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Video Content

Echocardiography for the diagnosis of carditis in acute rheumatic fever and chronic rheumatic heart disease.

- Dedication
- Revised Jones criteria, 2015.
- 6th revision of the Jones Criteria for the diagnosis of acute rheumatic fever in the era of Doppler echocardiography.
- Major changes in original Jones criteria.
- Clinical diagnosis of carditis.
- Echo can assess.
- Doppler findings in rheumatic valvulitis: Jones criteria, 2015.
- Doppler findings in valvulitis.
- Morphological findings on Echo in rheumatic valvulitis.
- M-mode Echo features.
- Thickened valve leads to reduced mobility.
- Parasternal long axis in 13-year-old RHD patient MV thickness is > 7 mm. (RHD: rheumatic heart disease; MV: mitral valve)
- Thickened mitral and aortic valve.
- Physiological mitral regurgitation.
- Physiological mitral regurgitation in PLX.
- Pathological MR with central jet. (MR: mitral regurgitation)
- Pathological MR. (MR: mitral regurgitation)
- Physiological versus pathological regurgitation.
- Trivial AR. (AR: aortic regurgitation)
- Beaded appearance (histopathology).
- Beaded appearance of mitral valve (histopathology comparing with Echo).
- Parasternal long axis shows beaded appearance.
- Nodular club like AML in RHD. (AML: anterior mitral leaflet; RHD: rheumatic heart disease)
- Vijaya's Echo score.
- How specific are Vijaya's Echo criteria?
- Results of auscultation versus Echo.
- Summary—revised Jones criteria: subclinical carditis.
- "Echo detectable" subclinical carditis, is it of clinical benefit? Yes
- Unless valve regurgitation is associated with other features.
- Thickened MV, AV, and beaded appearance. (AV: aortic valve; MV: mitral valve)

- Efficacy of Echo criteria.
- Parasternal long-axis view.
- Echo can differentiate functional MR from pathological. (MR: mitral regurgitation)
- Myxomatous MV with prolapse of scallops. (MV: mitral valve)
- Severe aortic cusp prolapse.
- Classical beaded appearance of MV in short axis. (MV: mitral valve)
- Severe mitral regurgitation.
- Severe MR in PLX and four-chamber view. (MR: mitral regurgitation)
- Torn chordae, flail MV with severe MR. (MR: mitral regurgitation; MV: mitral valve)
- Echo features of carditis.
- A 3-year-old boy with ARF. (ARF: acute rheumatic fever)
- Modified two-chamber view.
- Both mitral and aortic valves are thickened.
- Torn chordae tendineae with mitral regurgitation.
- Diagnostic of ARF with carditis. (ARF: acute rheumatic fever)
- Echo helps in decision making.
- A 3-year-old girl with ARF. (ARF: acute rheumatic fever)
- Chordal tear prolapse with severe MR in an 8-year-old boy.
- Apical four-chamber view.
- ALCAPA with MR. (ALCAPA: anomalous left coronary artery from pulmonary artery; MR: mitral regurgitation)
- ALCAPA confirmed with angiography. (ALCAPA: anomalous left coronary artery from pulmonary artery)
- Identify the features of pancarditis.
- Pancarditis.
- Case profile of patient with I° AV block. (AV: atrioventricular)
- Apical three-chamber view.
- Tear of chordae tendineae with MR. (MR: mitral regurgitation)
- Chordal tear with severe MR. (MR: mitral regurgitation)
- Tear of chordae tendineae.
- Torn chordae moving freely between LV and LA flail MV with severe MR. (LA: left atrium; LV: left ventricle; MR: mitral regurgitation; MV: mitral valve)
- Case profile.
- Short axis illustrating beaded appearance.
- Classical beaded appearance of MV and AV. (AV: aortic valve; MV: mitral valve)
- Clinical description.
- Modified two-chamber view shows moderate PE, severe MR, and MVP. (MR: mitral regurgitation; MVP: mitral valve prolapse; PE: pulmonary embolism)
- Pericardial effusion.
- Case profile.
- Apical four-chamber view.
- Apical five-chamber view.

