



Case Cardiac Anesthesia Group

TEE Exam Sequence/Worksheet[†]

Version 11-22-2011

[†]The following exam sequence is a recommended set of guidelines and is not meant to replace sound clinical judgment while performing a complete perioperative TEE examination.

Mid-Esophageal 4-Chamber View

LV Fxn-global: ☐ Hyperdynamic
☐ Normal
☐ Depressed (Mild – Moderate – Severe)
 RV Fxn-global: ☐ Hyperdynamic
☐ Normal
☐ Depressed (Mild – Moderate – Severe)

LV Fxn-MOD: ☐ (mLs)EDV
 (Uniplane) ☐ (mLs)ESV
☐ (%)LVEF

LV size-gross: ☐ Small
☐ Normal
☐ Enlarged

LVH: ☐ Yes (PWT>11mm)
☐ No
 PWT: ☐ (mm)
 SWT: ☐ (mm)
 SWT:PWT ☐ (≥ 1.3 ASH)
 ASH ☐ Yes
☐ No

RA size-gross: ☐ Small
☐ Normal
☐ Enlarged

RA size: ☐ (mm) minor axis
☐ (mm) major axis

Pericarditis: ☐ normal
☐ (mm) thickened
 (> 3 mm)

Tamponade: ☐ Yes
☐ No

LV Fxn-MOD: ☐ (mLs)EDV
 (Biplane) ☐ (mLs)ESV
☐ (%)LVEF

RV size-gross: ☐ Small
☐ Normal
☐ Enlarged

RVH: ☐ Yes (LWT>5mm)
☐ No
 RV wall: ☐ (mm)

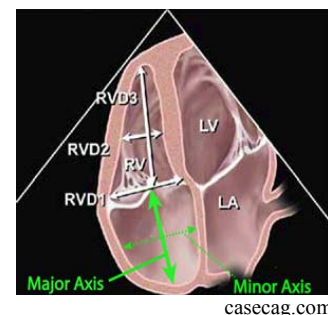
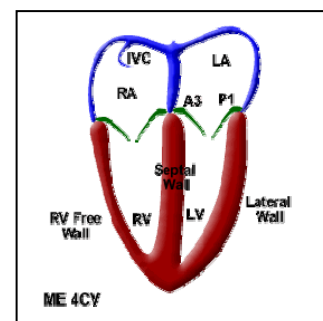
LA size-gross: ☐ Small
☐ Normal
☐ Enlarged

LA size: ☐ (mm) minor axis
☐ (mm) major axis

Pericardial Effusion: ☐ None
☐ Small
☐ Moderate (5-20 mm)
☐ Large (> 20 mm)

RA systolic collapse ☐ Yes
☐ No

RV diastolic collapse ☐ Yes
☐ No



Mid-Esophageal 4-Chamber View (cont.)

Interatrial Septum:

___ Normal
___ Lipomatous hypertrophy
___ Aneurysmal ___ (mm) from midline
(Aneurysmal > 15 mm)

Coronary Sinus:

___ Normal
___ Enlarged ___ (mm)
___ Persistent Left Subclavian Vena Cava

Interatrial Septal Defect:

___ None
___ Patent Foramen Ovale
___ Secundum defect ___ (mm)
___ Septum Primum defect (IVC) ___ (mm)
___ Cleft Mitral ___ Yes ___ No
___ Sinus Venosus defect (SVC) ___ (mm)
___ Coronary Sinus defect
___ Shunt ___ Yes ___ No
___ L→R ___ R→L ___ L↔R

Mitral Valve

Leaflet thickness

___ Normal
___ Thickened ___ (mm) ___ Ant. ___ Post.

Leaflet mobility

___ Normal
___ Restricted ___ Ant. ___ Post.
___ Tethered ___ Ant. ___ Post.

Commissural Fusion ___ Antlat. ___ Postmed.

Leaflet mass/vegetation

Location _____
Dimension _____
Other info. _____

___ Annular Calcification ___ Ant. ___ Post.
Mild ___ Moderate ___ Severe ___

Regurgitation

___ None ___ Mild to Moderate
___ Physiologic ___ Moderate
___ Trace ___ Moderate to Severe
___ Trace to Mild ___ Severe
___ Mild ___ / ___ Concurrent BP
Vena Contracta Width ___ (mm)
PISA ___ (mm) radius ___ (cm/sec) Nyquist limit
___ (cm) VTI ___ (cm/sec) Vmax
___ (cm²) EROA ___ (mls) RVol

