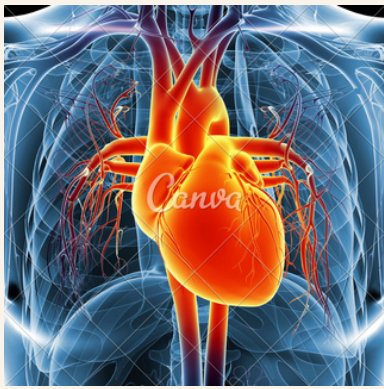


Aortic Dissection



Aortic Dissection occurs when blood flows through a **tear in the Tunica Intima**, creating a false lumen as the **Tunica Intima separates from the Tunica Media**.

The dissection may occur at any point along the Aorta and can extend proximally or distally to involve other arteries.

Symptoms

- Sudden onset **Chest and/or Back pain** - Often *Interscapular*
- Pain is **sharp, tearing in nature** and **reaches maximal intensity in seconds**

HIGH RISK FEATURES!!!

- Perfusion deficit - Limb Weakness/BP differential (>15mmHg)
- Hypotension/shock/collapse
- New Heart Murmur with pain

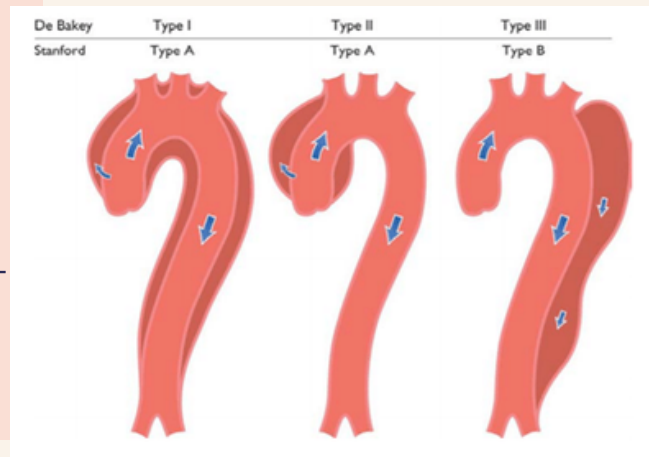


Classification

Stanford Classification:

- Type A - Dissection involves the **Ascending Aorta**
- Type B - Dissection predominantly involves the **descending thoracic aorta** and **abdominal aorta** - ascending aorta not involved

Also DeBakey classification which divides into Type I, II and III.



CT Scan is gold standard for definitive diagnosis, DO NOT DELAY CT!!

Image whole aorta: **CT angio aorta**

CXR Features suggestive of dissection - widened mediastinum/double-knuckle aorta/left pleural effusion/tracheal deviation to right
Elevated D-Dimer should also raise suspicion of dissection

Initial Management

Manage patient in Resus - Get Senior help and Refer early!

Key Principles:

- ABCDE assessment
- High Flow O2 via trauma mask
- 2x large bore IV Cannulas
- Aggressive BP Control +/- Arterial Line insertion
- Analgesia and Antiemetic
 - IV morphine
 - IV ondansetron 4mg



BP Control: initial targets

- **Systolic BP 100-120mmHg (measured in right arm)**
- **MAP <80mmHg**

IV Labetalol - 1st Choice

- start with slow IV Bolus injections - 10mg every 2 mins till max 200mg
- also start infusion - 15mg/hr and titrate as needed

Can add - Nicardipine (2nd line) or Hydralazine (3rd line)



Who to Refer to?

TYPE A DISSECTION - Surgical management - refer to **Cardiothoracics** (GJNH)

TYPE B DISSECTION - Thoracic Endovascular repair - refer to **Vascular Surgery** (QEUH)

SOURCES:

CEM WEBSITE - AORTIC DISSECTION

MSD MANUAL 'AORTIC DISSECTION' -[HTTPS://WWW.MSDMANUALS.COM/EN-GB/PROFESSIONAL/CARDIOVASCULAR-DISORDERS/DISEASES-OF-THE-AORTA-AND-ITS-BRANCHES/AORTIC-DISSECTION](https://www.msmanuals.com/en-gb/professional/cardiovascular-disorders/diseases-of-the-aorta-and-its-branches/aortic-dissection)