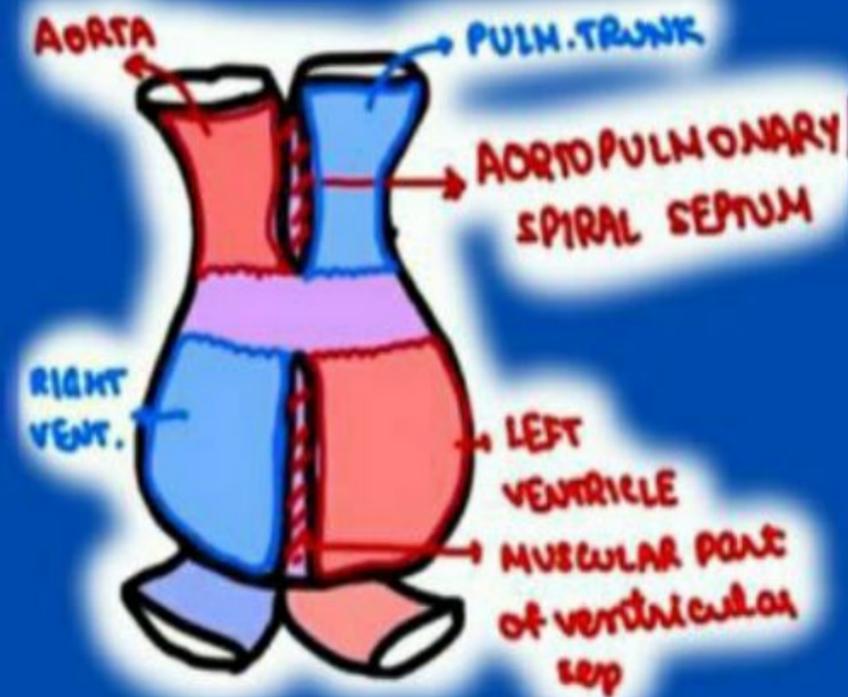




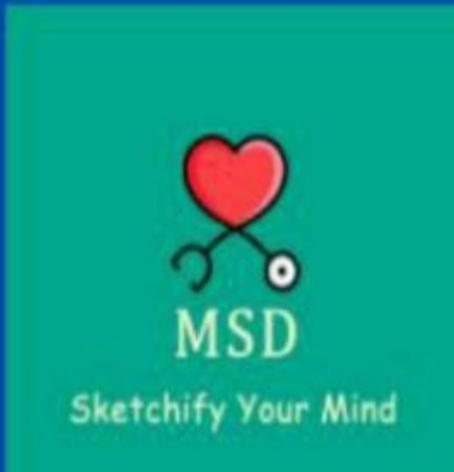
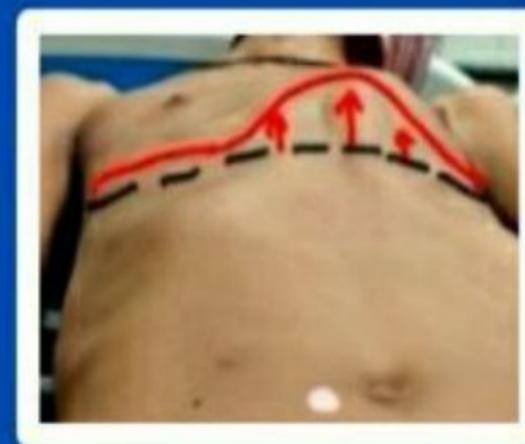
DR. KARTHIKEYAN
MD MEDICINE
MAMC



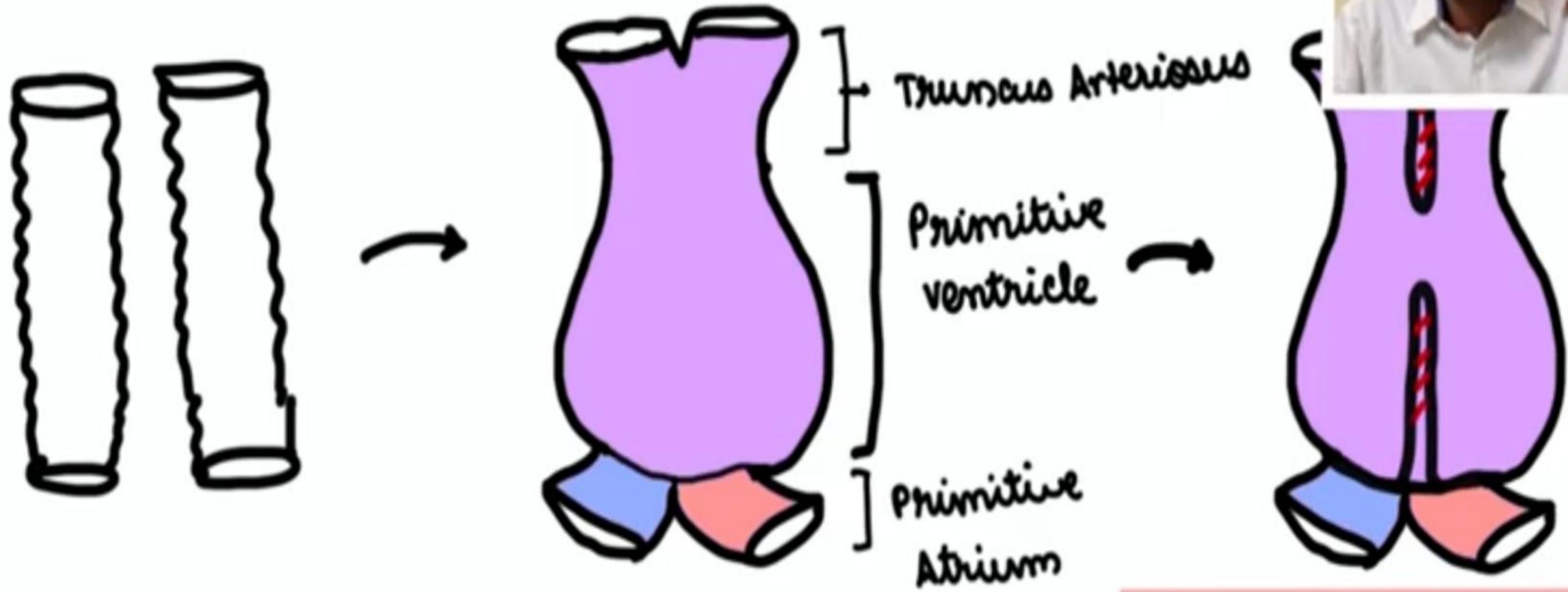
(ANIMATION)
CVS



EXAMINATION:
CONGENITAL
HEART
DISEASE



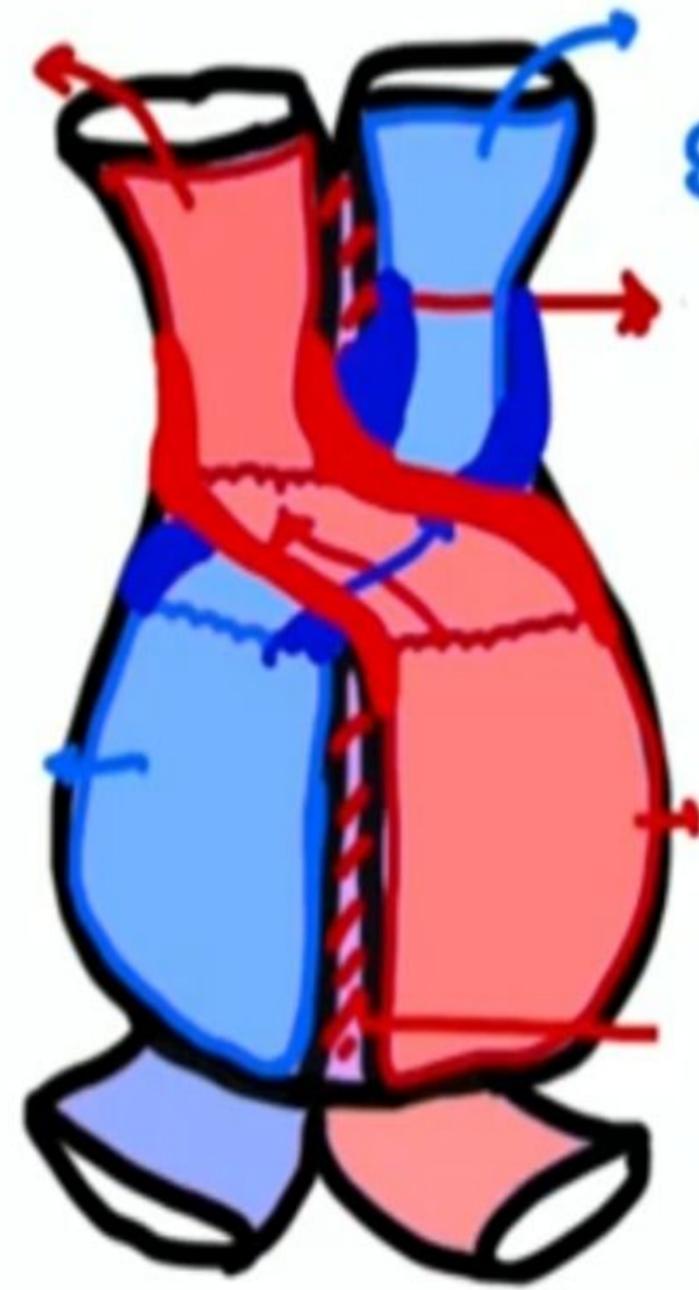
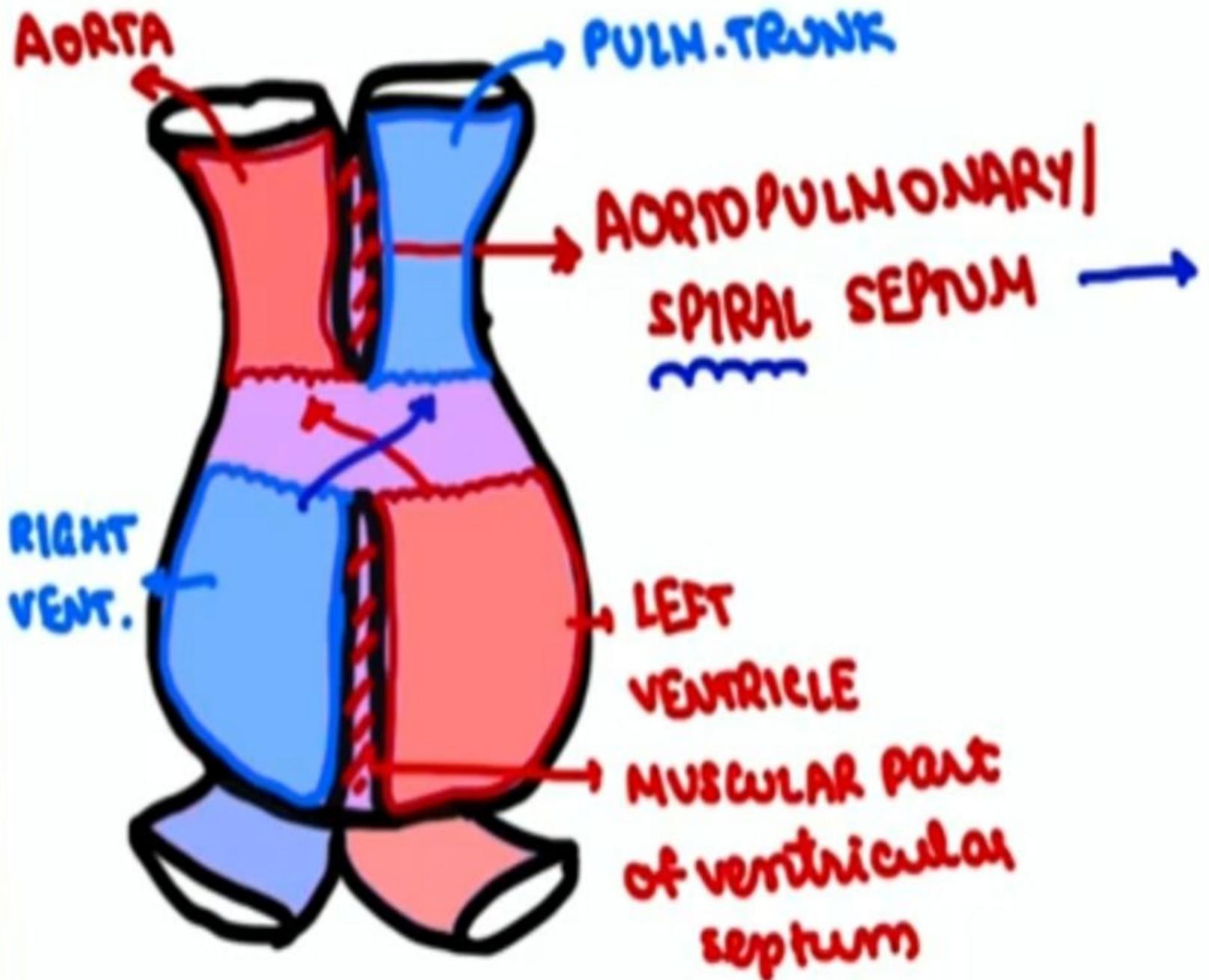
NORMAL EVENTS IN DEVELOPMENT



SEPTUM FROM BELOW UP [P.V.]

