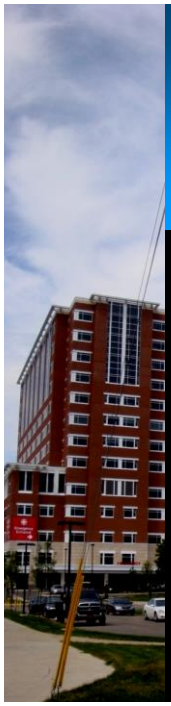

Stress Echo Cases:
Are you as good as the Experts?

Vincent L. Sorrell, MD
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Chair, Cardiac Imaging
Director, Adult Cardiology Fellowship Program

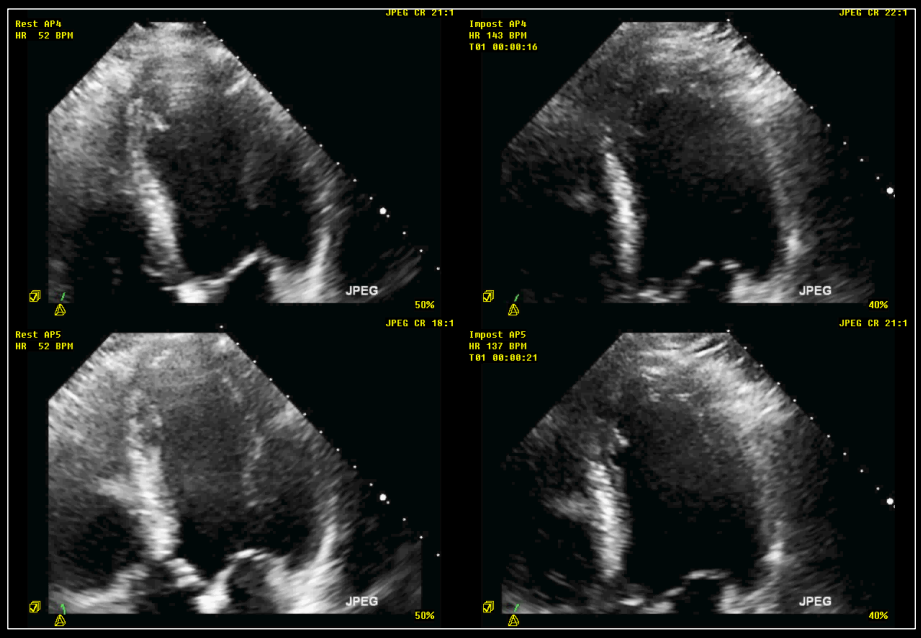
American Society of Echocardiography Sci Sessions, Oct 2017

