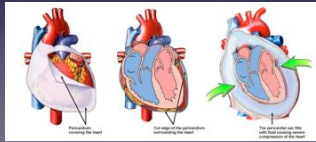


Pericardial tamponade



Tamponade

- [tam-puh-neyd]
- Derived from the French word Tampon ► plug, bung
- Tamponnade in French

Principles

- Malignant
- Pericarditis
- Trauma

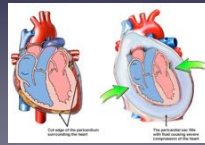


Principles

- Malignant diseases - 30-60% of cases
- Uremia - 10-15% of cases
- Idiopathic pericarditis - 5-15%
- Infectious diseases - 5-10%
- Anticoagulation - 5-10%
- Trauma 2%

Principles

- Insufficient diastolic filling
- Pericardium is a two layered structure
 - Thicker outer fibrous layer
- Rapid filling more dangerous

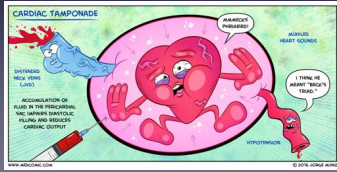


Clinical Features

- Tachycardia
- Tachypnea
- Dyspnea
- Chest pain
- Pulsus Paradoxus

Beck's Triad

- Hypotension
- Distended neck veins
- Muffled heart sounds



Pericardial Tamponade

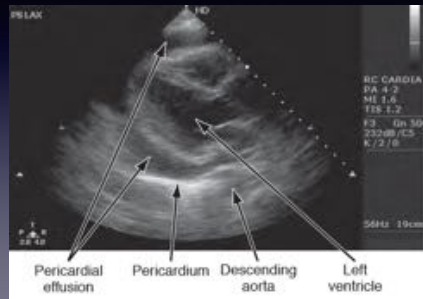
- Presents with shock with distended neck veins
- Needs to be differentiated from a tension pneumothorax
- Commonly due to penetrating trauma
- Even a small amount of blood in the non-distensible pericardial sack can cause obstruction of the heart

Investigations

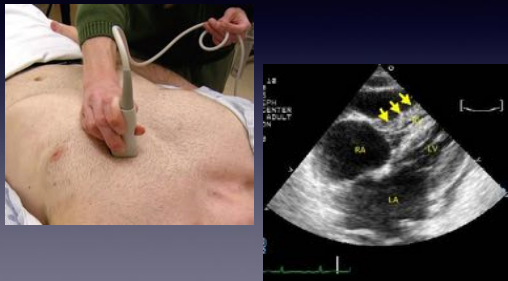
- CXR



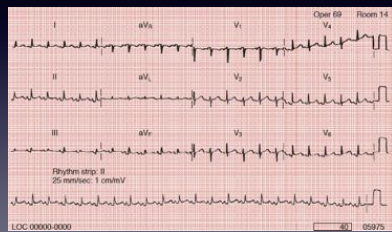
Investigations



Echocardiography



Electrical Alternans



Investigations

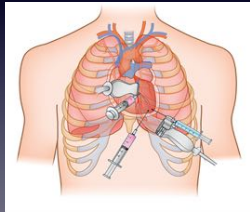
- Equalization of ventricular pressures
- Rising central venous pressure

Management

- Needle pericardiocentesis temporising measure
- Penetrating injuries are associated with a substantial clot
- Pericardiocentesis ► high potential for iatrogenic injury
- Correct immediate treatment ► Sternotomy or Left thoracotomy
- Pericardiectomy for non trauma patients

Pericardiocentesis

- Parasternal
- Substernal
- Apical



Pericardial tamponade

- The presentation is similar to a tension pneumothorax: deteriorating cyanosis tachycardia and agitation
- Ultrasound is diagnostic
- The central venous pressure may not be elevated if the circulating volume is depleted, e.g. because of other injuries
- Pericardiocentesis is a temporising measure only with a high complication rate and is not a substitute for immediate operative intervention

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