SEPTUM FROM ABOVE DOWN [T.A.]

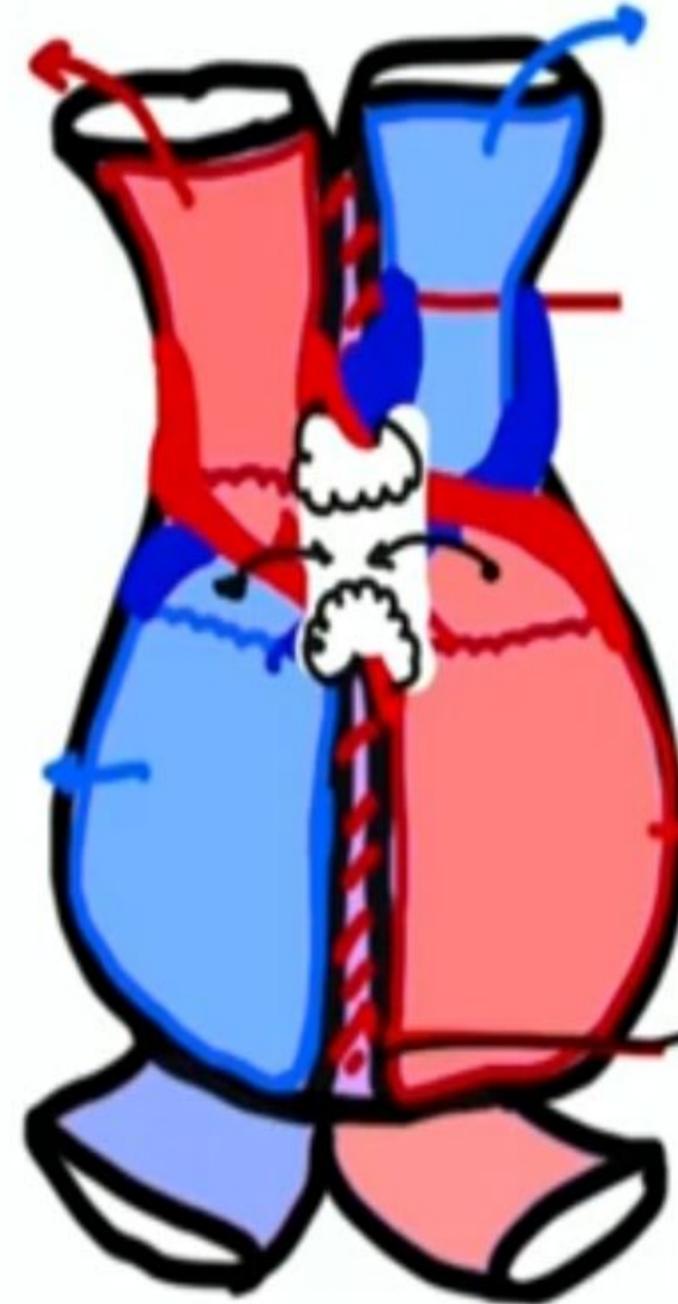
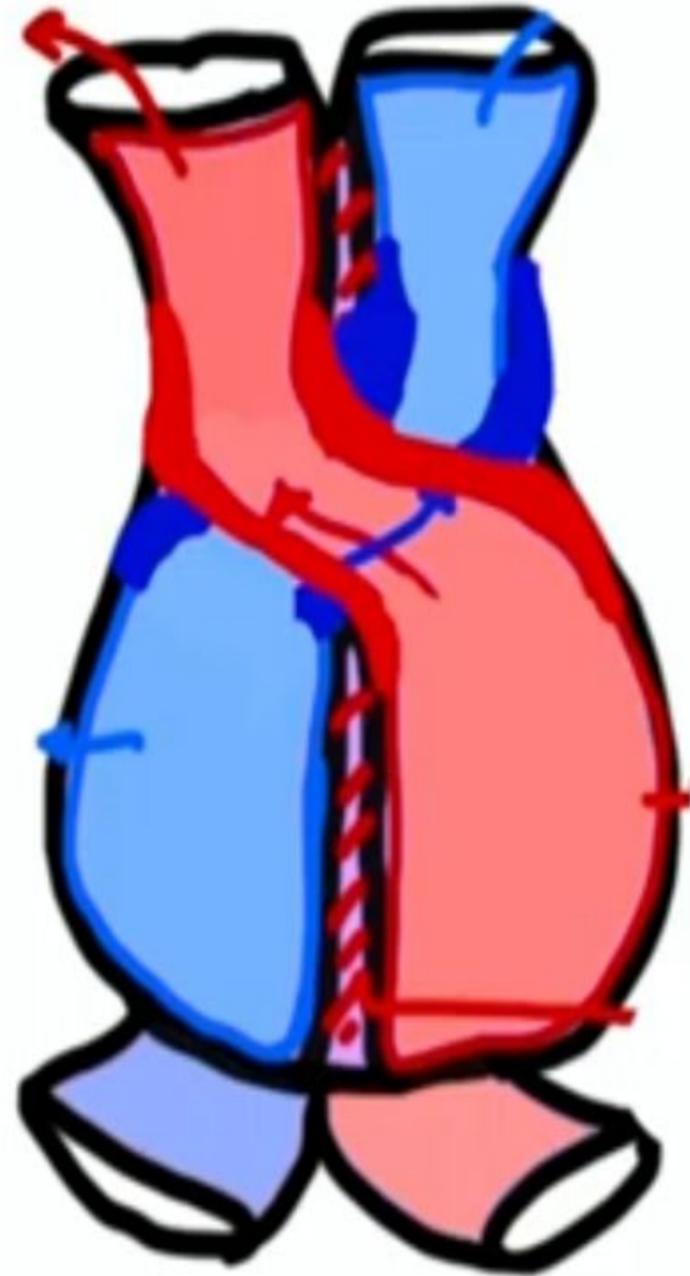
NORMAL EVENTS IN DEVELOPMENT



SF
OF
SPIRAL SEPTUM
↓
connects
RV ↓ Pulm trunk
LV ↓ Aorta



NORMAL EVENTS IN DEVELOPMENT



INTERVENTRICAL
SEPTUM
FORMATION



Muscular
part

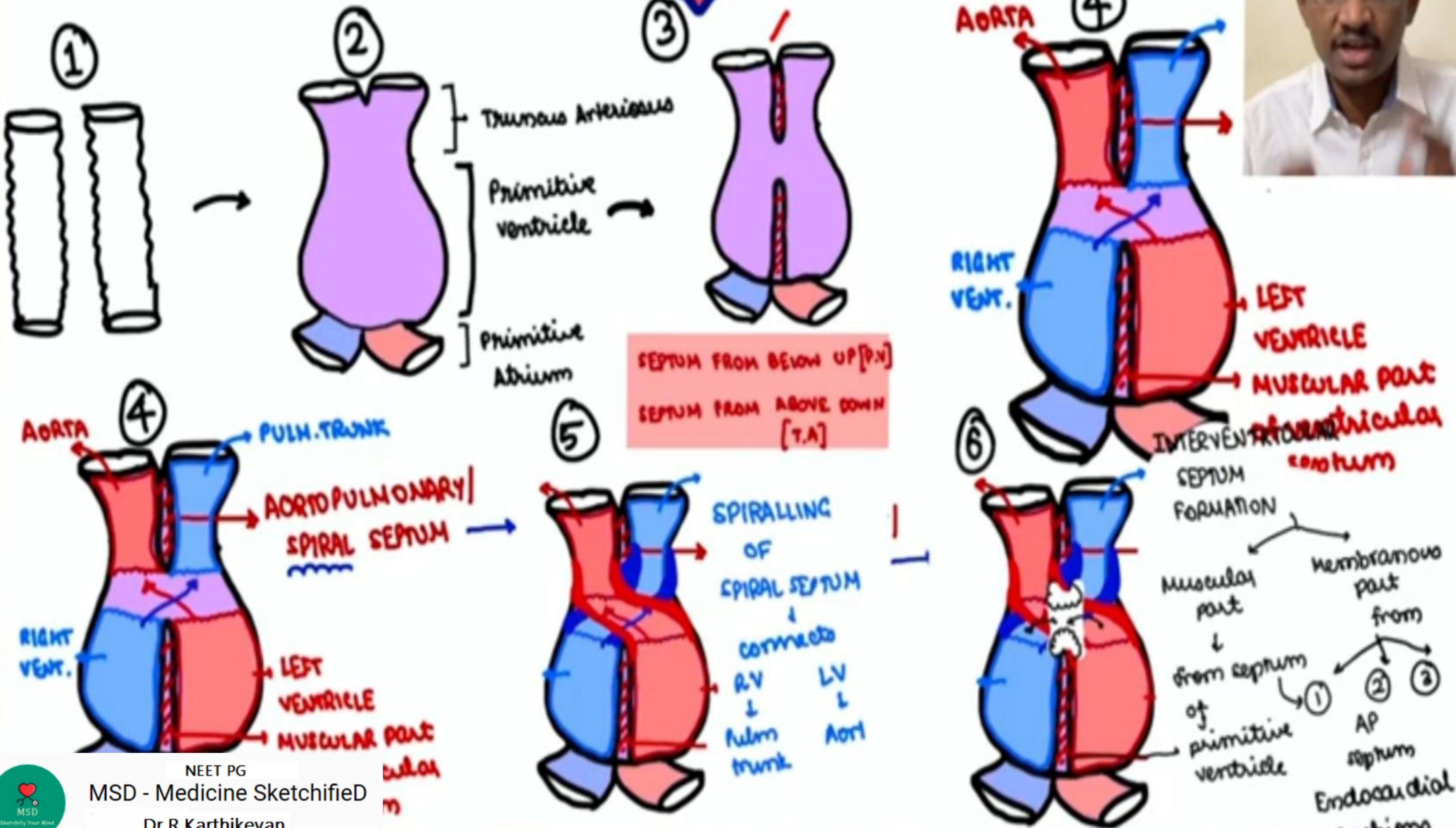
Membranous
part

↓
from septum
of
primitive
ventricle

from
① ② ③
AP
septum
Endocardial
cushions



NORMAL EVENTS IN DEVELOPMENT

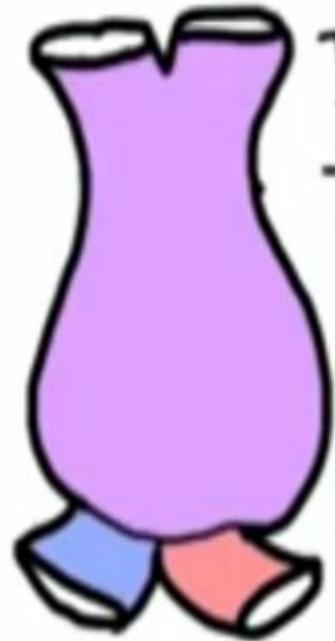


NORMAL EVENTS

IN



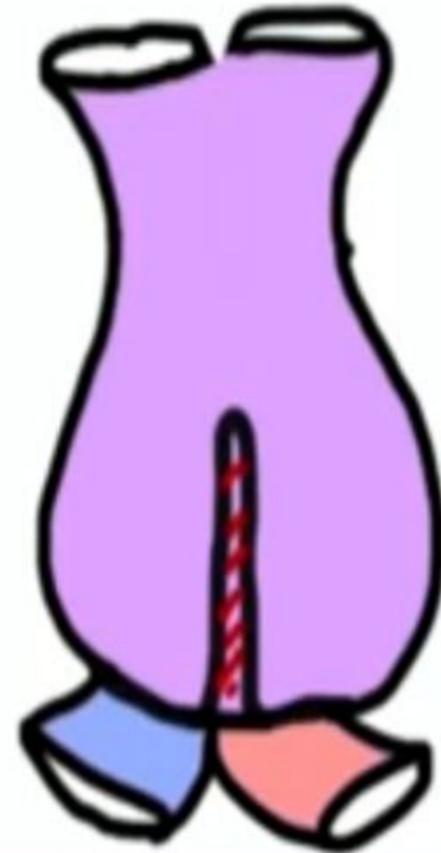
DEVELOPMENT



Truncus Arteriosus

Primitive ventricle

Primitive Atrium



SEPTUM FROM BELOW UP [P.V]

