# High Yield Associations Cardio for Step 1

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#### **EKGs**

- Irregularly irregular with no p waves and inconsistent RR intervals
  - High Yield new onset
  - MC risk factors
- Regular PP intervals and RR intervals but no association between P and R
  - High Yield associations (2)
- Greater than 3 distinct P morphologies
  - High Yield association
- Short PR interval with prolonged QRS
  - High yield medication and side effects
- Undulating QRS
  - High yield causes (6), treatment

- Atrial fibrillation
  - Hyperthyroidism
  - o CAD, HTN
- Third Degree Heart Block
  - Lyme Disease, Baby from Lupus mom
- Multifocal Atrial Tachycardia
  - COPD
- Wolff Parkinson White
  - o Procainamide, SLE
- Torsades
  - Ondansetron, macrolides, FQN, haloperidol, IA antiarrhythmics, TCA
  - Magnesium for treatment

#### **EKGs**

- Low amplitude with beat variation, pulsus paradoxus and distant heart sounds, JVD
- Disorder of repolarization leads to prolonged QT
  - W/ deafness, Mode of inheritance
  - W/o deafness, Mode of inheritance
- Pseudo RBBB
  - MC, mode of inheritance
- Diffuse STE

- Cardiac tamponade
- Long QT
  - Jervell and Lange-Nielsen syndrome, AR
  - o Romano Ward, AD
- Brugada
  - Asian males, AD
- Pericarditis

# Murmurs (bolded phrases words are essentially pathognomonic)

- Systolic, crescendo-decrescendo, radiates to carotids, louder with squatting, quieter with valsalva
  - o MC pathology, earlier onset
- Systolic, louder with valsalva, quieter with squatting, S4 auscultated
  - Path, MC genetics
- Holosystolic murmur that radiates to the axilla
- Late systolic murmur with midsystolic click, louder with valsalva

- Aortic Stenosis
  - Calcification aortic valve, bicuspid valve
- HOCM (subset of hypertrophic)
  - Myofibril disarray, AD
- MR
- MVP

# Murmurs (bolded phrases words are essentially pathognomonic)

- Continuous machine-like murmur
  - High yield infection
- Wide, fixed and split S2
- Holosystolic, harsh-sounding murmur
  - High yield association
- Diastolic murmur with opening snap
- Blowing diastolic murmur
  - PE findings
  - High yield associations
- Late systolic/continuous murmur, may radiate to back

- PDA
  - o Rubella
- ASD
- VSD
  - Down Syndrome, Alcohol
- MS
- AR
  - Widened pulse pressure, head bobbing, bounding pulses in nails
  - Aortic root dilation in setting of connective tissue disorders, syphilis (tree bark)
- Coarctation of the Aorta
  - Turner Syndrome
  - High BP in upper extremities, low BP in lower extremities, notched ribs on CXR

#### Post-MI

- MC death cause of death post MI (first 24 hours)
- New friction rub (1-3 days)
- New holosystolic murmur radiates to axilla
  (2-7)
  - Cause, arterial supply
- Hypotension, JVD, low voltage EKG (5-14 days)
- Step-up in O2 concentration, holosystolic murmur
  - Cause
- Low fever, CP, friction rub weeks after MI

- Arrhythmia
- Fibrinous pericarditis
- MR
  - Rupture of papillary muscle, posterior descending artery
- Ventricular free wall rupture (leads to tamponade)
- VSD
  - Rupture interventricular septum
- Dressler

#### CHF

- Causes systolic HF (reduced EF)
  - DCM causes
  - Type of hypertrophy
- Causes diastolic HF (preserved EF)
  - HCM type of hypertrophy
  - RCM causes

#### MI or dilated CM

- Coxsackie B, wet beriberi, Chagas,
  Doxorubicin, hemochromatosis,
  sarcoidosis, peripartum CM
- Eccentric
- Hypertrophy or restrictive CM
  - Concentric hypertrophy
  - Postradiation fibrosis, Loffler, amyloidosis, sarcoidosis, endocardial fibroelastosis, hemochromatosis

#### CHD

- Treatment early cyanotic CHD
  - Drug of choice
- Embryology failure truncus arteriosus
- Transposition of great vessels embryology
  - MC association
- Kid playing and all of a sudden squats
  - How does this work?
- Association Ebstein anomaly
- High yield coarctation of aorta

- Surgery and maintenance of PDA
  - o PGE
- Failure of aorticopulmonary septum formation
- Failure of spiraling aorticopulmonary septum
  - Babies of diabetic mothers
- Tetralogy of Fallot
  - Exercising increased R to L shunting, squatting increased resistance in systemic system so that R sided circulation to the lungs became the lower pressure system
- Lithium
- Turners

### **CHD**

- VSD associations
- Marfan cardiac manifestations
- 22q11 syndromes

- Alcohol, Down syndrome
- MVP, thoracic aortic aneurysm, aortic regurgitation, aortic dissection
- Truncus arteriosus, tetralogy of Fallo