Trans-esophageal Echocardiography

Artifacts and Pitfalls

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Introduction

Transoesophageal echocardiography has emerged over only the last 40 years. The first M-mode transoesophageal images were published in the 1970s by Dr Frazin, a cardiologist in Chicago, who attached a traditional probe on to the end of an endoscope. It did not catch on as a technique because the patient found it
Transesophageal echocardiography uses all the same technology as transthoracic imaging. 2D-echo, colour & spectral Doppler can all be performed as well as TDI & 3D reconstructions.

LUNGS AND RIBS DON’T INTERFERE
ONLY ESOPHAGEAL WALL AND PERICARDIUM IN BETWEEN
WONT DISRUPT SURGERY
TRANS THORACIC IS DIFFICULT IN:
   - OBESITY/EMPHYSEMA/ABNORMAL CHEST WALL

ADVANTAGES
Indications

- Evaluation of valve pathology.
  - Pre-surgical evaluation for repair of mitral or aortic valves.
  - Evaluation of cause of dysfunction.

- Suspected acute aortic pathology.

- Evaluation of Prosthetic valve malfunction.
Suspected endocarditis:
  - Diagnosis.
  - Monitoring.

Percutaneous non-coronary intervention:
  - PBMV
  - Closure of cardiac defects (ASD – VSD – PFO).
  - Repair of paravalvular leak
  - EPS (septal puncture – lead placement)
  - Alcohol septal ablation in HOCM

Congenital heart disease:
  - Intra-cardiac shunt.

Prior to cardioversion
  - AF / Flutter.

Suboptimal TTE image:
  - Post-operative.
  - COPD - Obesity.
Cardiac source of emboli:
- LAA- LA- LV.
- Lt. sided valve masses / thrombi/ vegetations.

Haemodynamic monitoring:
- Peri-operative monitoring.
- Intensive care monitoring.

left atrial appendage thrombus
papillary fibroelastoma is a small, mobile mass attached to the aortic valve