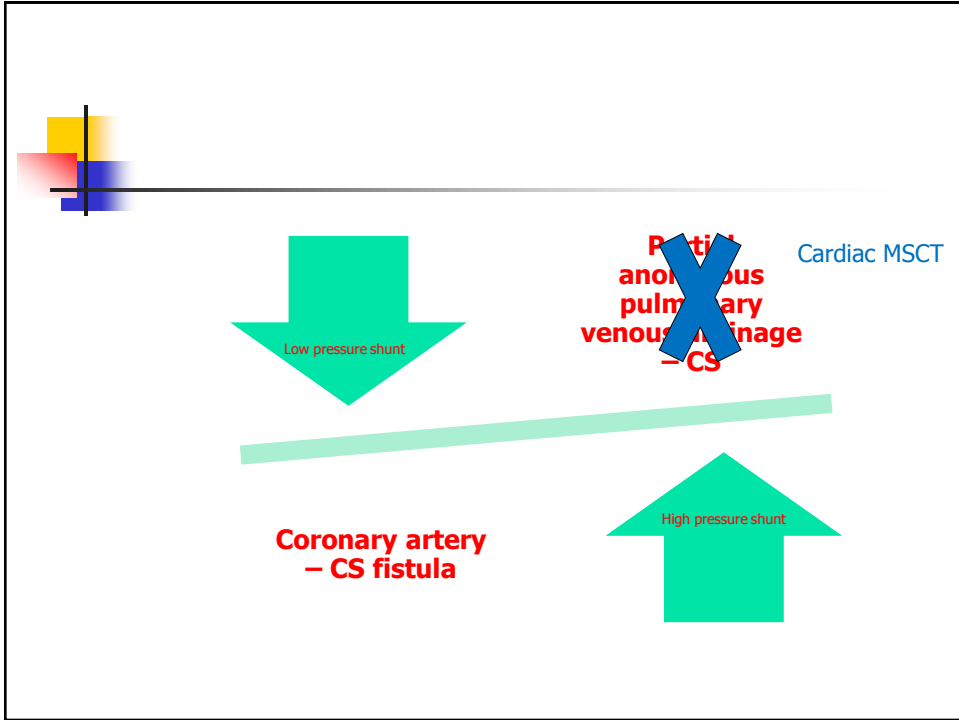
- The coronary sinus is defined as the blood conduit that is a continuation of the great cardiac vein from the valve of the great cardiac vein to the ostium of the coronary sinus.
- The length varies from 3 to 5.5 cm. CS lies in the sulcus between the left atrium and ventricle
- The CS receives blood from the ventricular veins during ventricular systole and empties into the right atrium during atrial systole.
- The Thebesian valve is a crescent shaped structure often found guarding the mouth of the CS as it opens to the right atrium.

## Coronary Sinus anomalies

- An Absent coronary sinus is always associated with a persistent left superior vena cava (PLSVC) connecting to the left atrium.
- A Hypoplastic coronary sinus
- Atresia or stenosis of the coronary sinus ostium
- Enlargement of the coronary sinus
- Unroofed coronary sinus anomaly





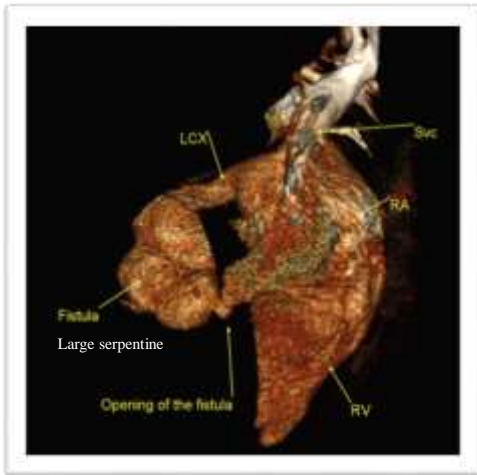
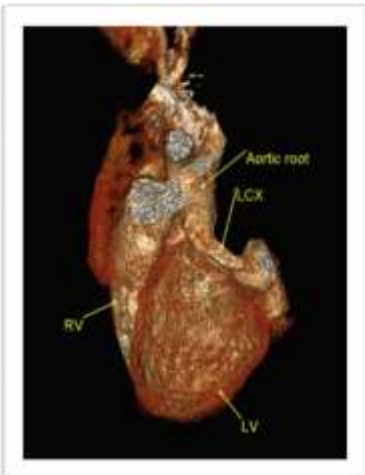




# MSCT



# MSCT



## Coronary sinus fistula


- **Coronary artery fistula is a condition in which a communication exists between one or two coronary arteries and either:**

1. *A cardiac chamber*
2. *The coronary sinus*
3. *The superior vena cava*

- *The pulmonary artery*
- **Coronary anomalies may be abnormalities of origin, distribution or termination.**


**CAVF are considered mainly to be termination abnormalities**

Origin	Frequency (%)	Drainage	Frequency (%)
RCA	50-60	RV	14-40
LAD	25-42	RA	19-26
Both	5	LV	2-19
CX	18.3	PA	15-20.2
Diagonal	1.9	CS	7
Marginal	0.7	LA	5-6
Single coronary	3	SVC	1



- **The involved coronary artery is dilated because of increased blood flow and is often tortuous to an extent determined by the shunt volume**

- .



**Generally, the symptoms develop depending on the amount of the left-to-right shunt or the presence of coronary steal phenomenon of the fistulae, which usually present in young adults with angina (3–7%), exertional dyspnoea (60%), endocarditis in the fistula (20%), syncope, palpitations, myocardial ischemia and infarction, and manifest in older adults with congestive heart failure (19%), atherosclerosis, and cardiac arrhythmias**



## What is the Plan ?



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### Surgical closure

#### Recommended

- large and tortuous,
- distal

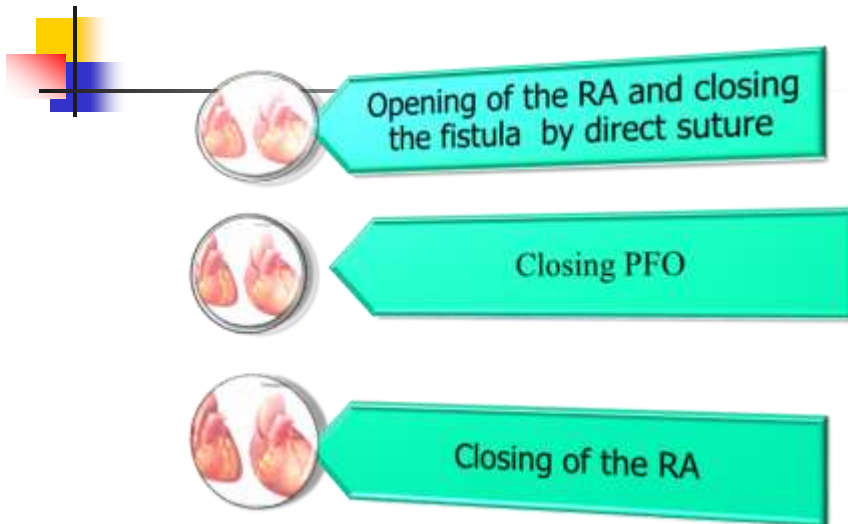
#### Difficult

- the **multiplicity** of distal coronary artery-to-CS connections and
- the **location** of the connection on the posterior base of the heart



### Transcatheter closure

## Operative details



## Follow-up


- ASA 75 mg/day life-long
- Prophylaxis against infective endocarditis
- Follow up Echo



# Post operative Echo

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6 months Post operative



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# THANK YOU