VALVULAR HEART DISEASES

NAME	CAUSE	SIGNS	SYMPTOMS	SEVERITY	MANAGEMENT
AS	Congenital Rheumatic Degenerative / Senile (Calcific) Atherosclerotic (>65yrs)	Slow rising , small volume Heaving S4 Ejection click Carotid thrill ESM radiate to carotid and apex AS murmur - LRR low pitched, rough, rasping	Angina Dyspnoea Syncope Dizziness Sudden death	S2 Mild - A2 P2 Mod - A2P2 Sev - P2A2 Valve area N - 3 - 4 sqcm Sev - < 0.75 Critical - < 0.5 Long late peaking murmur P gradient N - 0 mmHg Mild - < 25 mmHg Mod - 25 - 40 mmHg Sev - > 40 mmHg Sev - S4 no A2	**Investigation : ECG**, **X-Ray** (poststenotic dilatation ascd aorta, calcification) , **ECHO** (calcification, hypertrophies LV), **catheter**, **coronary angiogram** **Prognosis :** 4 years - angina 3 years - syncope 2 years - LVF **Rx :** Cardiac Failure trt (avoid Digitalis and VD in mod and Sev) Prophylaxis - Rheumatic Fever, Infective Endocarditis Angina - NTG Degenerative Calcific AS - Satins
AR	**Valvular**: Congenital bicuspid aortic valve 2 to sub AS RF IE **Wall:** Syphilis Rheumatic arthritis Ankylosing spondylitis Marfans syndrome Ehler danlos syndrome Takayasu arteritis Dissection of aorta Idiopathic dilatation of aorta	Light house sign Landolfi sign Becker's sign de Musset sign Muller's sign Quinckne's sign Corrigan's sign Locomotor branchii Collapsing pulse Pulses bifringens Traube's sign Duroziez's sign Duroziez's murmur Hill's sign Rosenbach's sign Gerhardt's sign	Angina Dyspnoea Palpitation	Duration = Severity Biferiens pulse Hill's sign (>60) Apical impulse (down & out) Austin Flint murmur Marked peripheral signs	**Investigation : ECG** (LV enlargement), **Chest X-ray** (Cor bovinum, calcification of ascdng aorta / aortic valve), **ECHO** (Dilated LV, fluttering mitral valve, reflux) **Rx:** Antifailure medications Prophylaxis - Rheumatic Fever, Infective Endocarditis Acute AR - Diuretics, IV nitroprusside, Surgery *Beta blockers and intra aortic balloon counterpulsations are CI* Chronic AR - VD (hydralazine, CCB) Syphilitic AR - Penicillin prophylaxis Aortic Root Dilatation - Beta blockers Goal - BP < 140 mmHg
TS	**RCC** Rheumatic Heart Disease Congenital TS Carcinoid syndrome When to entertain Diag of TS: Pul congestion disappear in MR MS findings are masked No improve after MS Sx	Giant 'a' waves in JVP Prominent pre systolic pulsation of liver No palpable P2 / RV enlargement Occasionally OS of T valve Diastolic murmur in T area (Carvello's sign & Valsalva maneuver) Signs of RVH : ascites , oedema	Dyspnoea Fatigue		**Investigation : ECG** (LV enlargement), **Chest X-ray** (Cor bovinum, calcification of ascdng aorta / aortic valve), **ECHO** (Dilated LV, fluttering mitral valve, reflux) **Rx:** Antifailure medications Prophylaxis - Rheumatic Fever, Infective Endocarditis Acute AR - Diuretics, IV nitroprusside, Surgery *Beta blockers and intra aortic balloon counterpulsations are CI* Chronic AR - VD (hydralazine, CCB) Syphilitic AR - Penicillin prophylaxis Aortic Root Dilatation - Beta blockers Goal - BP < 140 mmHg
TR	**Primary:** Rheumatic heart disease Infective Endocarditis Carcinoid Syndrome Ebstein's anomaly Trauma	Throbbing pulasation neck Raised JVP Cyanosis Jaundice Massive oedema Irregularly irregular pulse (AF) VenousSystolic murmur,thrill neck Hyperdynamic, Thrusting, RV type Apical Impulse P2 - loud S3 from RV Hight pitched PSM 4rth ICS Carvello's sign Systolic Hepatic pulsation HepatoJugular Reflex Ascites Painful Congestive Hepatomegaly	Weakness Fatigue	Murmur: Short - Mild TR Long - Severe TR	**Investigation : ECG** (non specific, Features of AF), **Chest X ray** (marked cardiomegaly, prominent RA & RV), **ECHO** (RV dilatation, abnormal structural TV) **Rx:** Isolated TR without PHT is well tolerated Correction of MVD and Antifailure measures *Rarely, tricuspid annuloplasty or replacement done*