PERSISTENT TRUNCUS ARTERIOSUS

Failure of AP septum to grow

Cyanosis at birth



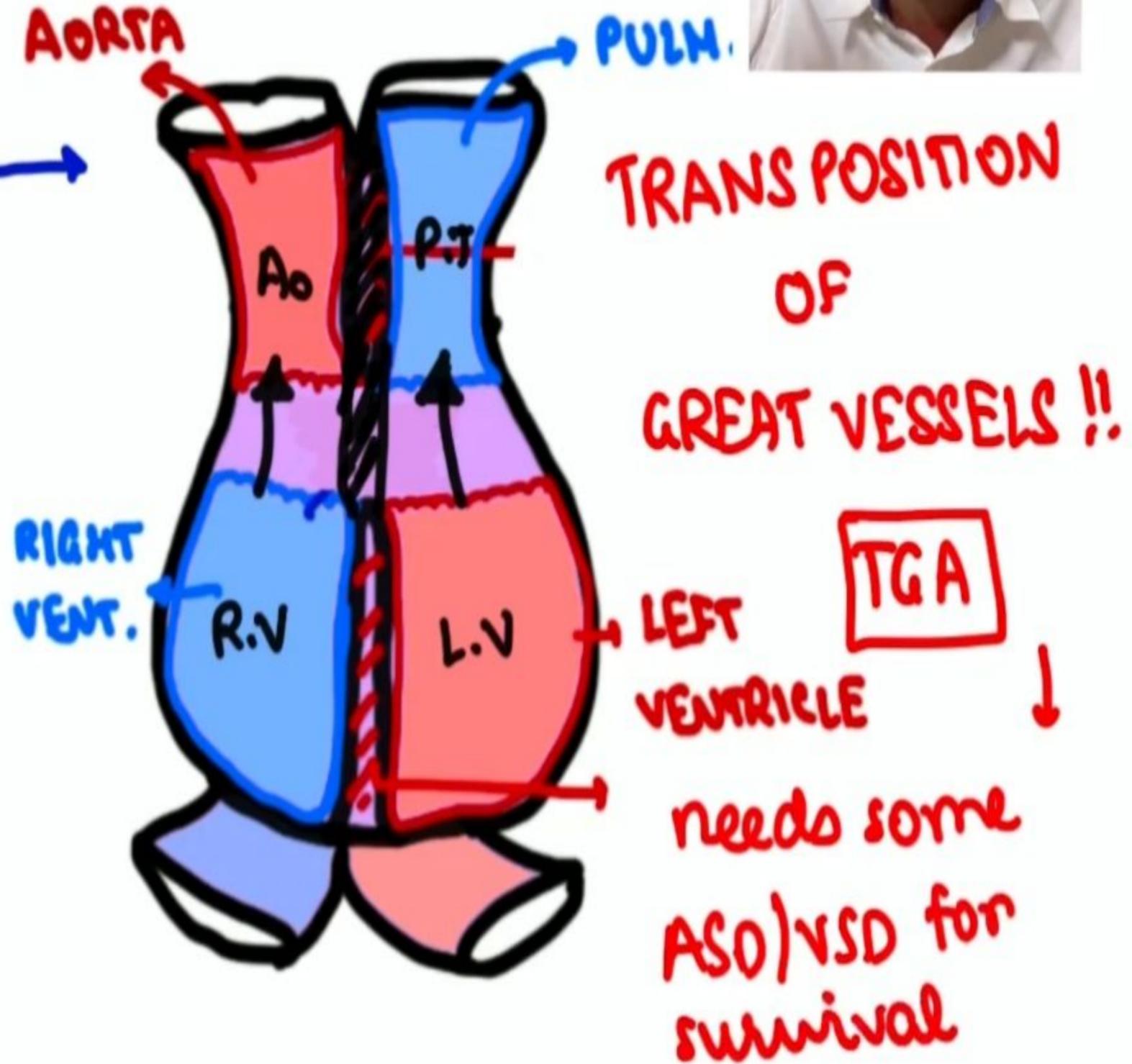
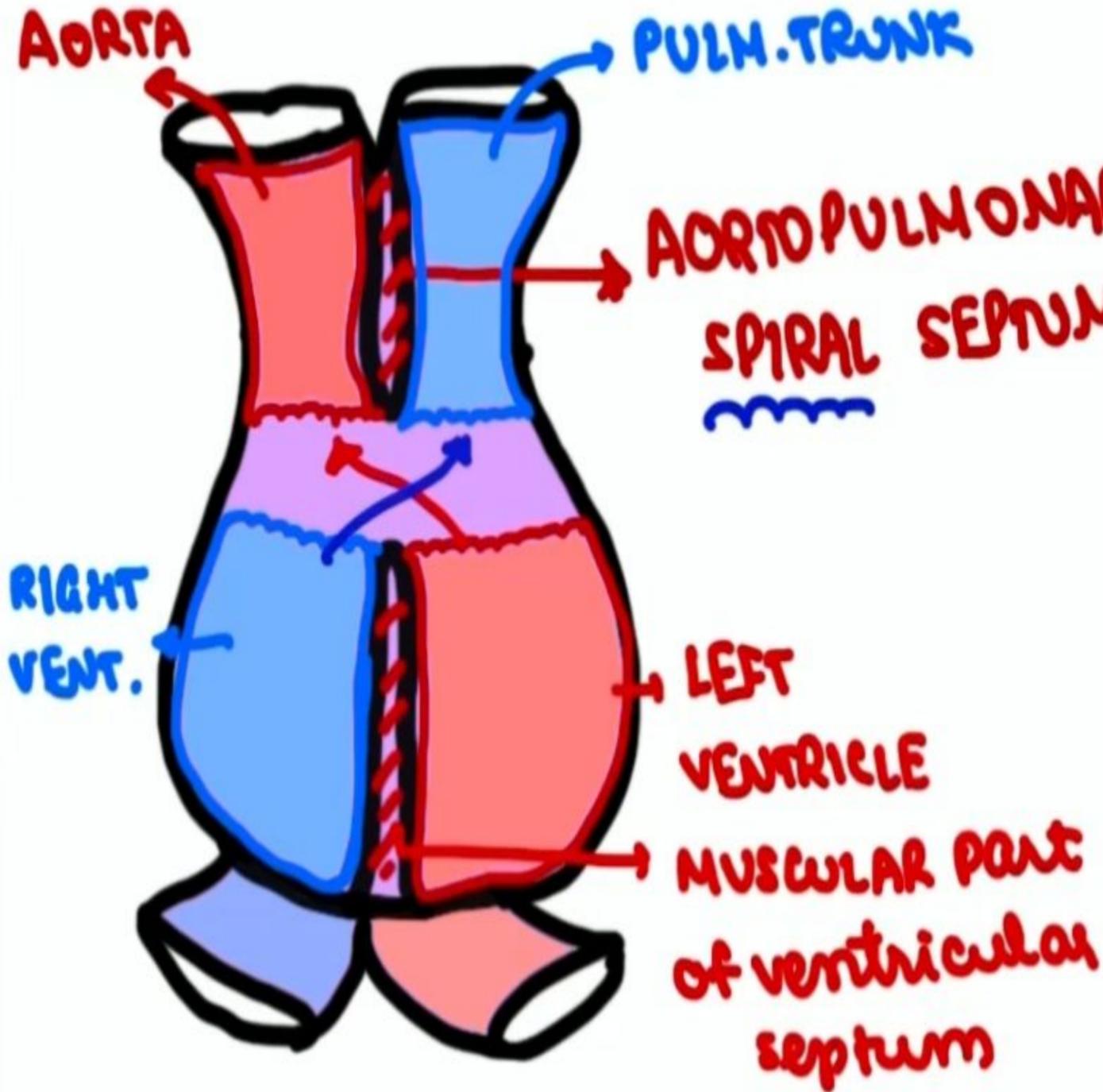
NORMAL EVENTS IN



DEVELOPMENT



IF SPIRALING FAILS ?



NEET PG

MSD - Medicine Sketchified

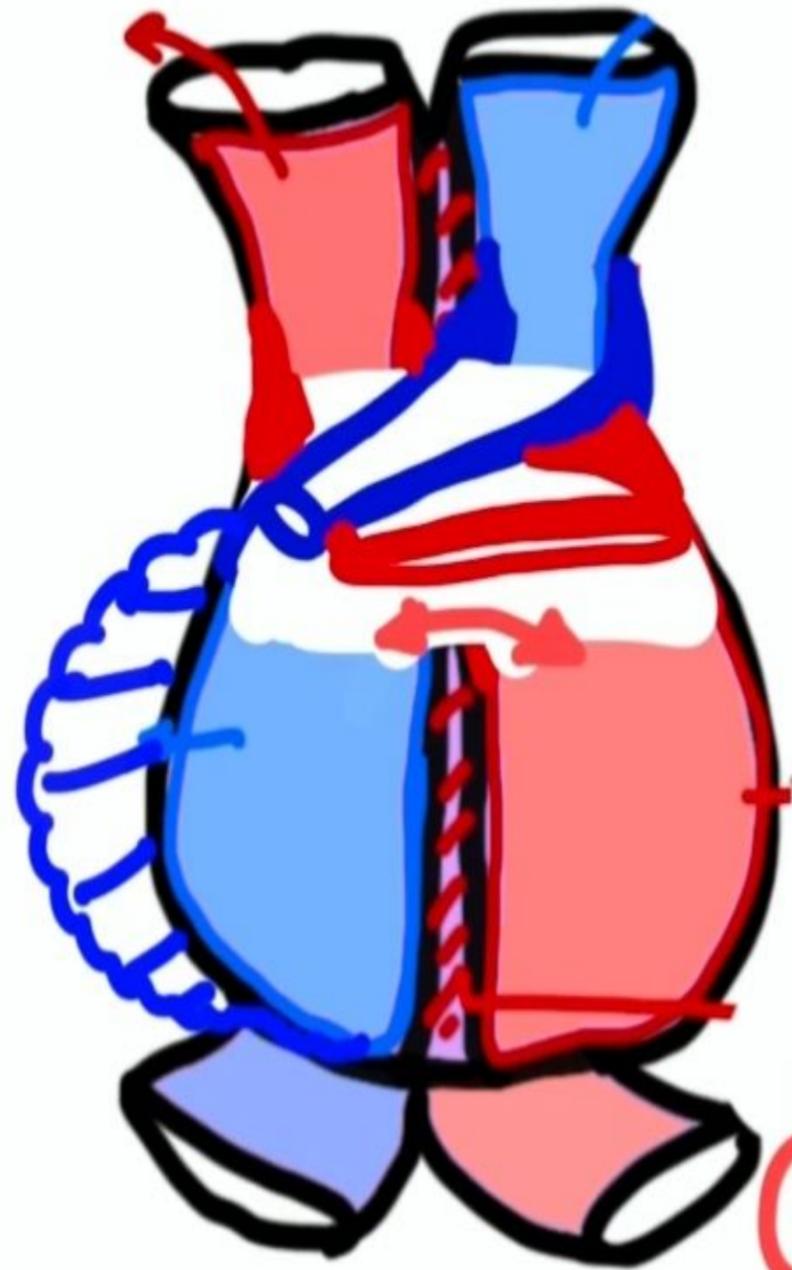
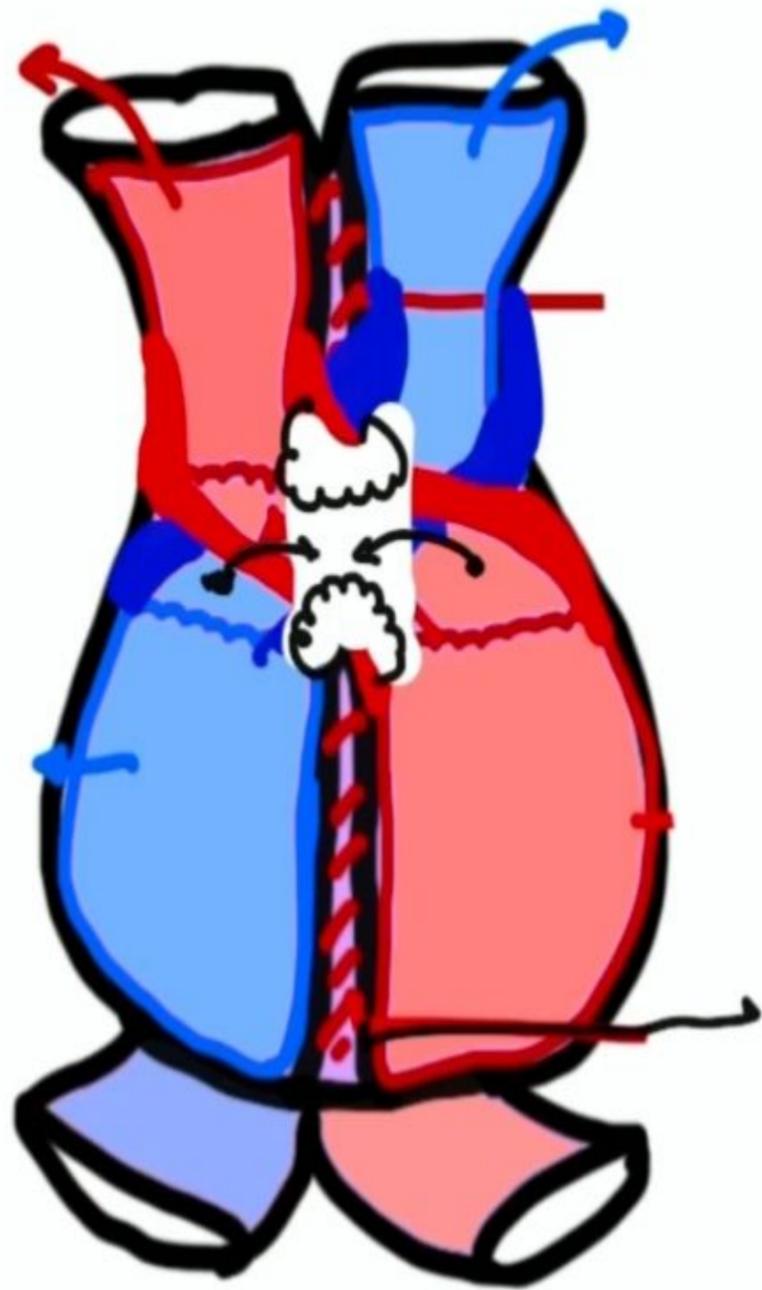
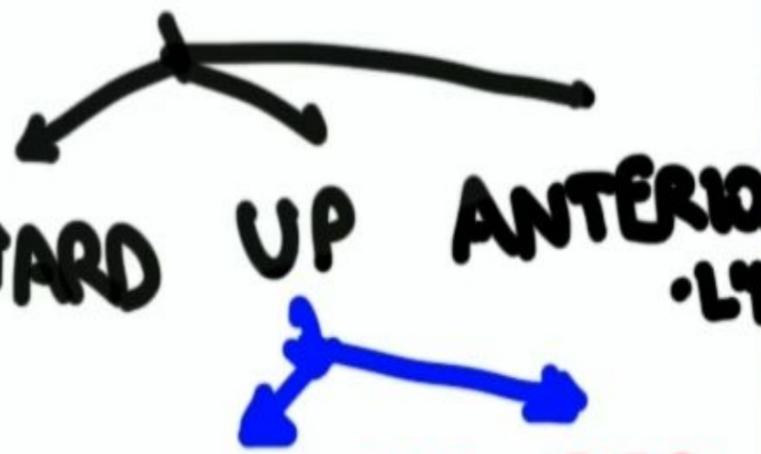
Dr. R. Karthikeyan



