Differential Diagnoses In Heart Disease

An Incomplete List

In Slide Show mode, to advance slides, press spacebar or click left mouse button

How to Use This File
And How Not to Use It

- Use the bookmarks on the left as cues for the differentials
- Try to recite the differential without looking
- Then click on the bookmark for the answers
- The file can be used like “flashcards”
- These lists are not meant to be all-inclusive so please do not consider them as such. If you wish all-inclusive lists of differentials, consult the appropriate textbooks

Nine Lesions Which Produce 75% of All Severe Congenital Heart Lesions In the Neonate

- **Decreased flow**
  1. Tetralogy of Fallot
  2. Tricuspid Atresia
  3. Severe Pulmonic Stenosis
  4. Ebstein's
- **Increased Flow**
  5. Transposition
  6. VSD

Einstein

Nine Lesions Which Produce 75% of All Severe Congenital Heart Lesions In the Neonate

- **Pulmonary venous hypertension**
  7. Hypoplastic left heart
  8. Coarctation of the aorta
  9. TAPVR with infradiaphragmatic obstruction
- **What's left**
  - Left-to-right shunts
    - ASD
    - PDA
  - Truncus arteriosus

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Cyanosis With Decreased Vascularity

- Tetralogy
- Truncus-type IV
- Tricuspid atresia*
- Transposition*
- Ebstein's

* Also appears on DDx of Cyanosis with ↑ Vascularity

Cyanosis With Increased Vascularity

- Truncus types I, II, III
- TAPVR
- Tricuspid atresia*
- Transposition*
- Single ventricle

* Also appears on DDx of Cyanosis with ↓ Vascularity

Cardiomegaly with Normal Vasculature

- Viral myocarditis
- Endocardial fibroelastosis
- Aberrant left coronary artery
- Cystic medial necrosis
- Diabetic mother

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CHF In Newborn
Impede Return of Flow to Left Heart

- Infantile coarctation
- Congenital aortic stenosis
- Hypoplastic left heart syndrome
- Congenital mitral stenosis
- Cor triatriatum
- Obstruction to venous return from lungs
  - TAPVR from below diaphragm

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CHF In Chronologic Sequence

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CHF In Newborn
Impede Return of Flow to Left Heart

- Infantile coarctation
- Congenital aortic stenosis
- Hypoplastic Left Heart Syndrome
- Congenital mitral stenosis
- Cor triatriatum
- Obstruction to venous return from lungs
  - TAPVR from below diaphragm

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CHF In 2nd-3rd Week

- Coarctation of the aorta
- Interruption of the aortic arch

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CHF-later

- Coarctation of the aorta –adult type

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Other Differential Diagnoses

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Causes of ↑ Left Atrium

6

1. CHF
2. Mitral stenosis
3. Mitral regurgitation
4. Prolapsed mitral valve
5. Papillary muscle dysfunction
6. Left atrial myxoma

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Causes of ↑ Main Pulmonary Artery

4

1. L → R shunt
2. Pulmonary arterial hypertension
3. Pulmonic stenosis
4. Idiopathic dilatation of pulmonary artery

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Causes of Prominence of the Thoracic Aorta

7

1. Hypertension (entire)
2. Atherosclerosis (entire)
3. Aortic insufficiency (entire)
4. Aortic stenosis (ascending)
5. Aneurysm (ascending or entire)
6. Coarctation of the aorta (ascending)
7. Aortitis (ascending or entire)

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Types of Left-to-Right Shunts

6

- Atrial Septal defect
- Ventricular Septal Defect
- Patent ductus arteriosus
- Anomalous pulmonary venous return
- AV communis
- Anomalous origin of left coronary artery from pulmonary artery

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Causes of Increased Flow Vascularity

6

1. Left-to-right shunts
    1. Atrial septal defect
    2. Ventricular septal defect
    3. Patent ductus arteriosus
    4. Total anomalous pulmonary venous return
    5. AV communis
2. High-output states

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Causes of Pulmonary Arterial Hypertension

4

1. Primary or idiopathic
2. Secondary to
    1. Lung disease – COPD, fibrosis
    2. Pulm. arterial dz – arteritis, multiple emboli
    3. Chronic hypoxia – hi altitude

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Causes of Pulmonary Venous Hypertension

8

1. Coarctation of aorta
2. Aortic stenosis
3. Hypoplastic Left Heart syndrome
4. Mitral stenosis-acquired or congenital
5. Left atrial myxoma
6. Cor triatriatum
7. TAPVR from below diaphragm
8. CHF

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Causes of Congestive Heart Failure

6

1. Coronary artery disease
2. Hypertension
3. Cardiomyopathy
4. Valvular lesions – AS, MS
5. Left-to-right shunts
6. Fluid overload

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Causes of Marked ↑ of Cardiac Silhouette

3

1. Cardiomyopathy
2. Pericardial Effusion
3. Multiple valve disease

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Causes of Cardiomyopathy

6

1. Alcoholism
2. Coronary artery disease
3. Collagen-vascular disease
4. Myocarditis – e.g. rheumatic
5. Amyloidosis
6. Nutritional – e.g. Beriberi

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Causes of Pericardial Effusion

7

1. Viral pericarditis
2. Collagen-vascular disease, e.g. lupus
3. Uremia
4. TB
5. Trauma
6. Post myocardial infarction
7. Mets

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Most Commons

- Most common cause of CHF in newborn
  - Hypoplastic left heart syndrome
- Most common cause of CHF > 2 weeks
  - Coarctation of the aorta (infantile form)
- Most common cyanotic heart disease
  - Tetralogy of Fallot
- Most common dz associated c R arch
  - Tetralogy of Fallot

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Most Commons

- Most common L → R shunt
  - Ventricular Septal Defect
- Most common L → R shunt dx'd in adult
  - Atrial Septal Defect
- Dz most commonly associated c R arch
  - Truncus arteriosus
- Most common congenital cardiac lesion
  - Bicuspid aortic valve

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Most Commons

- Most common type of ASD
  - Ostium secundum
- Most common type of VSD
  - Membranous VSD
- Most common type of TAPVR
  - Supracardiac

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Most Commons

- Most common cardiac tumor
  - Metastatic disease, e.g. melanoma
- Most common 1° benign heart tumor
  - Myxoma
- Most common 1° tumor of heart in child
  - Rhabdomyoma

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Most Commons

- Most common CHD in Down's Syndrome
  - Atrioventricular canal defects
- Most common cause of pericardial effusion
  - Myocardial infarction with LV failure
- CHD most commonly assoc. with pericardial abnormalities
  - ASD

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Uncommon Most Commons

- Most common site of coronary stenosis
  - Right coronary artery
- Most common site of true LV aneurysm
  - Anterolateral and apical walls
- Most common cause of false LV aneurysm
  - Post-myocardial infarction rupture of LV into pericardium

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The End

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