Cardiovascular system

Venous congestion in neck indicates increased venous pressure — same true c̄ veins in arm when raised above level of auricle

Pulse
Glen Cunningham 46-48 = pulse rate
in 80's after race

Both radial pulses
1. ~~thrombosis~~ ~~of~~ embolism of subclavian or brachial
2. aneurysm

rythm
1) sinus arrythmia — change c̄ respiration (speeds c̄ respiration (common under 30)
2) extrasystoles (The compensatory pause followed by extra big beat draws patient's attention to them) very common in normal
3) pulsus bigeminus // // //
trigeminus /// /// ///
almost always indicate
1) damaged heart
2) over digitalization
4) Pulsus paradoxus — just opposite of sinus arrythmia — pulse volume obliterated c̄ inspiration — pericardial effusion or massive pneumothorax
determine blood pressure from pulse — Dr. Thayer could get within few mm. also Dr. Hamman

Condition of vessels:
1) ophthalmoscopic
2) brachial ~~tortuous~~
pipe stem
~~trachea~~-like

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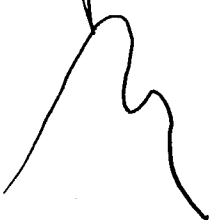
5) pulsus ~~alternans~~ alternans
|||/| : grave prognostic significance
will die in 3 months —
best to pick up blood pressure readings

in hypertension or ath heart disease or combination

Dicrotic pulse



typhoid fever, flu, measles where B.P low

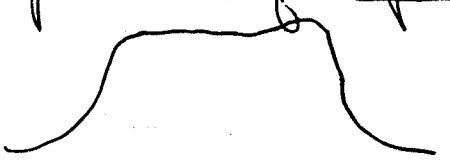
If find in aortic ins efficiency indicates mitral stenosis also tells whether syph. or rheumatic

Anacrotic pulse

pulsus bisfiriens
plateau pulse

felt only in aortic stenosis

may give impression of a prolonged beat



low volume long sustained

Collapsing, Corrigan, Waterhammer

bottle = air exhausted and water in it - shake to get impulse

Capillary pulse

1) pressure on fingernail
2) transillumination
3) glass slide against cheek
4) in retina

Auricular fibrillation
often hard to tell if extra systole or this — extrasystoles disappear in exercise

pulse deficit = difference between apex beat and beat of arm

<u>today</u>

peripheral vessels
pulses
pulse in forced inspiration & expiration
time pulses in neck & apex beat

pulse 66 before exercise
pulses equal
no jugular pulsations observed
no pulse deficit

<u>Patient</u>

1) Capillary pulse
2) Collapsing pulse — put finger to ay wound
3) Pistol shot sound (over femoral)
4) Duroziez's murmur — continuous murmur over great vessels in aortic insufficiency

All peripheral signs of aortic insufficiency after violent exercise or hyperthyroidism = dinitrophenol (increased metabolism)

Observation and palpation of precordium

PMI may not actually be at apex of heart - may 1 or 1½ cm within margin of heart - however gives good idea of heart size

changes in intensity + perhaps position ± movement from standing to lying or from left to right + vice versa

if have rheumatic fever have pericarditis at some time and all mediastinal structures stuck together so does not move ± change of side strong in:

1) aortic insufficiency - syphilitic or otherwise
2) hypertension
3) Lt. ventricular hypertrophy
4) Paget's disease
5) fever

diminished in:

1) emphysema
2) left pneumothorax
3) ± adhesive pleurisy

have patient sit up or even lean forward to get it

Shift to left:

1) cardiac hypertrophy
2) dilatation in Lt. lung
3) adhesions to left
4) air or fluid on right

Shift to right:

Same causes

cardiac outline + body build

2nd interspace to 5th interspace or 6th int

h at parts present on chest

location of valves + auscultatory areas of each

heart pulled down + appears smaller in forced inspiration

ant. aspect of heart almost entirely right ventricle

must consider body build and age
heart appears enlarged in pyknic | heart appears enlarged in young

An. Heart jour. for April very good

EKG not yet too good but to be good P.D. man

today:
1) Surface marking of heart (Chambers)
2) location of valves
3) look for pulsations
right be ripple down left of sternum
any on
4) PMI on stand, sitting, exercise, rt + left
5) epigastric + episternal pulsations

Rheumatic fever

small for age (15)

~~precordial fullness~~

diffuse wavy PMI impulse — 6th space almost in midax[illary] line

thrill

diastolic tap in pulmonic area indicative of mitral stenosis

diastolic pulmonary tap = palpable 2nd pulmonary sound due to elevated pressure in pulmonary circuit

Broadbent's sign

adhesive mediastinitis c̄ pericarditis

also retraction of ensiform process in systole

10 gms a day (150 grams)

10 gms IV then 10 gms a day

Henry Moulton

longer expectancy in combined lesions

5/16/44 Percussion of heart

transverse diameter over 10 cm is abnormal

absolute dullness - no lung over heart
relative " - lung " "

today;
1) PMI
2) percuss absolute & relative dullness

can't percuss lower border

5/23/40

Auscultation of heart

1st & 2nd heart sounds
3rd first described by Thayer in 1911
1st - much discussion as to origin - Dock, 1937, favored
view that purely valvular (AV leaflets) -
2nd - purely valvular - [illegible]

3rd sound = expulsion of blood into ventricle
by auricle late in ventricular diastole

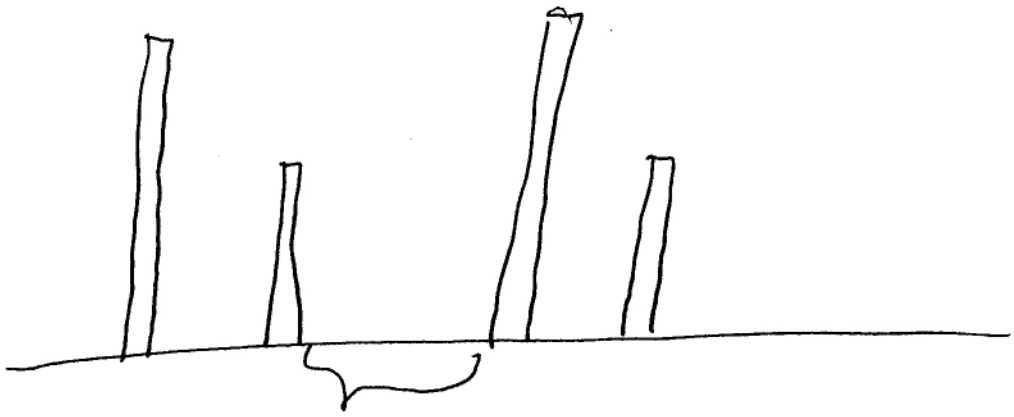
intensity controlled by same factors as health sounds

all gallops in diastole
Wallentrum - showed call triple rhythm
protodiastolic or presystolic

diastolic murmurs of aortic valve rightsomewhere in
3rd left interspace

pulmonary murmurs of anemia

Systolic murmurs
harsh, blowing
Sea gull murmur = ruptured chordae tendineae



in here

may have referable only to mitral area

1) early diastolic (protodiastolic
2) mid "
3) late or presystolic or whole diastolic (disappears in auricular fibrillation of mitral stenosis)
4) Complete

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for aortic area

all murmurs

early diastolic

(Quantitative sounds

pericardial friction rub (sometimes can mistake a pleural rub for it — exclude by not breathing)

sternal crunch - normal

Patient

aortic diastolic murmur transmitted downward & to left to 3rd left intercostal area

When combined lesions peripheral signs minimal