- Echo PLX: severe MR and severe AR. (AR: aortic regurgitation; MR: mitral regurgitation)
- MVP with club-like thickened AML and PML. (AML: anterior mitral leaflet; MVP: mitral valve prolapse; PML: posterior mitral leaflet)
- How Echo is superior?
- Aortic valve showing active valvulitis.
- Nonrheumatic pathological MR and mild AR. (AR: aortic regurgitation; MR: mitral regurgitation)
- Gradient in abdominal aorta aortoarteritis.
- Case profile.
- Modified two-chamber view with severe MR. (MR: mitral regurgitation)
- Pericardial effusion, preserved LV function is rheumatic (LVEF—60%). (LV: left ventricle; LVEF: left ventricular ejection fraction)
- Is it recrudescence of rheumatic activity? Or SBE? (SBE: subacute bacterial endocarditis)
- Submitral aneurysm versus AML tear. (AML: anterior mitral leaflet)
- Carditis, AHA, 2015. (AHA: American Heart Association)
- Subclinical carditis.
- Subclinical carditis.
- Doubtful RF. (RF: rheumatic fever)
- What to do if diagnosis is not certain?
- Writing group statement.
- Rheumatic heart disease (RHD).
- Assessment of severity of mitral stenosis.
- M-mode in MS. (MS: mitral stenosis)
- Mitral valve area by planimetry.
- Commissural morphology.
- Valve morphology and subvalvular apparatus.
- Subvalvular stenosis.
- Submitral fusion.
- Grading of MS. (MS: mitral stenosis)
- Tips to measure MVOA. (MVOA: mitral valve orifice area)
- Limitation of planimetry.
- Pressure gradient.
- Evaluation of pulmonary hypertension.
- Data of percutaneous transvenous mitral commissurotomy (PTMC) in juvenile mitral stenosis (JMS), poster presented at Transcatheter Cardiovascular Therapeutics (TCT), Washington DC, 2002.
- Challenges of BMV in juvenile mitral stenosis. (BMV: balloon mitral valvuloplasty)
- BMV in juvenile MS. (BMV: balloon mitral valvuloplasty; MS: mitral stenosis)
- PTMC in juvenile MS (until 2016). (MS: mitral stenosis; PTMC: percutaneous transvenous mitral commissurotomy)
- Youngest child of MS. (MS: mitral stenosis)
- Mitral stenosis (MS), tricuspid stenosis (TS), and tricuspid regurgitation (TR) in a 3-year-old child.
- Shortest patient of MS to undergo BMV. (BMV: balloon mitral valvuloplasty; MS: mitral stenosis)

- A 12-year-old child with critical MS. (MS: mitral stenosis)
- Continuous wave (CW) cursor on tricuspid valve to demonstrate TS and TR. (TS: tricuspid stenosis; TR: tricuspid regurgitation)
- Juvenile MS/malignant MS. (MS: mitral stenosis)
- MVOA measurement by planimetry increased from 0.2 to 1.4 cm^2 after BMV. (BMV: balloon mitral valvuloplasty; MVOA: mitral valve orifice area)
- Post-BMV, the MVOA is better MV gradient reduced from 35/15 to 13/7 mm Hg. (BMV: balloon mitral valvuloplasty; MV: mitral valve; MVOA: mitral valve orifice area)
- Catheterization data of 12-year-old female of critical MS, height—130 cm.
- Post-BMV MR. (BMV: balloon mitral valvuloplasty; MR: mitral regurgitation)
- Post-BMV MR two jets in an 8-year-old girl. (BMV: balloon mitral valvuloplasty; MR: mitral regurgitation)
- Catheterization data of an 8-year-old female.
- Pre-BMV. (BMV: balloon mitral valvuloplasty)
- Post-BMV apparently good result.
- Do not miss the eccentric jet.
- Catheterization data.
- Restenosis.
- 16 Post-BMV, restenosis after 6 years. (BMV: balloon mitral valvuloplasty)
- Challenges of BMV in mitral restenosis. (BMV: balloon mitral valvuloplasty)
- Post-BMV restenosis.
- Post-BMV restenosis after 6 years.
- The eccentric MR with severe submitral fusion. (MR: mitral regurgitation)
- MVP, MS, and MR in an 8-year-old girl. (MR: mitral regurgitation; MS: mitral stenosis; MVP: mitral valve prolapse)
- Post-closed mitral commissurotomy and later BMV, RHD–MS, TS, severe TR, AS with AR. (AR: aortic regurgitation; AS: aortic stenosis; BMV: balloon mitral valvuloplasty; MS: mitral stenosis; RHD: rheumatic heart disease; TR: tricuspid regurgitation; TS: tricuspid stenosis)
- Commissural morphology.
- Valve morphology and subvalvular apparatus.
- Subvalvular stenosis.
- Submitral fusion has deformed the balloon.
- MS, MR, AS, AR, TS, TR, and AF with CCF. (AF: atrial fibrillation; AR: aortic regurgitation; AS: aortic stenosis; CCF: congestive cardiac failure; MS: mitral stenosis; MR: mitral regurgitation; TR: tricuspid regurgitation; TS: tricuspid stenosis)
- Giant RA with severe TR. (RA: right atrium; TR: tricuspid regurgitation)
- Giant LA needs plication. (LA: left atrium)
- BMV during pregnancy. (BMV: balloon mitral valvuloplasty)
- Safe PTMC in pregnancy. (PTMC: percutaneous transvenous mitral commissurotomy)
- Echo-guided balloon across MV into LV. (LV: left ventricle; MV: mitral valve)
- BMV during pregnancy. (BMV: balloon mitral valvuloplasty)
- Contraindications to BMV. (BMV: balloon mitral valvuloplasty)
- Transthoracic echocardiography (TTE) versus transesophageal echocardiography (TEE) for thrombus in left atrial appendage (LAA).