NORMAL EVENTS IN DEVELOPMENT



IF LOWER PI
AP SEP
ROTATES



RIGHTWARD
↓
R.V
OUTFLOW
OBSTRUCTION

UP ANTERIOR
↓
③ VSD ④ AORTA
OVERRIDE

① PULM STENOSIS OF
② R.V.H. → TETROLOGY FALLOT



CLUBBING





POLYCYTHEMIA



POLYCYTHEMIA



CLUBBING

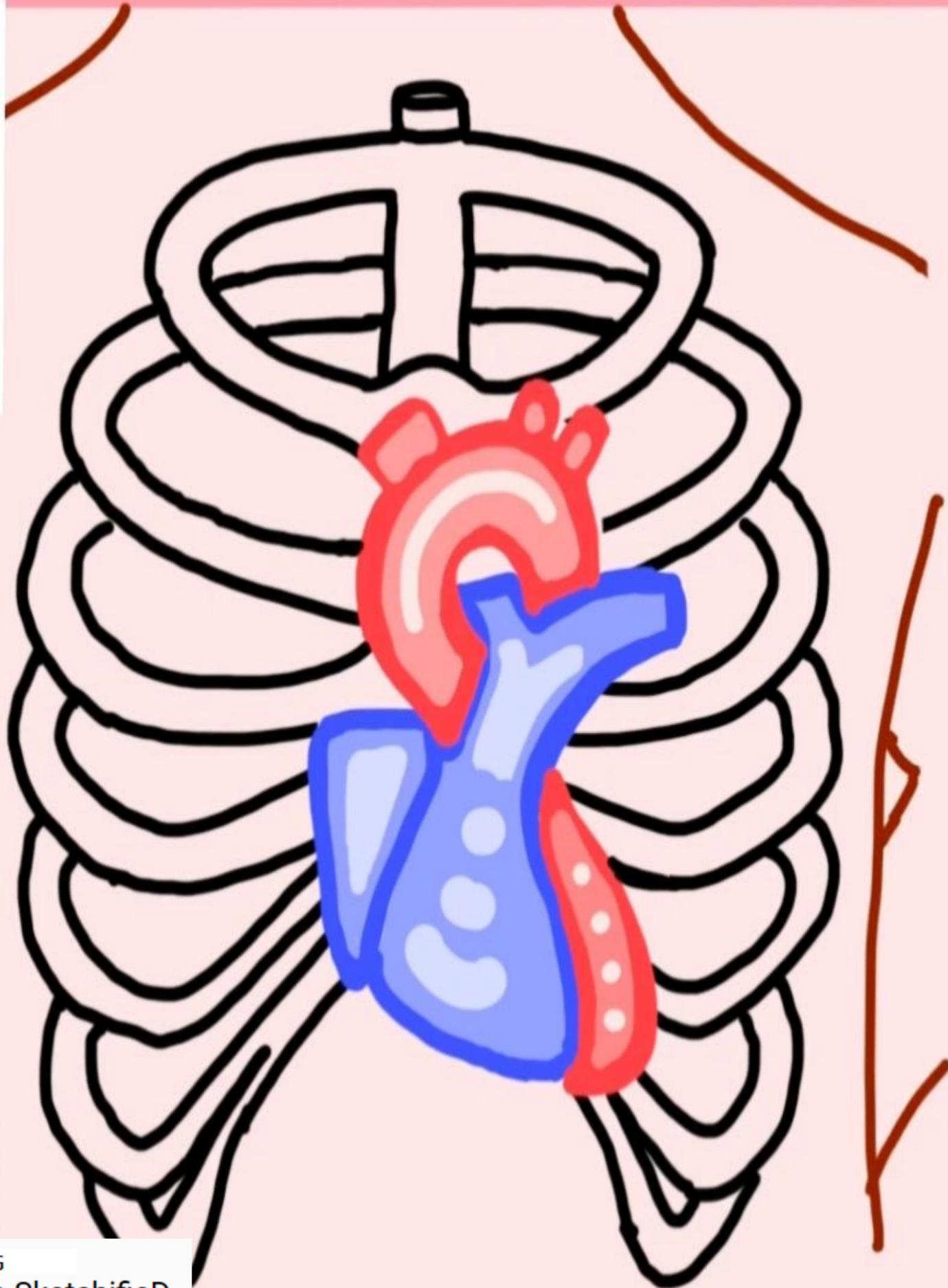




CVS EXAMINATION



- * INSPECTION
- * PALPATION
- * PERCUSSION
- * AUSCULTATION



INSPECTION

OF

CVS !!



NEET PG

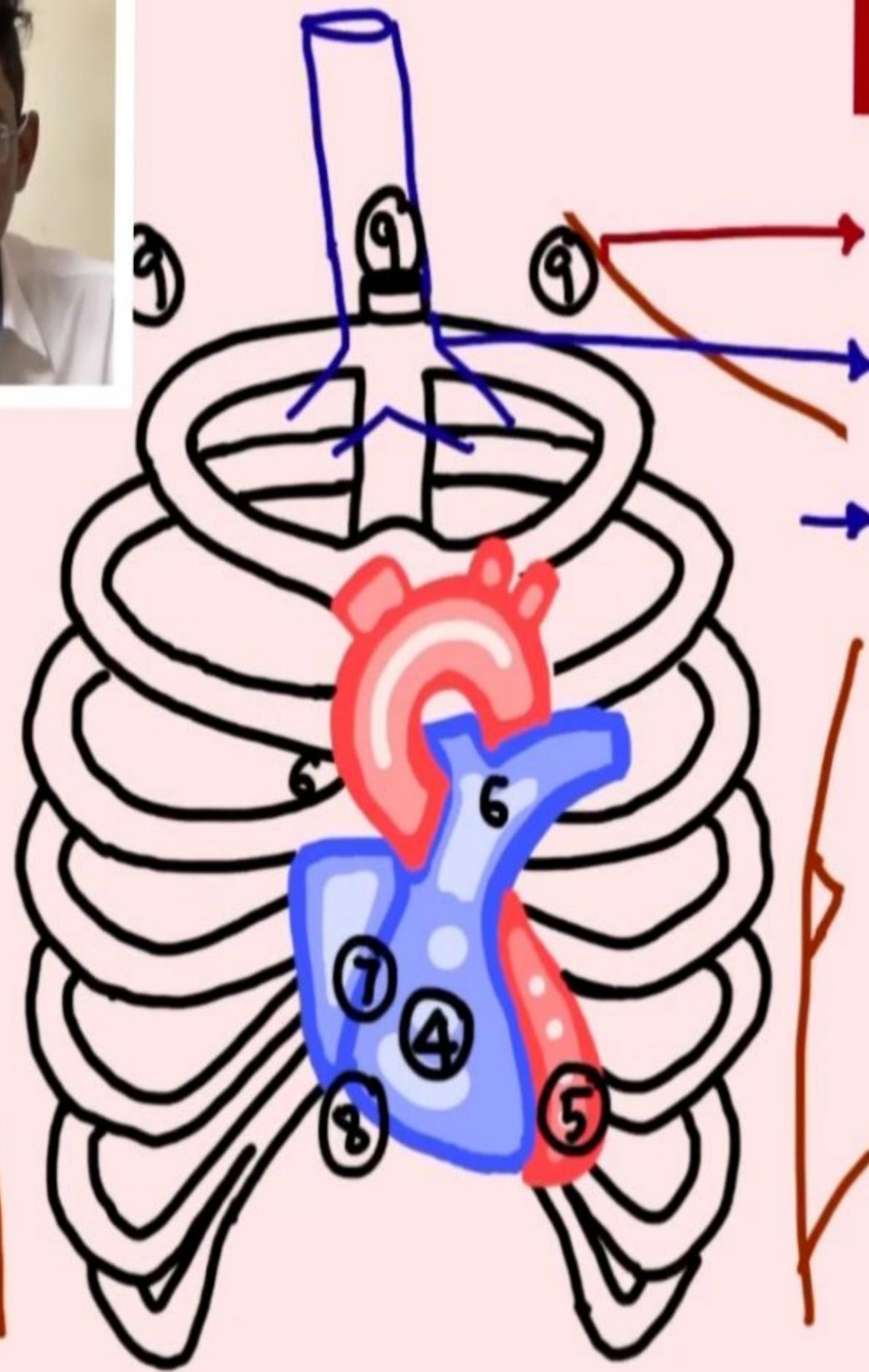
MSD - Medicine Sketchified

Dr.R.Karthikeyan





Inspection



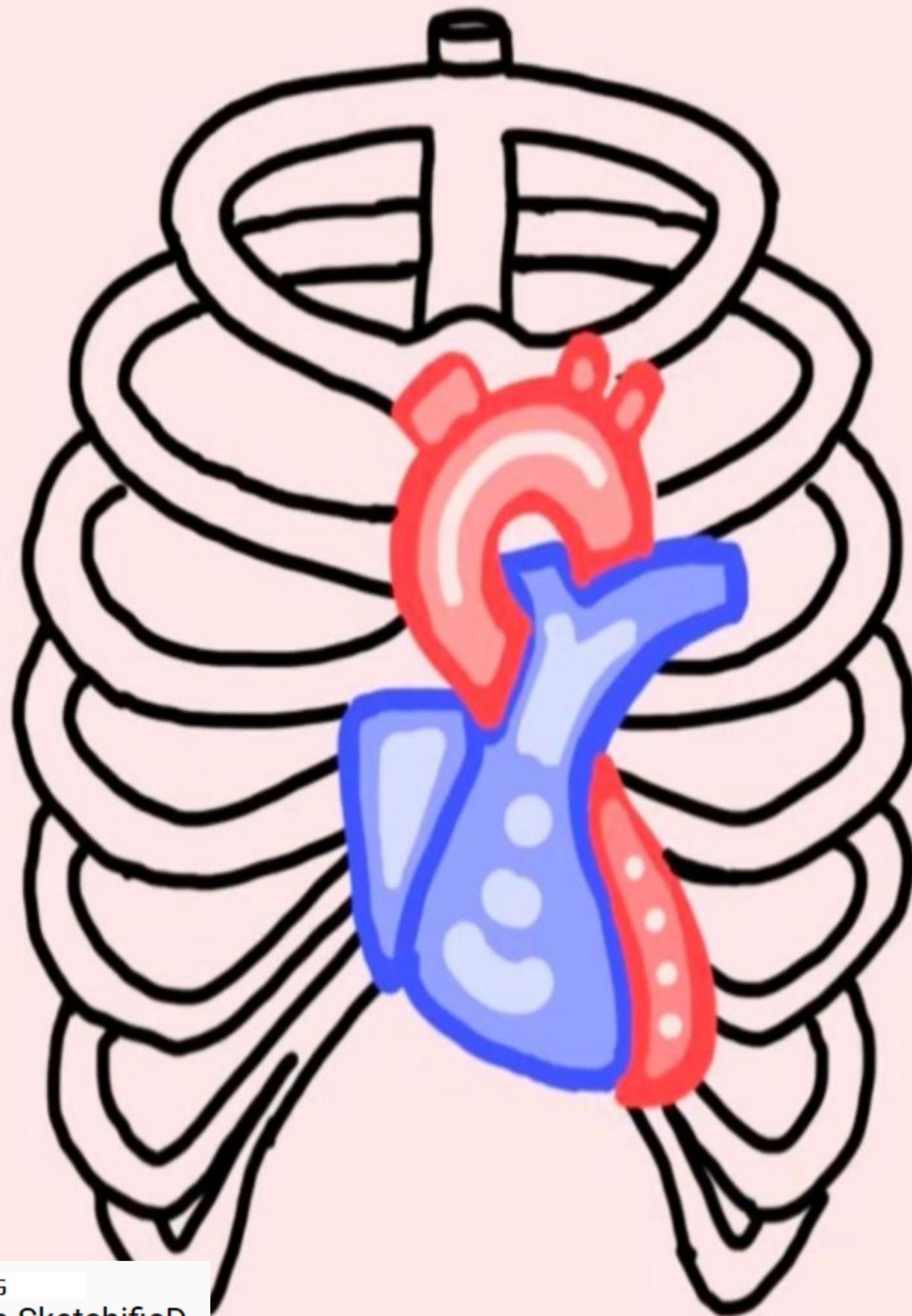
- ① Shape of the chest
- ② Position of trachea
- ③ Distended vessels
- ④ Precordial bulging
- ⑤ Apical impulse
- ⑥ 2nd ICS -left and right
- ⑦ Left Parasternal space
- ⑧ Epigastric pulsation
- ⑨ Suprasternal and supraclavicular pulsation
- ⑩ Scars and sinuses

