

CARDIOVASCULAR HISTORY

HPI:

- Chest Pain:

- Duration
- Location
- Severity
- Quality (stabbing or crushing? Stabbing = pericarditis)
- With breathing? (pleural rub)
- With exertion (angina)
- **EVER HAD THIS PAIN BEFORE?**

- Dyspnoea:

- With exertion?
- With anxiety?
- **HOW MANY PILLOWS DO YOU SLEEP ON?**

- Ankle swelling:

- **Both ankles?** (one ankle = probably DVT; both = heart failure)
- **Worse in the evening?** (= congestive heart failure;)
- **Pitting or non-pitting?** (non pitting = lymphoedema)

- Palpitations

- **Exactly what do you feel?** (heart racing, thumping etc)
- **HOW LONG FOR?**
- **Regular beat? Skipped beats?** (irregular = Atrial Fib)
- **Followed by fainting attack?** (ventricular tachycardia)
- **Relieved by cough or cold water?** (Supraventricular tachycardia)

- Syncope / Dizziness

- **WHAT CIRCUMSTANCES?**
 - Emotional distress? Micturition? **POSTURAL?**
 - **WITH or WITHOUT WARNING?**
- **If still dizzy when lying down, and aggravated by head movements, the dizziness is NEUROLOGICAL**

- Claudication

- Exertional pain @ **ANKLE, CALF, BUTTOCK**
- **SMOKER?**
- **How far can you walk? Lets take a walk**

- Fatigue

- **How long have you been fatigued /easily fatigued?**
- **How far can you walk?**
- **Worse in the morning/afternoon/nighttime?**

- Fever

- **Infective endocarditis!!**

Ask about RISK FACTORS:

- Ever had heart disease?
- Got high cholesterol?
- **A SMOKER??**
- With **DIABETES??**
- Hypertensive?
- Family history of coronary artery disease?
- **Smoking?**
- **Drinking?**
- **IV drugs?**
- **Exercise?**
- **Weight gain/loss?**

FAMILY HISTORY:

- **Heart disease**
- **Diabetes**
- **High cholesterol**
- **Stroke**

MEDICATIONS point the way to past history

CARDIOVASCULAR EXAMINATION

1) POSITION sitting @ 45 degrees on bed, **EXPOSE** chest + neck

- 2) LOOK for** – PALLOR
- JAUNDICE
 - CYANOSIS
 - CACHEXIA
 - DYSPNOEA

LOOK AT THE MACHINES:

- Oxygen sats?
- Heart rate?
- Blood pressure?

!! ALWAYS !!

AGE
WEIGHT
WAIST measurement

ALSO LOOK FOR SYNDROMES:

TURNER:

- Short 4th, 5th fingers
- Hand oedema
- Sexual infantilism
- Micrognathia
- Low hairline
- Ptosis
- Fish mouth

DOWN:

- Little simple ears
- Protruding tongue
- Single palmar crease
- Broad hands
- Mental deficit

MARFAN:

- Great height
- Gauntness
- Arachnodactyly
- Arm span is greater than height (!!)

CHARACTERISTIC SCARS:

- **MIDLINE STERNOTOMY:** degenerative condition, eg. bypass surgery
- **LATERAL THORACOTOMY:** congestive condition
- **LEFT AXILLA or SUBCLAVICULAR SCAR:** pacemaker (already visible = too skinny)
- **LONGITUDINAL ACROSS ULNA:** previous bypass graft taken from arm

3) The HANDS:

NAILS: look for

- **CLUBBING:** look in profile; loss of nail angle
- Nail Beds **BLANCHING ON THEIR OWN?** = aortic regurg.
- **Splinter Haemorrhages** (infective endo)
- **Osler's Nodes** (raised, painful)
- **Janeway lesions** (flat, painless and RARE)
- **White Leuconychia** = hypolabuminaemia = liver dysf(n)

PALM+WRIST:

- **Tendon Xanthoma?** = type 2 hyperlipidaemia
- **Palmar xanthomata?** = type 3 hyperlipidaemia
- **Anaemia?** Loss of colour in the palmar creases

RADIAL PULSE:

- **RATE?** Brady / tachy
- **Rhythm?** Sinus / arrhythmic
- **COMPARE BOTH HANDS**
- **Radio-Radial delay** (= vascular disease en route to brachial arteries)
- **Radiofemoral Delay** (Co-arctation or stenosis of Aorta)

The heart rate increases with inspiration and decreases with expiration

BLOOD PRESSURE:

- Go to 180 mmHg until it muffles
- Do both arms
- Do postural (lying down and sitting up)
- **MAKE CERTAIN THE ARM IS AT THE LEVEL OF THE HEART**
- **Normal postural drop = no more than 15mm**

4) The NECK:

CAROTID PULSE

- **BOUNDED**, “**COLLAPSING**” the pulse may actually shake the patient
 - If the pulse can still be felt with the pal of the hand when the pts. arm is raised
- **ANACROTIC** small volume, slow uptake, notched upstroke = aortic stenosis
- **PLATEAU** slow uptake, aortic stenosis
- **SMALL VOLUME** weak pulse, aortic stenosis
- **BISFERIENS** anacrotic AND collapsing (aortic stenosis AND regurgitation)
- **ALTERNANS** alternating strong and weak beats (LV failure)
- “**JERKY**” sharp upstroke (hypertrophic cardiomyopathy)

J.V.P.