- LA body clot. (LA: left atrium)
- Spontaneous Echo contrast (SEC) on transesophageal echocardiography (TEE).
- Contraindications to BMV. (BMV: balloon mitral valvuloplasty)
- Periprocedural TEE and 4D Echo have gained great importance to assess paravalvular leak. (TEE: transesophageal echocardiography)
- Spontaneous Echo contrast with organized clot in LAA—relative contraindication. (LAA: left atrial appendage)
- TEE showing thrombus on interatrial septum—contraindication for BMV. (BMV: balloon mitral valvuloplasty; TEE: transesophageal echocardiography)
- Football in the heart.
- SBE prophylaxis. (SBE: subacute bacterial endocarditis)
- Echocardiographic assessment of aortic stenosis.
- Apical five-chamber view shows AS in a case of RHD with MS, MR, and TR. (AS: aortic stenosis; MR: mitral regurgitation; MS: mitral stenosis; RHD: rheumatic heart disease; TR: tricuspid regurgitation)
- Dextrocardia with severe AS and rheumatic MS. (AS: aortic stenosis; MS: mitral stenosis)
- Balloon dilatation of AS and MS. (AS: aortic stenosis; MS: mitral stenosis)
- Result of BMV. (BMV: balloon mitral valvuloplasty)
- May–Thurner syndrome.
- Assessment of aortic regurgitation.
- M-mode AML flutter in AR. (AML: anterior mitral leaflet; AR: aortic regurgitation)
- Aortic regurgitation.
- Color Doppler.
- Diastolic flow reversal in descending aorta.
- Echo of diastolic flow reversal in descending aorta.
- Vena contracta width.
- AR with vegetation on AV. (AR: aortic regurgitation; AV: aortic valve)
- EF: 10–15%, inoperable. (EF: ejection fraction)
- Grading of MR by vena contracta width. (MR: mitral regurgitation)
- Tricuspid stenosis and regurgitation.
- Missed diagnosis can be disastrous for the patient.
- The disease in AV and TV is likely to progress despite BMV. (AV: aortic valve; TV: tricuspid valve; BMV: balloon mitral valvuloplasty)
- Post-BMV the MVOA is better MV gradient reduced. (BMV: balloon mitral valvuloplasty; MV: mitral valve; MVOA: mitral valve orifice area)
- Summary.
- Conclusion.
- 2012 WHF criteria for echocardiographic diagnosis of RHD. (RHD: rheumatic heart disease; WHF: World Heart Federation)
- Borderline RHD. (RHD: rheumatic heart disease)
- Echocardiographic criteria for individuals aged >20 years.
- Congenital MV anomalies must be excluded. (MV: mitral valve)
- Criteria for pathological regurgitation.

- Test your skill—Case I.
- Parasternal long axis.
- Test your skill—Case II.
- What is the Echo score and what is the diagnosis?
- Test your skill—Case III.
- What do you see?
- Test your skill—Case IV.
- What is the diagnosis?
- Test your skill—Case VI. Is it pathological or physiological MR?
- What is your decision?
- Is MR physiological or pathological? (MR: mitral regurgitation)
- What is the impression?
- What is the decision?
- Echo prevents damage at three levels.
- Carry home message.
- Conquer the unconquered.
- Acknowledgement.
- All working together for a cause.