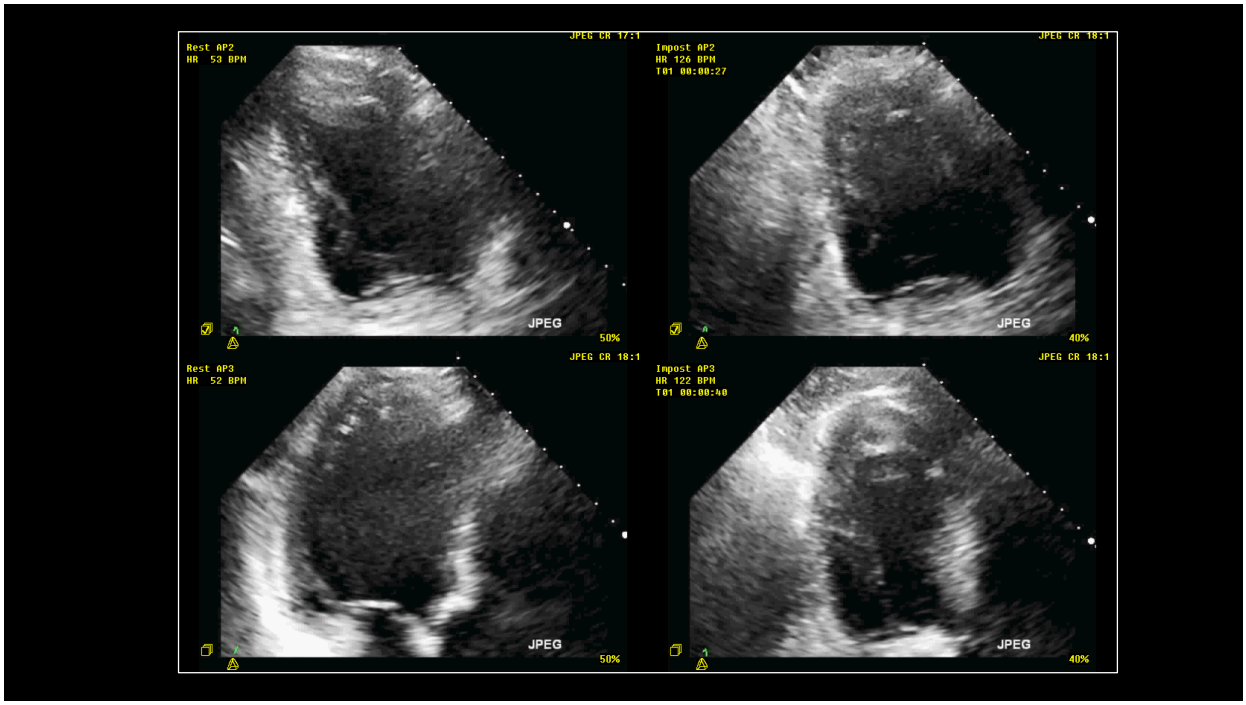
Disclosures

No Real or Potential Conflict of Interests for this Talk

CASE EXAMPLE

- 57M with increasing dyspnea on exertion
- Ht 70”; Wt 227lbs; History of murmur; ejection click
- Resting HR 55; BP 139/74mmHg
- Resting ECG: SB, left axis; no acute ST-T
- 7:43 Bruce; fatigue; HR 151 (91%); BP 180/80
- Stress ECG: 1mm upsloping V5, V6