Is the assessment of Right Heart Function (pt at 45 degrees, head turned)

- **SHOULD BE INVISIBLE** or below 3cm
- **VISIBLE BUT NOT PALPABLE 2-wave heave**
- **TWO WAVES: A, then V.**

HUGE A wave:

- Complete heart block, 3rd degree (or tricuspid stenosis)

HUGE V wave:

- Tricuspid regurgitation; check if liver is pulsating due to portal hypertension

HEPATOJUGULAR REFLUX TEST:

- **Compress liver for 15 sec.**
- **HEALTHY JVP:** rises briefly, then goes down
- **RHF JVP:** rises for the ENTIRE DURATION OF TEST

ASCITES without JVP is probably NOT due to heart failure

5) The FACE:

EYES:

- **Jaundiced sclera?**
- **Bloodshot?**
- **Xanthelasma?**

MITRAL FACIES: Rosy cheeks with Bluish tinge

MOUTH:

- **High arched palate** (Marfans)
- **Tooth decay? Petechiae?** (infective endocarditis)
- **CENTRAL CYANOSIS** (tongue, but not lips)

6) The PRAECORDIUM

LOOK:

- **Scars?**
- **Pectus excavatum/carinatum? Kypho/Scoliosis?**

APEX BEAT: 5th intercostal, 1cm left of midclavicular line = **BELOW NIPPLE**

- **DYSKINETIC** arrhythmia or LV dysfunction
- **PRESSURE LOADED** hypertension
- **DOUBLE IMPULSE** hypertrophic cardiomyopathy
- **TAPPING** mitral stenosis
- **Right Ventricular Heave:** rt sided hypertrophy
- **PALPABLE THRILLS?** Maybe a VSD or severe murmur

PERCUSS CARDIAC OUTLINE: along 5th space medially from axilla;

- **NORMAL = ~10.5 cm**

8) DYNAMIC MANOEUVRES

* Rt sided murmurs: louder with INSPIRATION

* Lt sided murmurs: louder with EXPIRATION

VALSALVA: breathing out vs. closed nose and mouth:

Hypertrophic cardiomyopathy and mitral prolapse = louder; most murmurs soften

DEEP INSPIRATION, leaning forward:

for Aortic regurg. and pericardial rub

SQUATTING: all murmurs get LOUDER on squatting

except *mitral prolapse and hypertrophic cardiomyopathy*

9) The BACK

PERCUSS lung bases

- looking for STONY DULLNESS of effusion

AUSCULTATE the bases

- looking for LATE OR PAN-INSPIRATORY crackles of pulmonary oedema

10) ABDOMEN

PALPATE IPSI for HEPATOMEGALY

PULSATILE? → RHF

ASCITES? Severe RHF if JVP also increased

PULSATING AORTA (mid area) → ANEURYSM

11) LOWER LIMBS

- Oedema? Check if pitting (h.f.)
- Femoral Pulse
- Auscultate for Femoral bruit (stenosis by atheroma)
- Achilles tendon xanthomata (type 2 hyperlipidaemia)
- Toe cyanosis (peripheral)
- Capillary return (peripheral vascular disease)
- Pallor of lower extremities (peripheral vascular disease)

BUERGER's TEST:

- Raise leg: observe PALLOR:
- Lower leg: observe CYANOSIS:
 - means Peripheral Vascular Disease is present (*poor arterial supply)

DVT:

- Calf Pain; squeeze gently and look for tenderness
- Homans Sign: pain in foot when calf is sharply dorsiflexed; avoid doing this one
- VARICOSITY?
- Inflamed/swollen/pigmented leg?
- HARD VEINS??

12) SUPPLEMENTARY TESTS

Trendelenburg:

- block saphenous opening while patient is lying down flat
- stand the patient up
- if POSITIVE = veins will stay empty until saphenous block is removed
- = means thrombus somewhere in the calf deep network

Perthe's test:

- Much the same, but let some blood through the block and get the patient to stand on tip-toes a few times:
- Veins will be less tense if the calf veins are patent