NEET PG

MSD - Medicine Sketchified

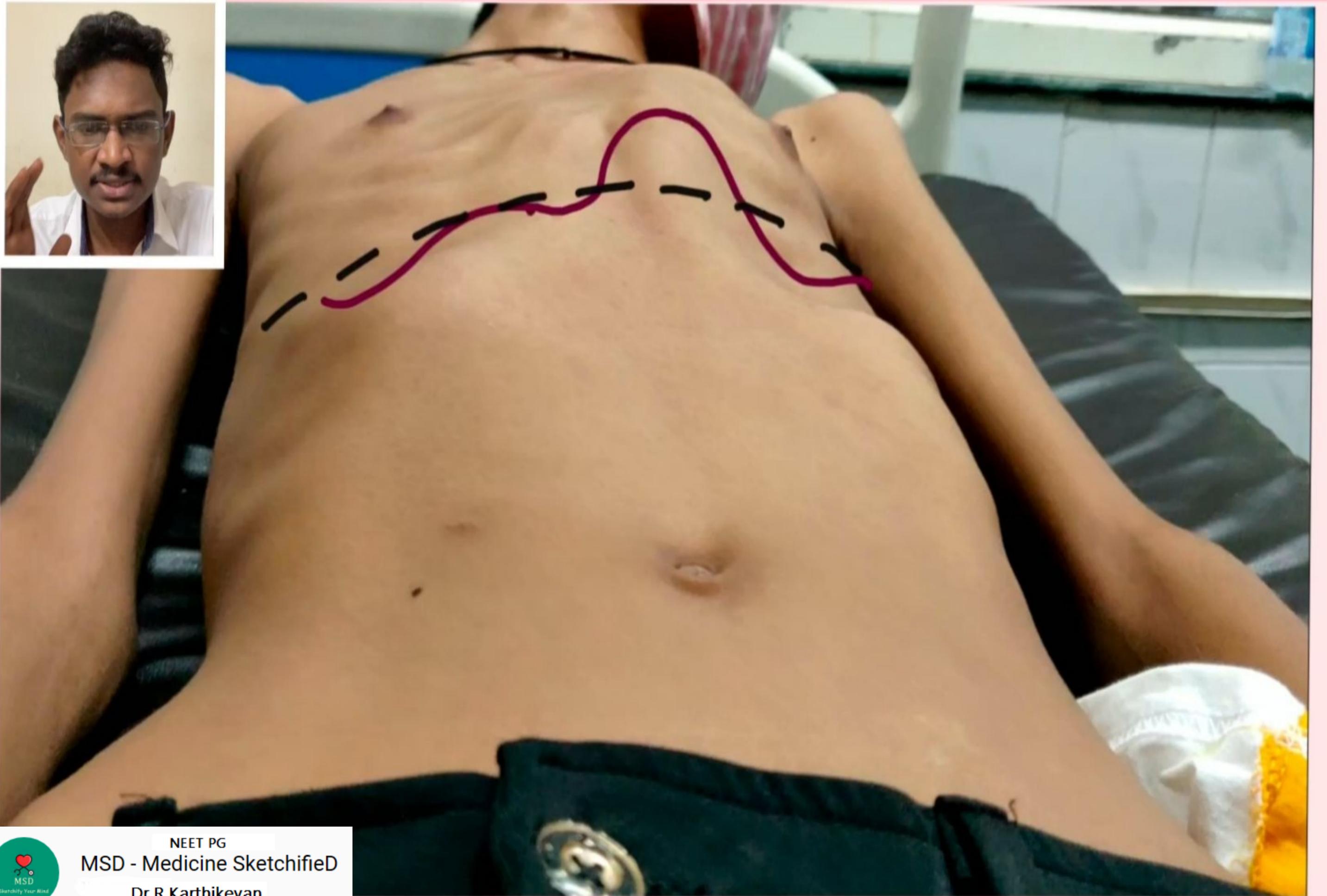
Dr.R.Karthikeyan



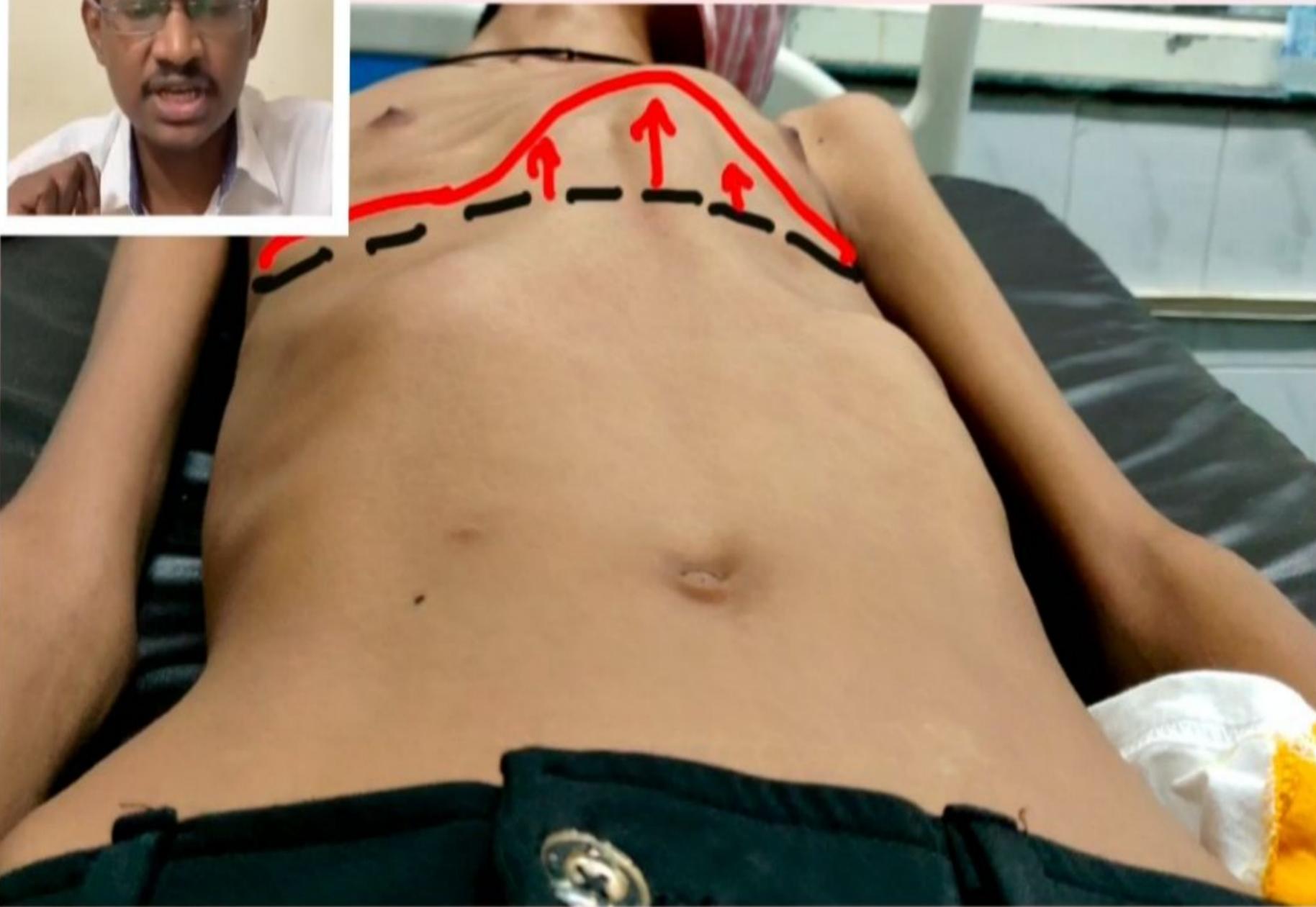


CHEST SHAPE & SYMMETRY





PRECORDIAL BULGE



- * Patient in supine position
- * Stand at foot end of the patient
- * Look for precordial bulge.