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HR 53 BPM
JPEG CR 17:1
JPEG
50%
Impost AP2
HR 126 BPM
T01 00:00:27
JPEG CR 18:1
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40%
Rest AP3
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50%
Impost AP3
HR 122 BPM
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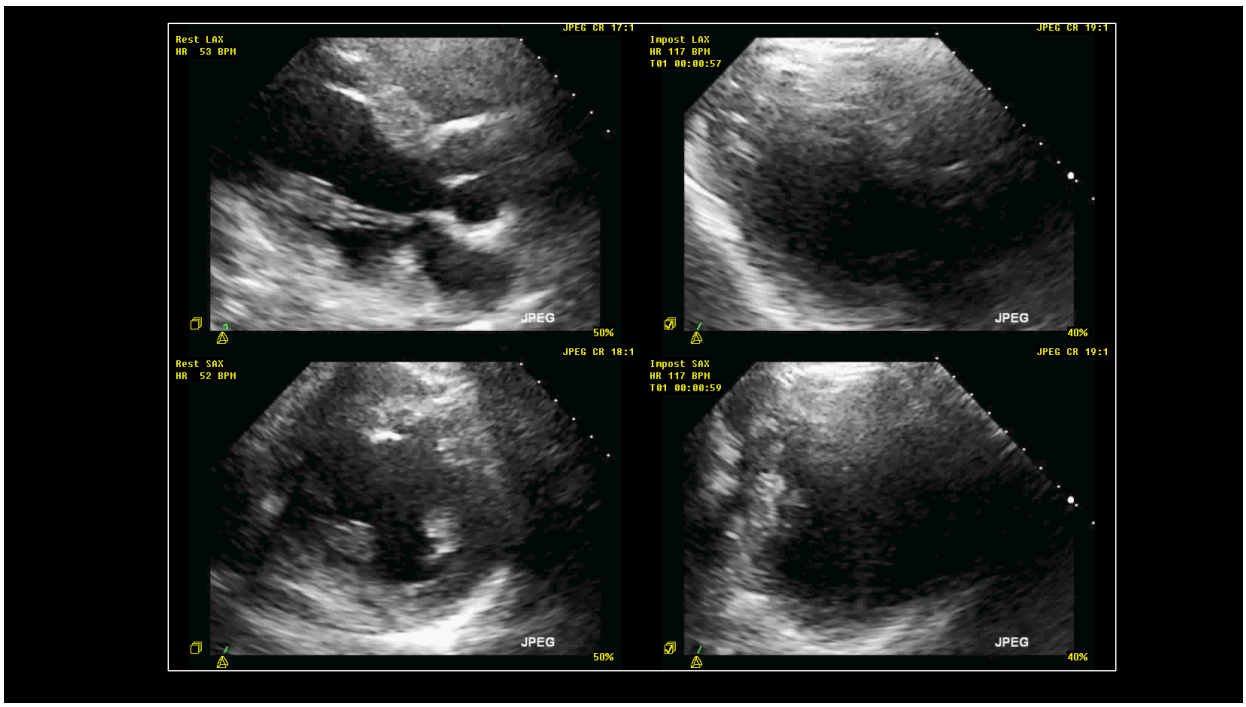
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JPEG CR 17:1
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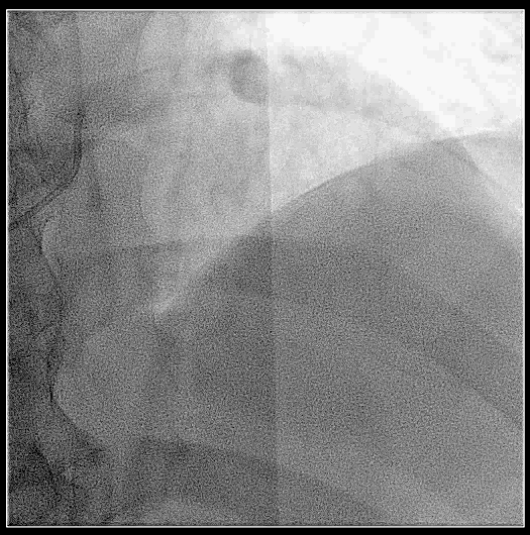
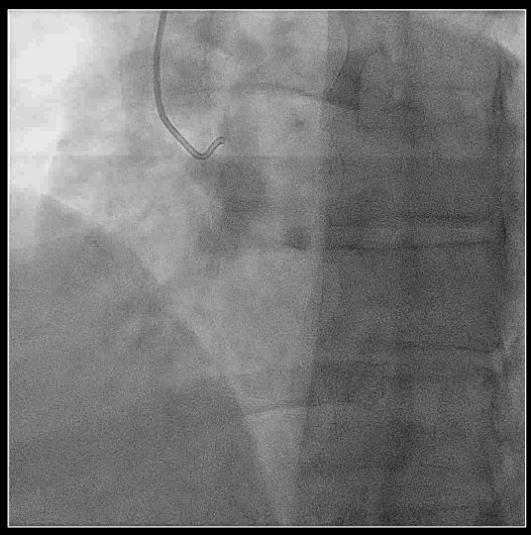
50%
Impost SAX
HR 117 BPM
T01 00:00:59
JPEG CR 19:1
JPEG
40%

INTERPRETATION

1. Worse LVEF, multiple WMA = 3V CAD
2. Worse LVEF, LAD / RCA WMA = 2V CAD
3. Worse LVEF, RCA / CFX WMA = 2V CAD
4. Worse LVEF, global dysfunction = No CAD
5. No change LVEF, LAD WMA = 1V CAD

