محاضرة ٢

* Inspection ends at apex beat
* In Palpation we feel it and define if it localized or diffuse
  ↓ one space ↓ أكثر من space

⇒ Heave sustained
In diseases cause pressure overload like pulmonary HTN
Pulmonary stenosis

⇒ Heave non sustained
In diseases cause volume overload like pulmonary regurge
Tricaspid regurge

③ Auscultation

① Normal heart sound
② Marmars
③ audil sound

① Normal:

S_1 (Systol)	S_2 (Diastol)
Lup	Dup
louder	
Closure of mitral and tricaspid valves	Closure of aortic and pulmonary valves

* 1st heart sound أقوى من 2nd في كل مكان حتى في pulmonary و aortic

* يوم اسمع S_2 اعلى من S_1 يعني في Accentuated S_2
* S_2 accentuated على pulmonary a. هي اهم علامة في pulmonary HTN
* اغلب sounds بنسمعها بـ diaphragm

sounds → low pitch → S_3, S_4, diastolic marmar / by bell
→ High pitch → normal sounds (S_1, S_2) / by diaphragm and bell

There is 5 areas, 2 radiation, 3 manokerus

5 areas

1. Mitral area → apex ↑ 5th IC space (between Lt ventricl and Lt atrium)
2. pulmonary area → 2nd left IC space
3. 1st aortic area → 2nd Rt IC space
4. ~~2nd IC area → 2nd aortic area~~
5. ~~4th IC space at left side → tricasped valve~~
4. 2nd aortic area → 3rd IC space
5. Tricasped valve → 4th IC space at Lt side

3 manoverus مناورات

بدي اقوي marmar إذا في واحد مش مسموع فبقول للمريض
ياخد نفس او يعمل حركة

2 radiation

1. carotid → only aortic stenosis marmar
2. axilla → mitral regargtation

① 1st manover (tricasped)

* لما احكي للمريض خد نفس واكتمه وانا اسمع صوت قوي على tricasped area معناته في عندي Tricasped regarge

لانه في inspiration بتزيد -ve pressure في Chest وبرجع الدم على Rt atrium فبزيد صوت marmar

* Carvallo's sign: murmurs at right side increase with inspiration except congintal pulmonary stenosis

② 2nd manover (mitral)

* بحط السماعة على mitral او على apex ولما الاحظ مع expiration marmar يعني هادا mitral stenosis or regarge (المريض بلف على الشمال)

③ 3rd manover (aorta)

* بحكي للمريض يقعد ويقدم لقدام كتير وبحط السماعة على 2nd aortic area بقله خد نفس عميق وطلعه بقوة واكتم النفس بسمع aortic regarge

مهم

* If 1st heart sound weaker (muffled)
  at apex means mitral regargetation
* If 1st " " loader (accentuated)
  at apex means mitral stenosis
* If 2nd heart sound weaker (muffled)
  at pulmonary area means pulmonary ~~hypertension~~ stenosis
  at aortic area means aortis stenosis
* If 2nd " " loader (accentuated)
  at pulmonary means pulmonary ~~stenosis~~ hypotension
  at aortic area means systemic HTN

② Murmur

لما يصير في مشكلة في الانابيب بصير في turbulente بصير الدم يدور زي الدوامة المسببات :

① Stenosis [انبوبة واسعة بتصب فجأة في انبوبة ضيقة]

② regage [انبوبة صغير بتصب في انبوبة واسعة]

③ VSD, ASD [Connection betn 2 tubes, ثقب]

* more high pressure gradiant more sever stenosis *

⇒ Grades of murmur

Grade 1: faint murmur [need expert to hear it]

Grade 2: audible ضعيف والكل يسمعه

Grade 3: load قوي والي ما بسمعه بكون عنده مشكلة بالسمع

Grade 4: thrill

Grade 5: لو رفعت السماعة شوية بسمعه

Grade 6: فن فوق الأواعي بسمعه

There is a diastolic and systolic murmur

- sh Lup Dup
- middiastolic or early diast.
- lup sh sh Dup
- pansystolic or mid systolic (ejection Sy.)

كل systol

The Theart divide into base and apex

The differantial diagnosis at the base لو سمعنا murmure على base حيكون واحدة من 5

1. pulmonary stenosis → بسمعها على p.a. ملهوش radiation , S_2 ضعيفة
2. aortic stenosis → بسمعه على اليمين aa وبروح على carotid
3. Innocent marmur
4. HOCM
5. ASD

كل ما ضعف S_2 كل ما كان more sever stenosis خاصة في a. stenosis

HOCM hypertrophe obstruction Cardiomyopathy

- The most common of sudden Cardiac death in young people during excersis
- Autosomal domenant
- Valves normal, Septum abnormal "subvalvular stnosis"
- Treatment: Amidrone

  ICD جهاز بس يوقف القلب بشغله

- الي بسبب الوفاة هان هي arrthmea ~~arrthmea~~
- How we differantiate it from aortic stenosis?

  pulse in HOCM the best at 1 2nd aortic area with 2 no radiation to carotid, 3 S_2 normal "العمام شغال"

  In HOCM: Jerky ← اهم اشي pulse احكي

  In aortic S.: pulsus parsus it tardus

Stenosis
- valvular
- subvalvular
- subravalvular

Innocent murmur

- In hyperdynamic Circulation Causes
- In children and pregnancy
- Heard at pulmonary area
- grade 1 or 2
- always systolic no diastolic
- Change with inspiration or position

ASD atrial septal defect

- Not caused by Shunt because there is no different pressure (equal pressure)
- Caused by Volume overload on pulmonary
- heard on pulmonary area
- How to differentiate it from pulmonary stenosis?

  In PS, S_2 Sound is muffled

  In ASD, S_2 Sound is wide fixed sploted S_2

  delay closure of P. valve — respiration ما بتأثر بـ — volume overload

← المنطق في حالة inspiration بزيد Venous retern فبالتالي بزيد murmur
على Pulmonary نتيجة الضغط ، ولكن في equilibrium

← كل ما زاد venous retain بخف Shunt
وبزيد على Pulmonary