Jet direction

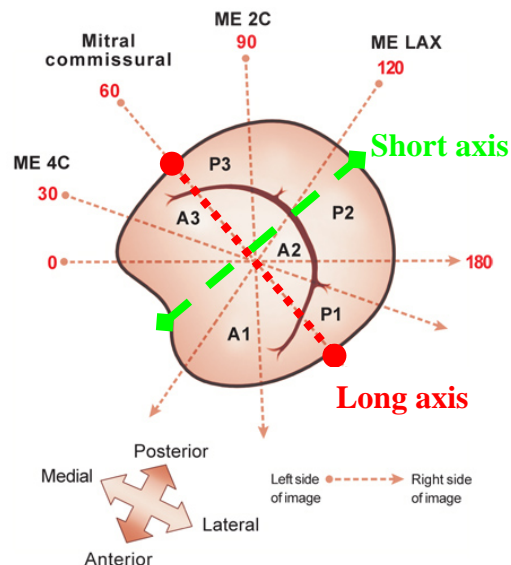
Jet mechanism _____
___ Prolapse of ___ segment(s)
___ Flail of ___ segment(s)
___ Tethering (2° ventricular dilation)
___ Papillary muscle dysfunction

Annular dimensions

Long axis (135°) ___ (mm)
Short axis (60°) ___ (mm)

Pulmonary veins

LUPV(70°): ___ Normal (S:D > 1)
___ Elevated LAP (S:D < 1)
___ C/W Severe MR (S reversal)
RUPV(135°): ___ Normal (S:D > 1)
___ Elevated LAP (S:D < 1)
___ C/W Severe MR (S reversal)



Aortic Valve

Aortic Valve Anatomy

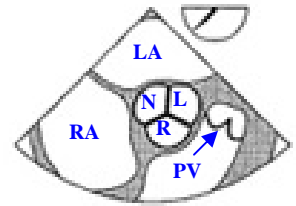
☐ Tricuspid
☐ Bicuspid
☐ Unicuspid
☐ Quadcuspid
☐ Indeterminant

Aortic Valve Leaflet Morphology

☐ Normally thin and mobile
☐ Thickened: ☐ Mild ☐ Moderate ☐ Severe
☐ Calcified: ☐ Mild ☐ Moderate ☐ Severe
☐ Mass
 Location: _____
 Size: _____
 Description: _____

Aortic Root Dimensions

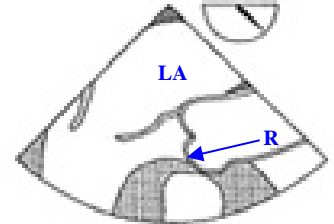
____ (mm) LVOT
 ____ (mm) Annulus
 ____ (mm) Sinuses
 ____ (mm) Sinotubular junction



Mid-esophageal AV SAX View

AV Prosthesis

☐ Mechanical
 ☐ Bileaflet tilting disc
 ☐ Single tilting disc
☐ Bioprosthetic
 Normal ☐ Abnormal ☐
☐ Perivalvular leak
 Location _____
 Other _____



Mid-esophageal AV LAX View

AV Regurgitation (BP= ____ / ____)

Jet direction _____
☐ None ☐ Trace ☐ Mild ☐ Moderate
☐ Severe
 Vena Contracta Width: ____ mm
 Jet Height: ____ mm
 CW Regurgitant Jet
 Intensity: ☐ Mild ☐ Moderate ☐ Severe
 Deceleration slope: ____ cm/sec
 PHT: ____ msec (< 200 → Severe)
 (200-500 → Moderate)
 (> 500 → Mild)
 Holodiastolic flow reversal in distal thoracic Aorta: ☐ Yes ☐ No

AV Stenosis

Mild ☐ Moderate ☐ Severe ☐
 LVOT Vmax: ____ cm/sec
 AV Vmax: ____ cm/sec
 LVOT dimension: ____ cm
 AVA: ____ cm²
 LVOT VTI: ____ cm
☐ Static obstruction
☐ Dynamic obstruction (SAM + ASH)
☐ Subvalvular membrane
 Peak velocity ____ cm/sec Mean velocity ____ cm/sec
 Peak gradient ____ mmHg Mean gradient ____ mmHg
 Concurrent Cardiac Index: ____ L/min/m² (TD vs. TEE LVOT)
 Calculated Stroke Volume & C.O.: ____ mL / ____ L/min

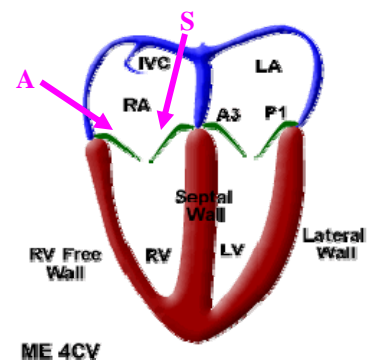
Tricuspid Valve

Tricuspid Valve Leaflet Morphology

☐ Normally thin and mobile
☐ Thickened: ☐ Mild ☐ Moderate ☐ Severe
☐ Calcified: ☐ Mild ☐ Moderate ☐ Severe
☐ Mass
 Location: _____
 Size: _____
 Description: _____
 Tricuspid annular dimension: ____ cm
 (Normal < 30 mm; Severe ≥ 39 mm)