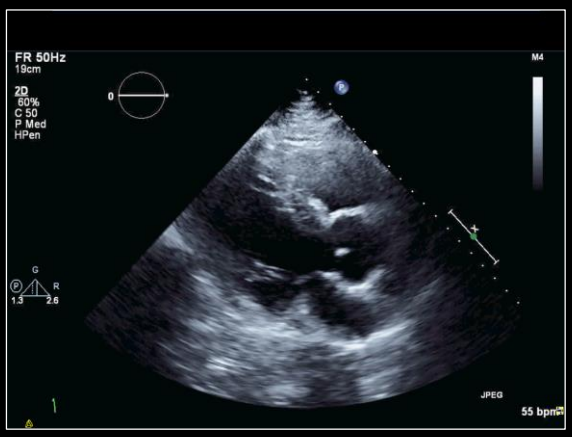


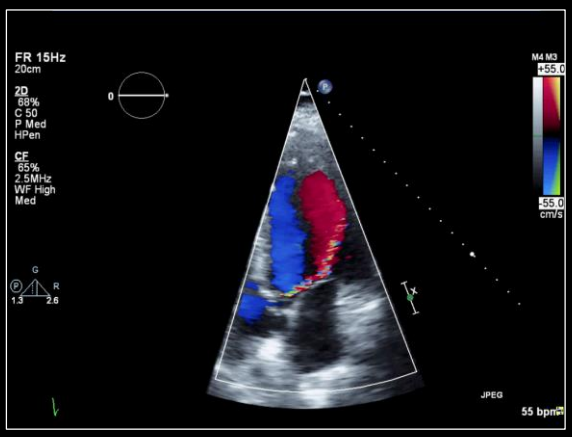


SUMMARY

1. Abnormal Exercise stress echo
   - Image quality would have benefitted from UCA
2. Global LVEF falls; RWMA lateral & inferior
   - Apical ‘regional motion’ from ‘diastole / gating’
3. Review of BP / valves is important
   - BP 139 to 180mmHg (unlikely cause)

Additional Images



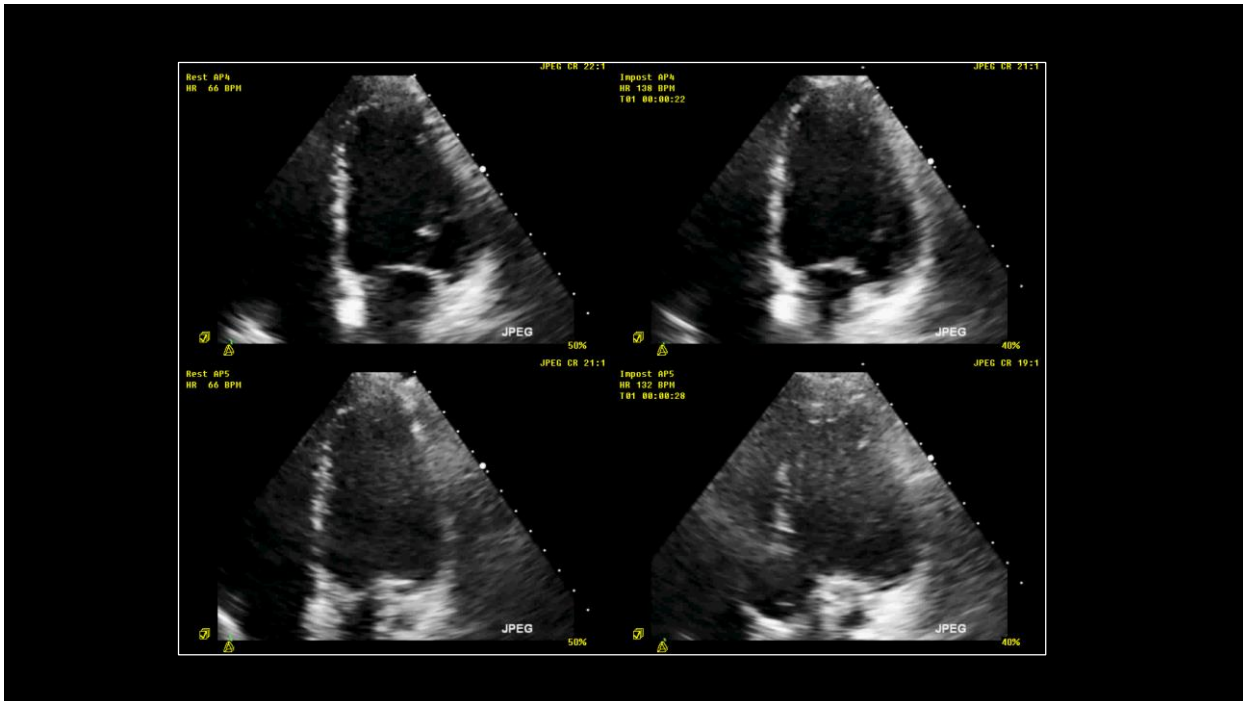


Clinical Interpretation

1. Abnormal Exercise stress echo
2. Symptomatic (class II) VHD
3. Global LVEF falls; RWMA lateral & inferior
   - Increased LV gradient (25-60mmHg)
   - Likely myocardial mismatch (without CAD %)
4. Plan to clinically follow for worse symptoms