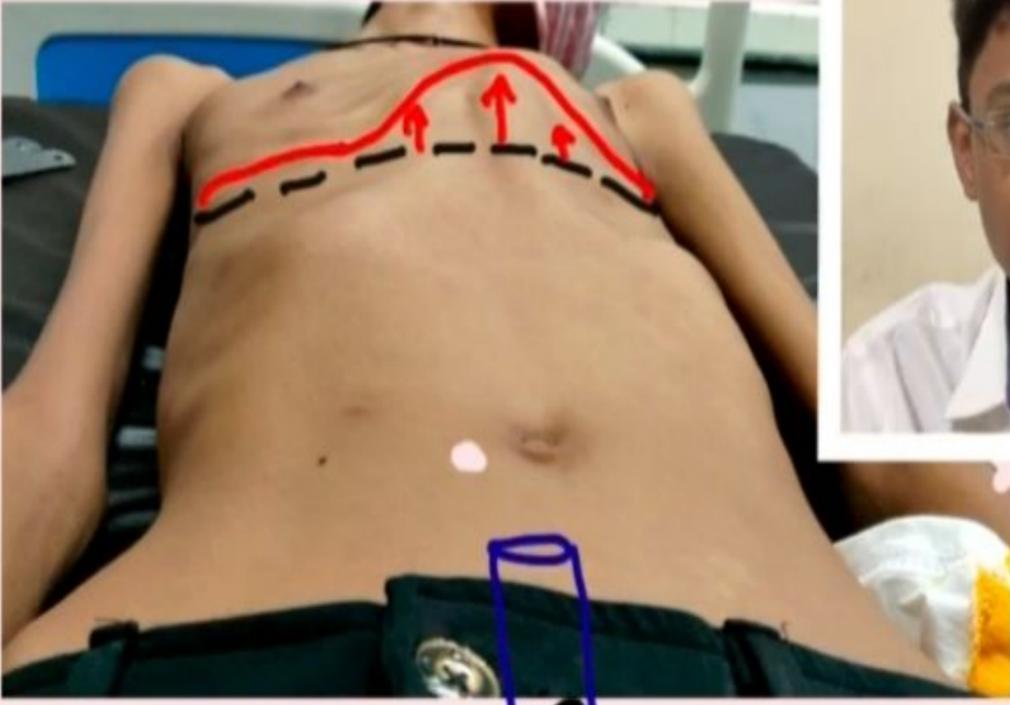
NEET PG

MSD - Medicine Sketchified

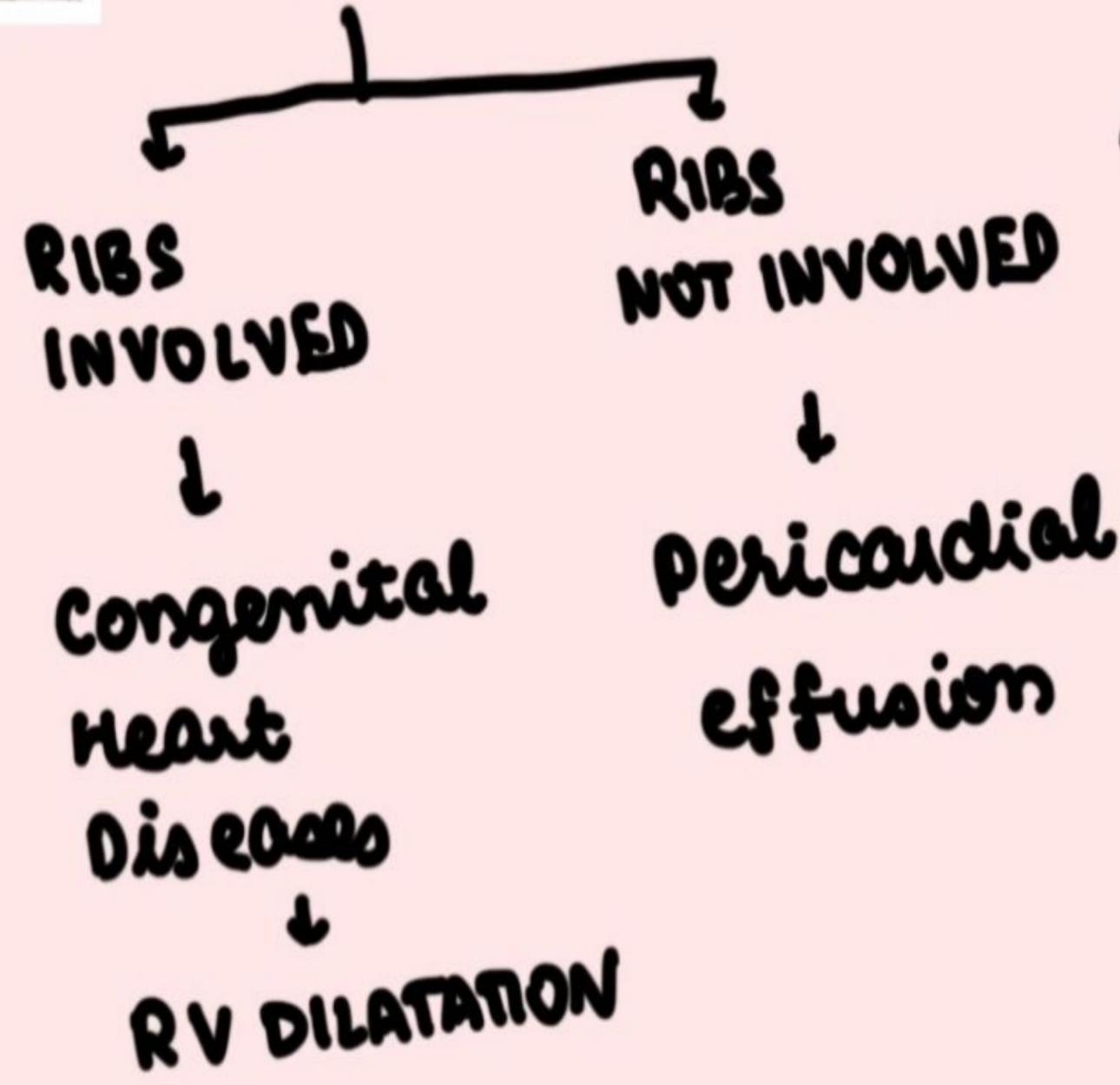
Dr.R.Karthikeyan



PRECORDIAL BULGE

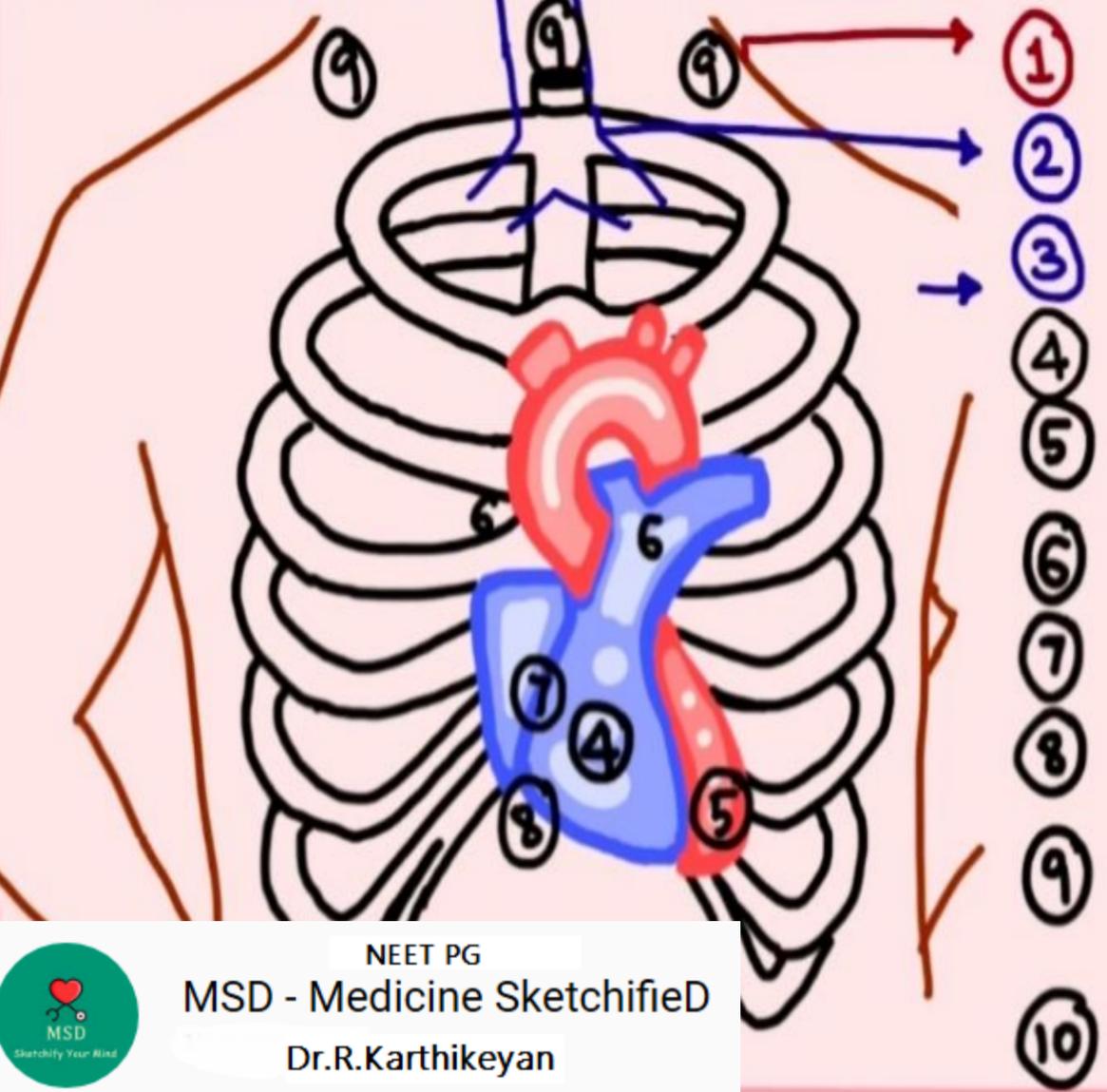


Precordial Bulge



Other causes

- MEDIASTINAL GROWTH
- BRONCHOGENIC Ca LUNG & PUSHES RV ↓ BULGE ⊕





APICAL IMPULSE



Stand on right side
of patient

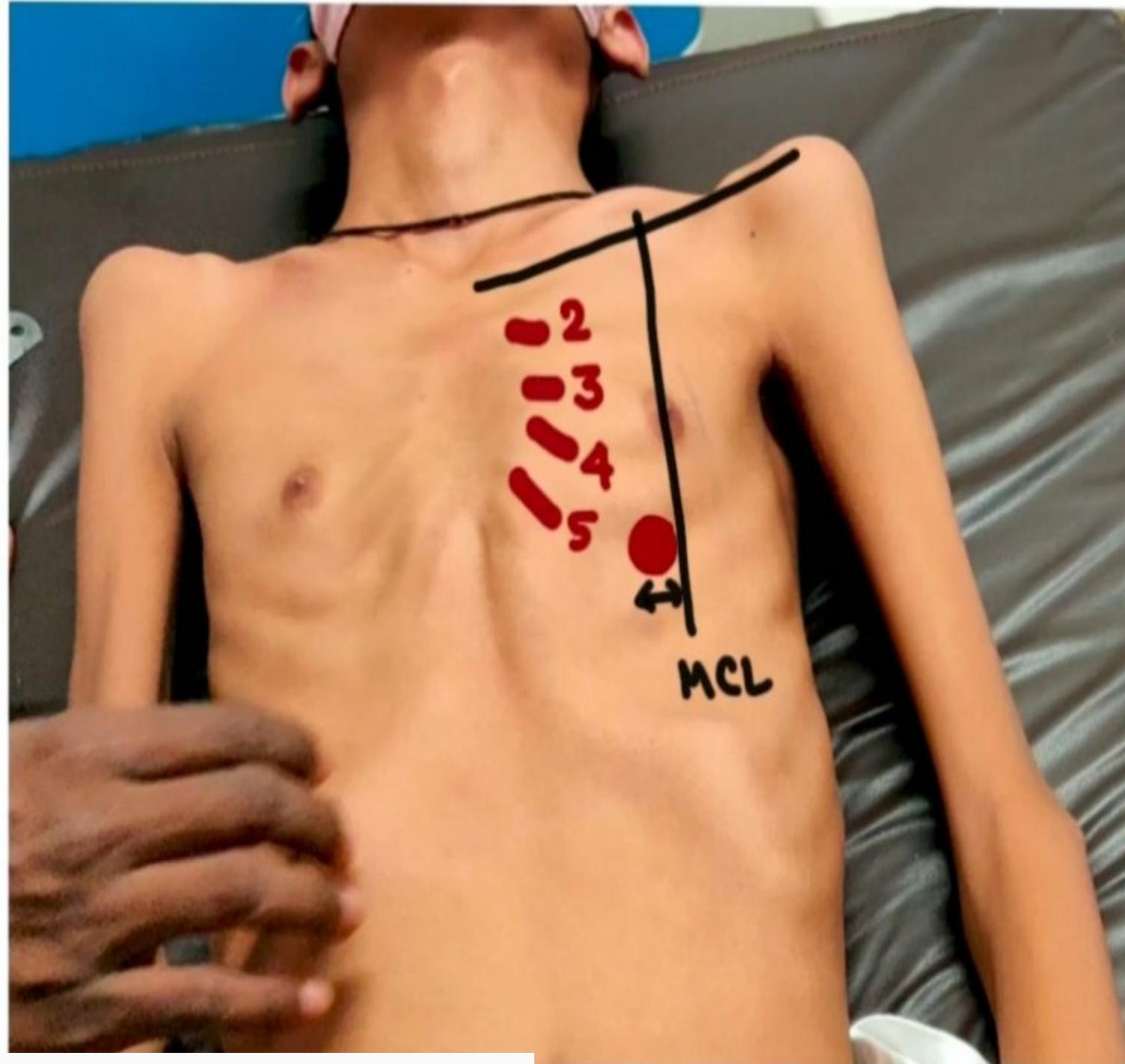


First palpate the apex
with palm



Localise it with
a fingertip

APICAL IMPULSE



* LOCATION :-

- 5th ICS 1cm medial to MCL

* EXTENT :-

NO. OF INTERCOSTAL SPACES



↳ poorly localizable

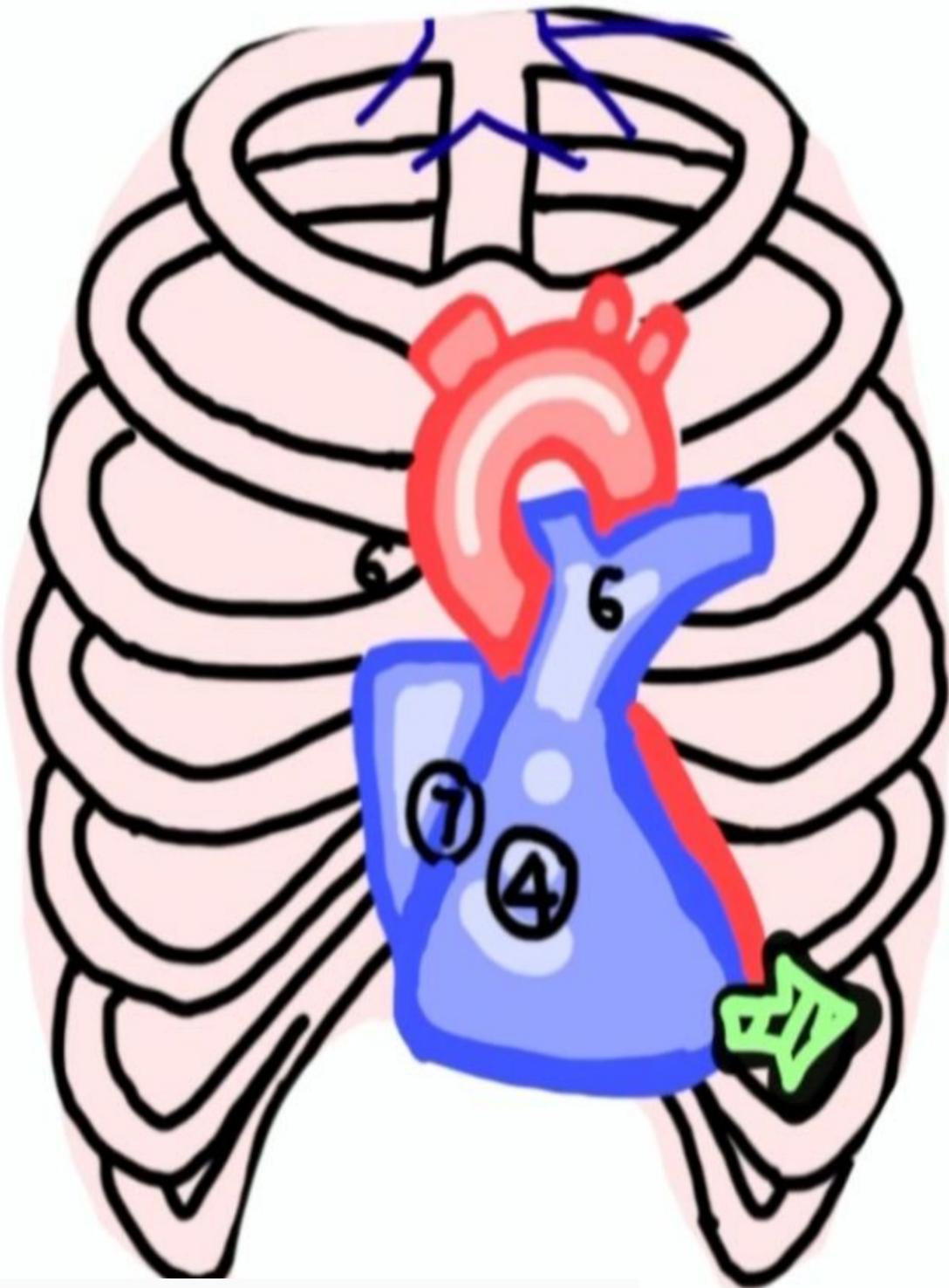
* DURATION :-

SYSTOLE → < 50% of systole

+

