

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.*



ADVANTAGES

- ✓ 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



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