CASE EXAMPLE

- 63F; 2PPD smoker; HTN; Ao Aneur repair; new CP
- Ht 63”; Wt 148lbs (recent 107# intentional loss)
- Resting HR 71; BP 133/71mmHg
- Resting ECG: NSR; RBBB & LAFB
- 3:23 Bruce; fatigue; HR 157 (92%); BP 214/88
- Stress ECG: No diagnostic ST dep / arrhythmia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50%
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Rest AP5
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Impost AP5
HR 132 BPM
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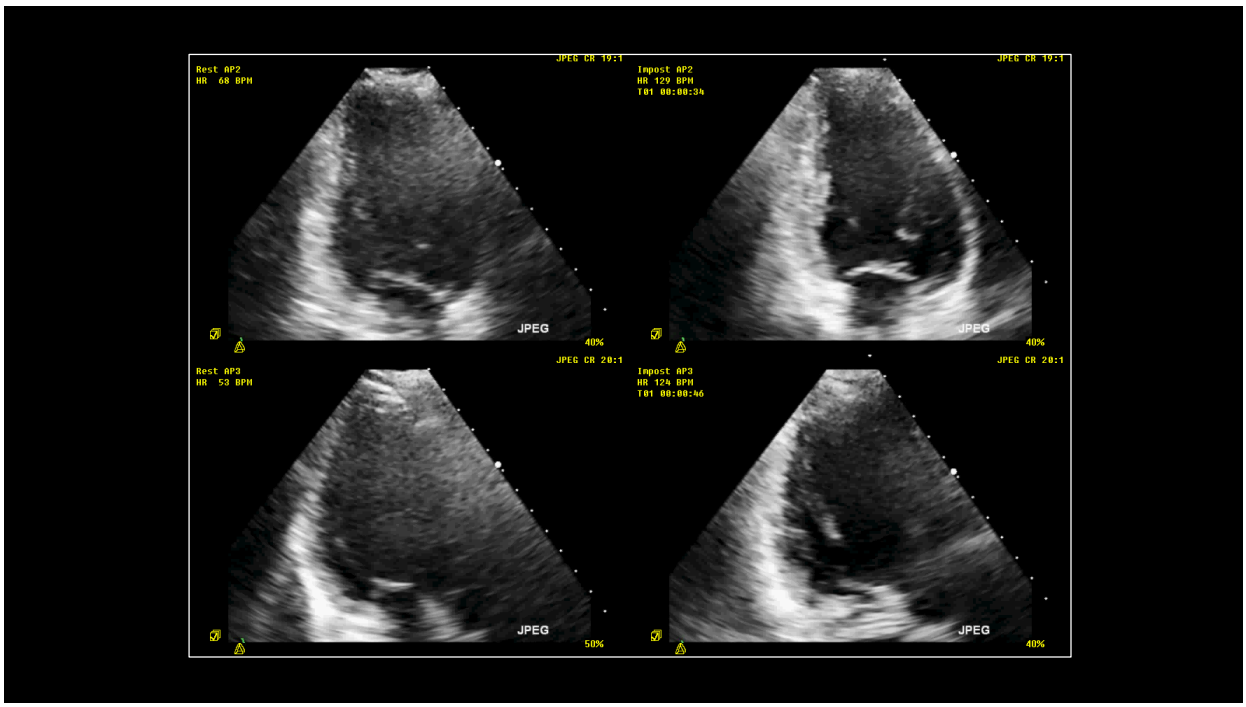
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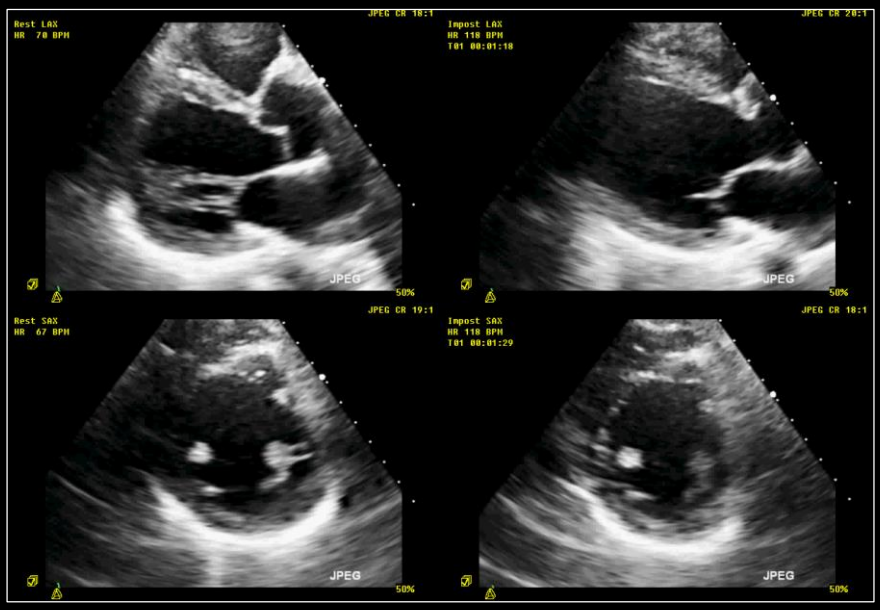