LATERAL RETRACTION

APICAL IMPULSE



Features of RV Apex:-

- LOCATION :- mostly same as
① (or) LATERAL
DISPLACEMENT
- EXTENT :- poorly localisable
- LATERAL RETRACTION
+
↓
THIN RV
compared
to LV

NEET PG

MSD - Medicine Sketchified

Dr.R.Karthikeyan

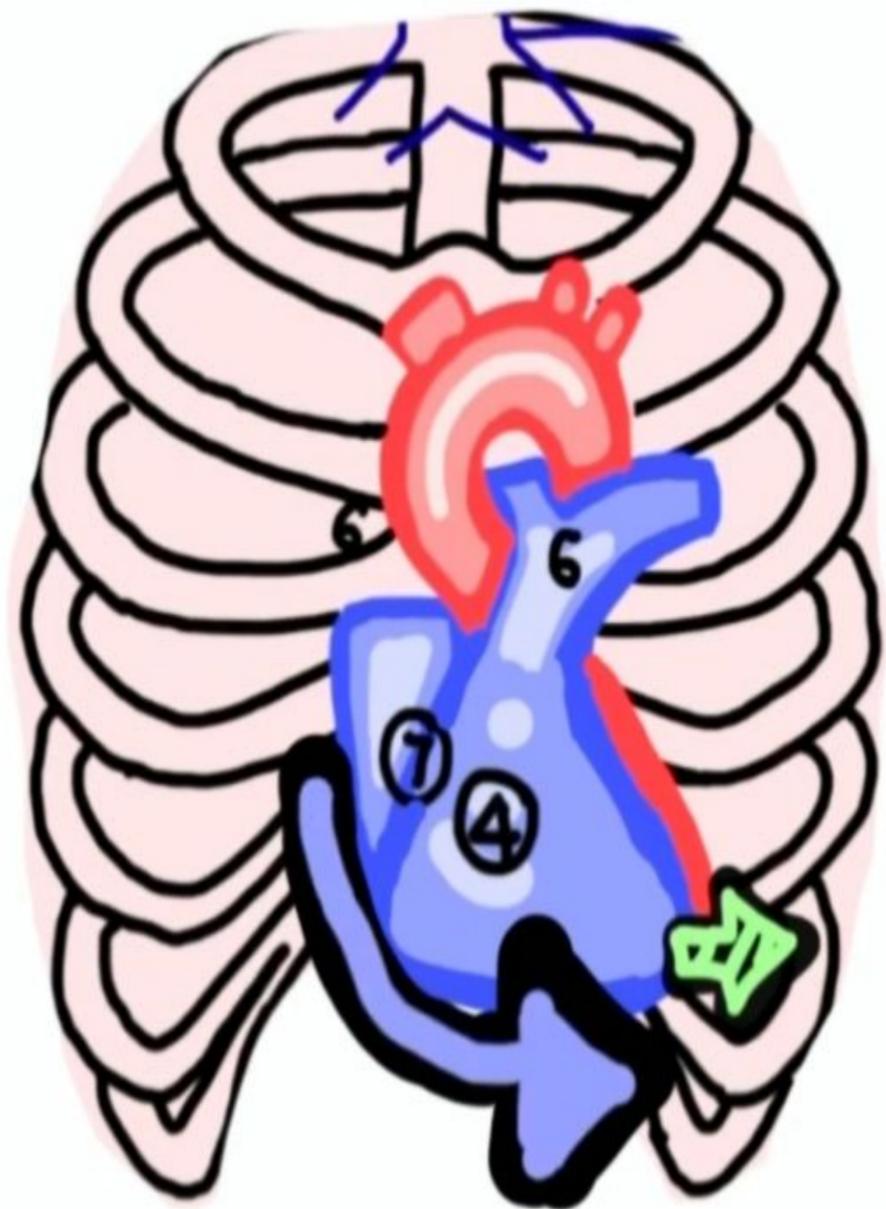


APICAL IMPULSE



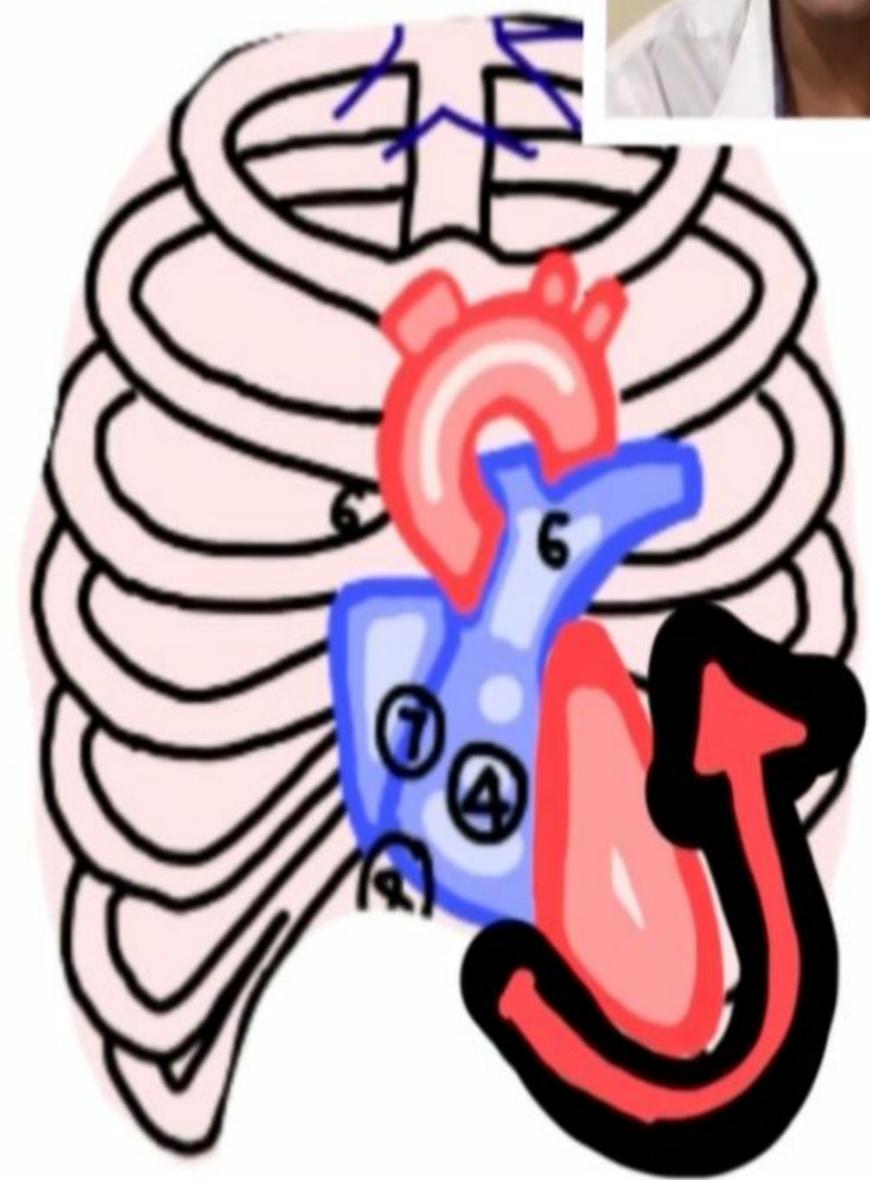
HEART ROTATES
ANTI CLOCKWISE
DURING EARLY
SYSTOLE

RV APEX



LATERAL RETRACTION

LV APEX



MEDIAL RETRACTION



Parasternal heave



Stand in right side of patient
Place your heel of hand with fingers
cocked up
Feel for heave
Ask patient to hold breath if needed
Try obliterating the impulse and
see
Appears in systole or diastole?