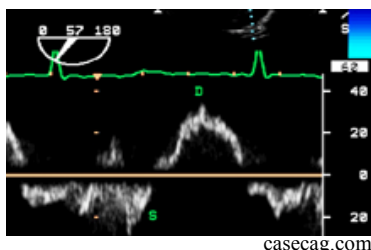
Tricuspid Valve Prosthesis

☐ Mechanical
 ☐ Bileaflet tilting disc
☐ Bioprosthetic
☐ Annuloplasty ring
 Normal ☐ Abnormal ☐
☐ Perivalvular leak
 Location _____
 Other _____



Estimated PAS pressure

____ Vmax TR jet
 ____ Estimated PAS (RAP = ____ mmHg)
 Holosystolic flow reversal in hepatic veins
 ☐ Yes ☐ No



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Regurgitation

☐ None ☐ Mild to Moderate
☐ Physiologic ☐ Moderate
☐ Trace ☐ Moderate to Severe
☐ Trace to Mild ☐ Severe
☐ Mild ☐ / ☐ Concurrent PAP
☐ Severe CW Regurgitant Jet Intensity
 Vena Contracta Width ____ (mm)
 Jet direction _____
 Jet mechanism _____
☐ Prolapse of ____ segment(s)
☐ Flail of ____ segment(s)
☐ Tethering (functional TR or RV dilation)
☐ Related to ICD/PPM wires

Tricuspid Valve cont.

TV Stenosis

Mild ___ Moderate ___ Severe ___

ME RV I/O 60-90°:

Peak velocity ___ cm/sec Mean velocity ___ cm/sec

Peak gradient ___ mmHg Mean gradient ___ mmHg

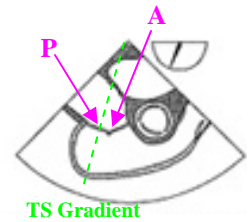
Concurrent Cardiac Index: ___ L/min/m²

Left Atrial Appendage

___ Not present

___ No thrombus

PW Velocity: ___ cm/sec



LV Diastology

Transmitral Parameters:

E wave: ___ (cm/sec)

A wave: ___ (cm/sec)

E wave Deceleration time: ___ msec

Flow Propagation (Vp): ___ cm/sec

Tissue Doppler:

Lateral Mitral Annulus : ___ cm/sec

IVRT : ___ msec

Diastolic Summary : ___ Normal ___ Delayed Relaxation
___ Pseudonormal ___ Restrictive filling

Pulmonary Valve

Pulmonary Valve Leaflet Morphology

___ Normally thin and mobile

___ Thickened: ___ Mild ___ Moderate ___ Severe

___ Calcified: ___ Mild ___ Moderate ___ Severe

___ Mass

Location: _____

Size: _____

Description: _____

PV annular dimension: _____ cm

Pulmonary Valve Prosthesis

___ Bileaflet tilting disc

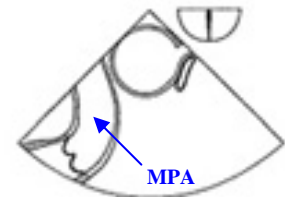
___ Bioprosthetic

Normal ___ Abnormal ___

___ Perivalvular leak

Location _____

Other _____



UE Ao Arch SAX

Regurgitation

___ None ___ Mild to Moderate

___ Physiologic ___ Moderate

___ Trace ___ Moderate to Severe

___ Trace to Mild ___ Severe

___ Mild ___ / ___ Concurrent PAP

Vena Contracta Width ___ (mm)

Jet direction _____

Jet mechanism _____

___ Prolapse of _____ segment(s)

Aorta Assessment

Ascending Aorta: ___

Aortic Arch: ___

Descending Aorta: ___

Grade I: Normal

Grade II: Intimal thickening

Grade III: Protruding atheroma < 5 mm

Grade IV: Protruding atheroma > 5 mm

Grade V: Mobile elements

___ Aortic dissection:

Location: _____

___ Intramural hematoma

Location: _____

___ Aortic disruption

Location: _____

LV Regional Wall Motion

LV Regional Motion Schematic

N = Normal

HP = Hypokinetic

HR = Hyperkinetic

A = Akinetic

D = Dyskinetic

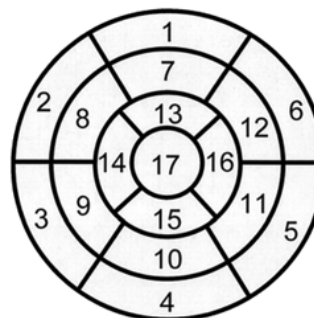
Qualifiers:

(S) = Severe

(Mo) = Moderate

(Mi) = Mild

Left Ventricular Segmentation



1. basal anterior

2. basal anteroseptal

3. basal inferoseptal

4. basal inferior

5. basal inferolateral

6. basal anterolateral

7. mid anterior

8. mid anteroseptal

9. mid inferoseptal

10. mid inferior

11. mid inferolateral

12. mid anterolateral

13. apical anterior

14. apical septal

15. apical inferior

16. apical lateral

17. apex

Interventricular Septum

___ Normal

___ Ventricular Septal Defect

Location: _____

Shunt: _____