INTERPRETATION

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4. Worse LVEF, global dysfunction = No CAD
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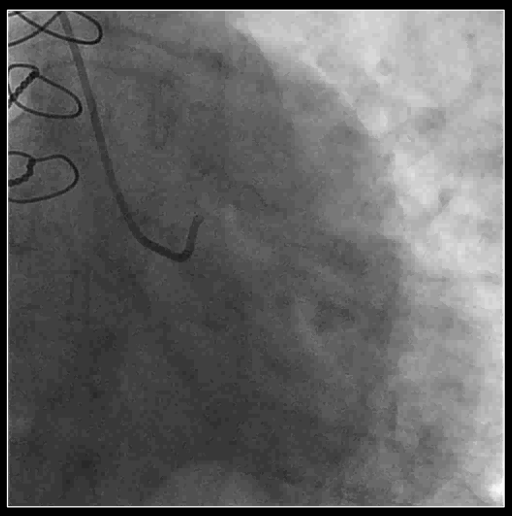
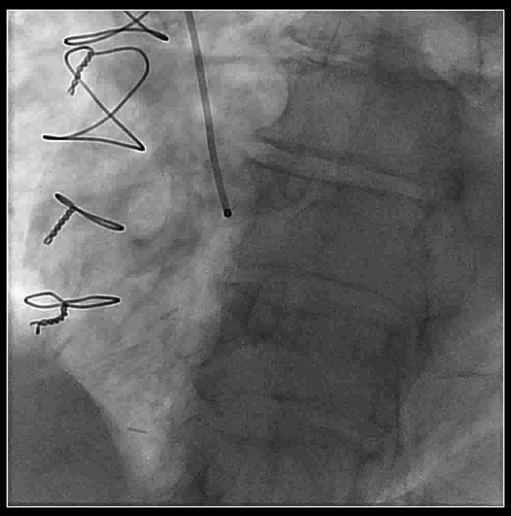