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MS	Rheumatic Heart Disease Infective Endocarditis Carcinoid Syndrome Amyloidosis Hunter's syndrome Hurler's syndrome SLE RA Mitral annular calcification Drugs - Methysergide **Supravalvular:** Fibrous ring Shone's syndrome **valvular :** Annular hypoplasia Commisure and papillary muscle fusion **Subvalvular:** Hammock valve Absent papillary muscle **Abn ass with LVOTO:** Adn attachment of subvalvular segment to the septum	Mitral facies Malor flush Pulse - Small Volume Left para sternal heave Tapping Apical Impulse S1 - Loud, Palpable P2 - Palpable OS Low pitched, rough,rumbling, Mid - Diastolic Murmur with pre systolic accentuation, best heard over apex in left lat position during Expiration MS accentuated by Mild excercise Murmur dissapears in Severe MS (decreased Cardiac o/p) Diastolic thrill - MItral area + PHTN - Pulmonary area - ESM Left sternal border - PSM increase on inspiration (functional TR)	Dyspnoea Fatigue Palpitation Haemoptysis Recurrent bronchitis	**Valve area(sqcm) :** >2.5 - none 1.5-2.5-mild(d - sev excertion) 1-1.5-mod(PND +/- PE) <1-sev/critical(Orthopnea(4)) **Pressure gradient (mmHg):** 0 - normal < 5 - Mild 5 - 15 - Moderate > 15 - severe Duration = Severity (murmur) **Complications:** Haemoptysis AF (MS > MR) Pulmonary oedema Infective Endocarditis Chest pain Pressure symptoms (*ortner's syndrome, bronchiectasis, parapegia)* Pulmonary haemosiderosis Pulmonary ossification	**Investigation : ECG** (LA enlarge & RVH), **Chest Xray** (LA enlarge(double shadow behind heart rt side), splayed carina, Left heart border straight, MV calcification, Kerley B lines, Kerley A lines, Sickling of barium filled oesophagus) **Management :** Mx: Antifailure measures Anticoagulants in AF AF - digoxin, verapamil, beta-blockers Prophylaxis - Rheumatic fever, Infective Endocarditis Sx: Closed mitral valvotomy / commissurotomy (without cardiopulmonary bypass) Open mitral valvotomy / commissurotomy (with cardiopulmonary bypass) Percutaneous Balloon valvuloplasty Mitral valve replacement
MR	**Mitral Annulus:** Infective endocarditis (abcess) Trauma (valve sx) Paravalvular leak (IE / Valve Sx) **Mitral leaflet:** Acute Rheumatic Fever Infective Endocarditis Trauma Tumour (atrial myxoma) SLE, RA, Ankylosing spondylitis Libman sac-ks lesion **Rupture of Chrodae Tendinae:** Acute Rheumatic Fever Infective Endocarditis Trauma Idiopathic Marfans syndome Ehler Danlos Syndome **Papillary muscle disorders:** Coronary artery disorders LV dysfunction Infiltrative ds (amyloidosis, sarcoidosus) Trauma **1 mitral valve prosthetic disorders:** Porcine cup degeneration Procine cup perforation Srut fracture Immobilised disc or ball	Wide pulse pressure Hyperdynamic Apical impulse Shift down and lateral Parasternal lift S1 - soft S2 - widely split P2 - loud S3 - apex S4 - acute MR MR murmur increased on hang grip and decreased during straining phase of VALSALVA Systolic thrill - mitral area PSM - apex, radiate - - ant leaflet - axilla , back - post leaflet - base Signs of AF AF well tolerated in MR than MS AF systolic murmur of AS change AF murmur of MR will not change	Dyspnoea Fatigue Palpitation	Systolic thrill over apex Large LV S3 present Flow MDM across non stenotic MV **Complications:** AF - thromboembolism Infective Endocarditis	**Investigations: ECG** (LV enlargment, maybe AF), **Chest Xray** (cardiomegaly : LA > LV > RV), **ECHO** (Dilated LA & LV, Dynamic LV, Regurgitation) **Management:** Mx : same as MS ACE inhibitors for chronic MR IV nitroprusside / NTG DIuretucs for acute MR Sx: LV end diastolic dimension : > 45mm LVEF < 60 %