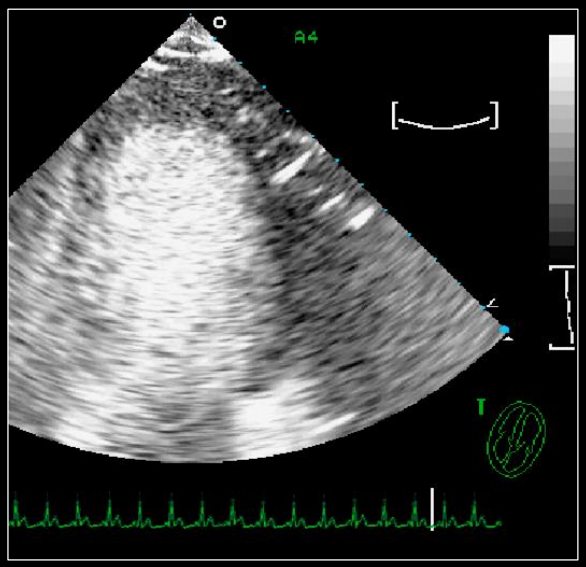
SUMMARY

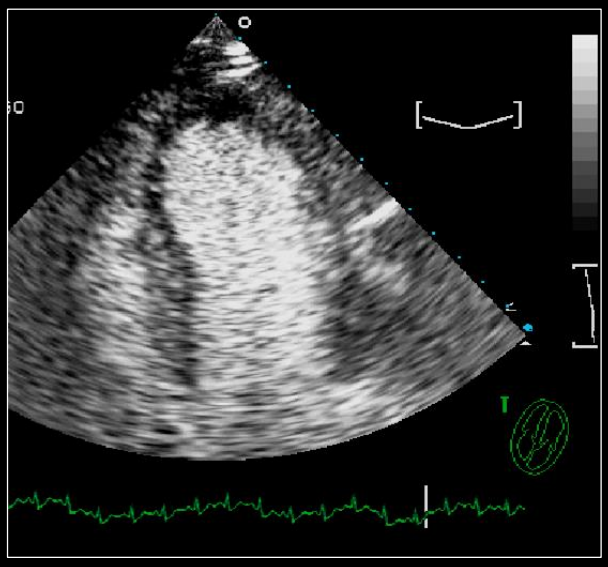
1. Abnormal Exercise stress echo
   - Image quality would have benefitted from UCA
2. Global LVEF falls; Focal RWMA RCA / CFX
   - RWMA with ‘normal’ CA suggests ‘myo mismatch’
3. Review of BP / valves is important
   - BP 133 to 214mmHg in ~3min (likely cause)

Clinical Interpretation

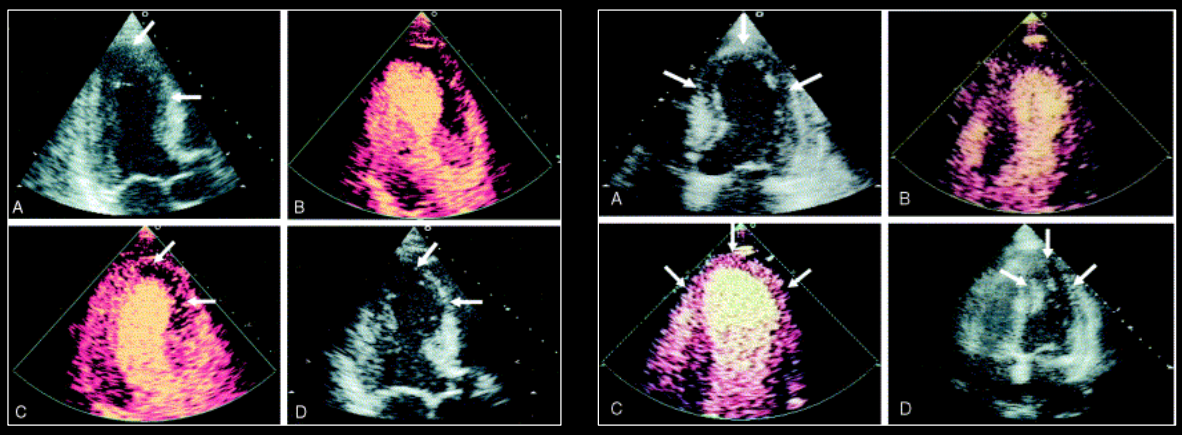
1. Abnormal Exercise stress echo
2. Symptomatic (NYHA class II-III)
3. Global LVEF falls; RWMA infero-lateral
   - Likely myocardial mismatch / Micro-Vasc
4. Plan: treat BP; exercise rehab

OK – simple case with LVO





MCE- recovery of function



Courtesy of Roberto Lang, MD Univ of Chicago

Remember: *our worst day in the hospital is infinitely better than our patient's best day…*

Thank You