Parasternal heave

AIIMS GRADING

 ± VISIBILITY

 ± PALPABLE

 ± OBLITERABLE

⊖

+

⊖

⊖

+

+

+

⊖

+

+

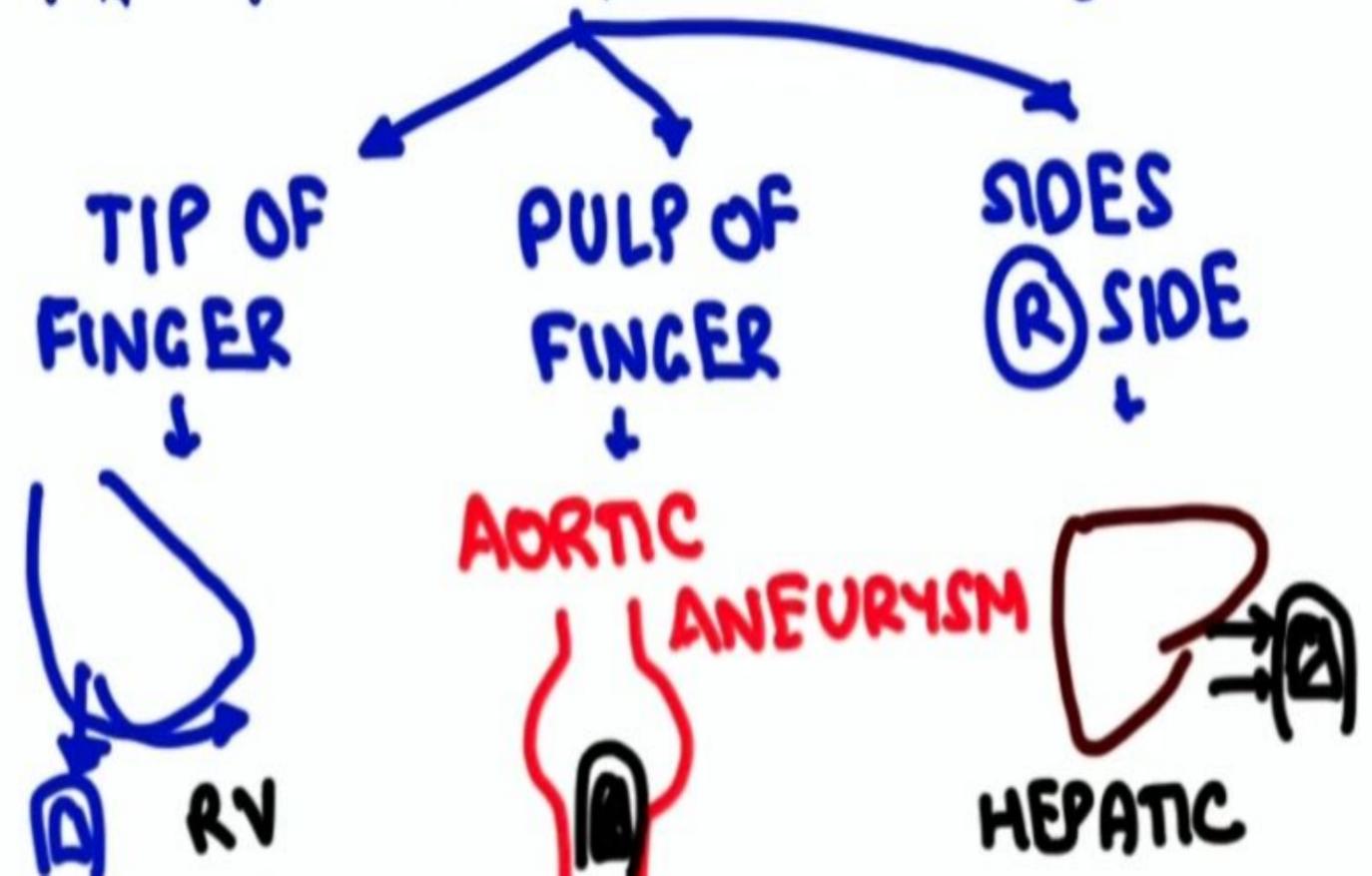
⊖



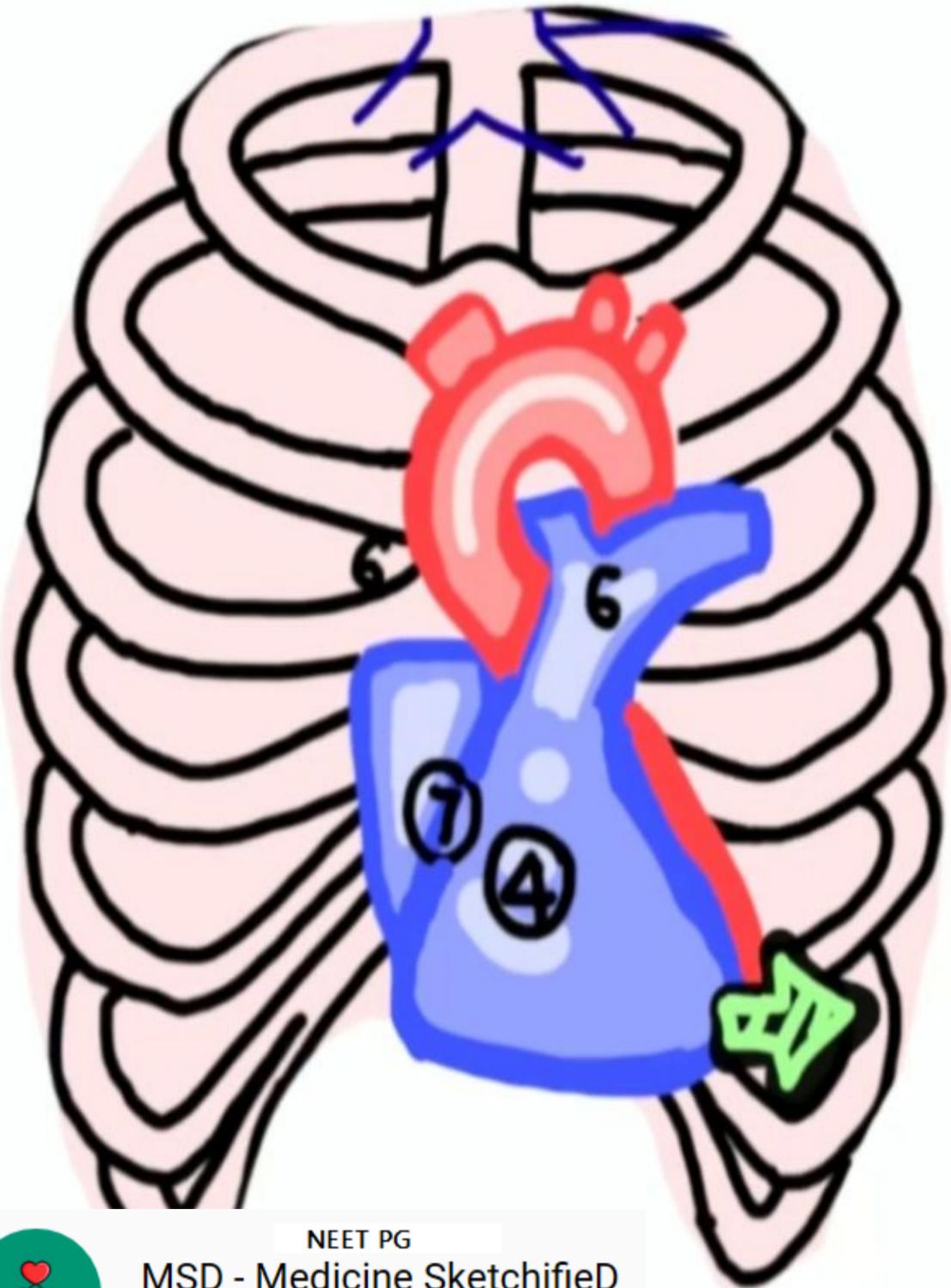
Epigastric pulsations



- Stand on right side
- Place your thumb on the epigastrium
- Gentle pressure applied down and up
- Ask patient to take a deep breathe
- If you feel an impulse touching



Pulsations



Aortic - x

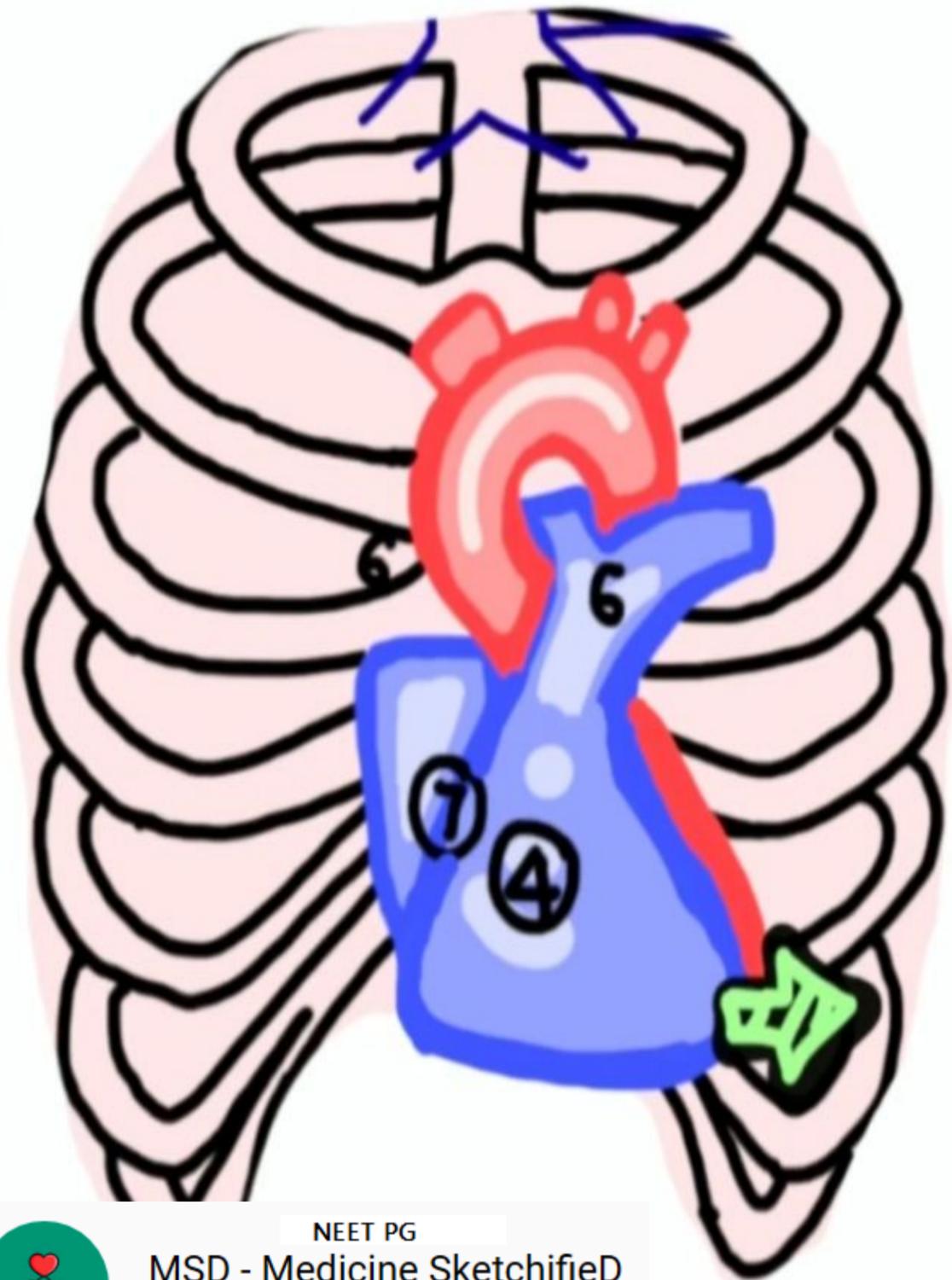
Pulmonary - x

Supraclavicular - x

Neck - x

Back - x

Thrills → palpable murmur



Aortic - x ⊖

THRILL ⊕

Pulmonary -

Supraclavicular - x ⊖

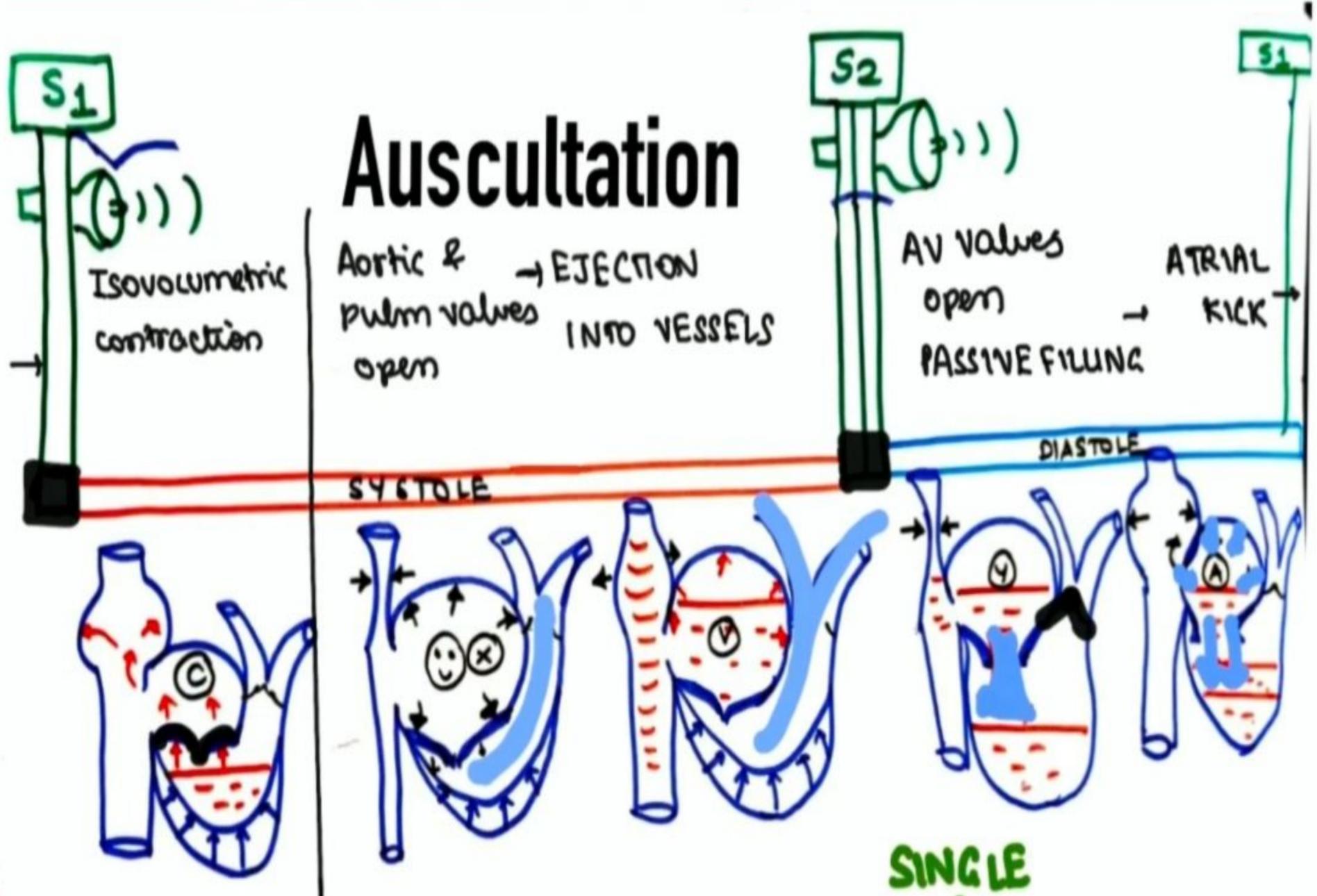
Ⓛ parasternal area - THRILL ⊕

Neck - x

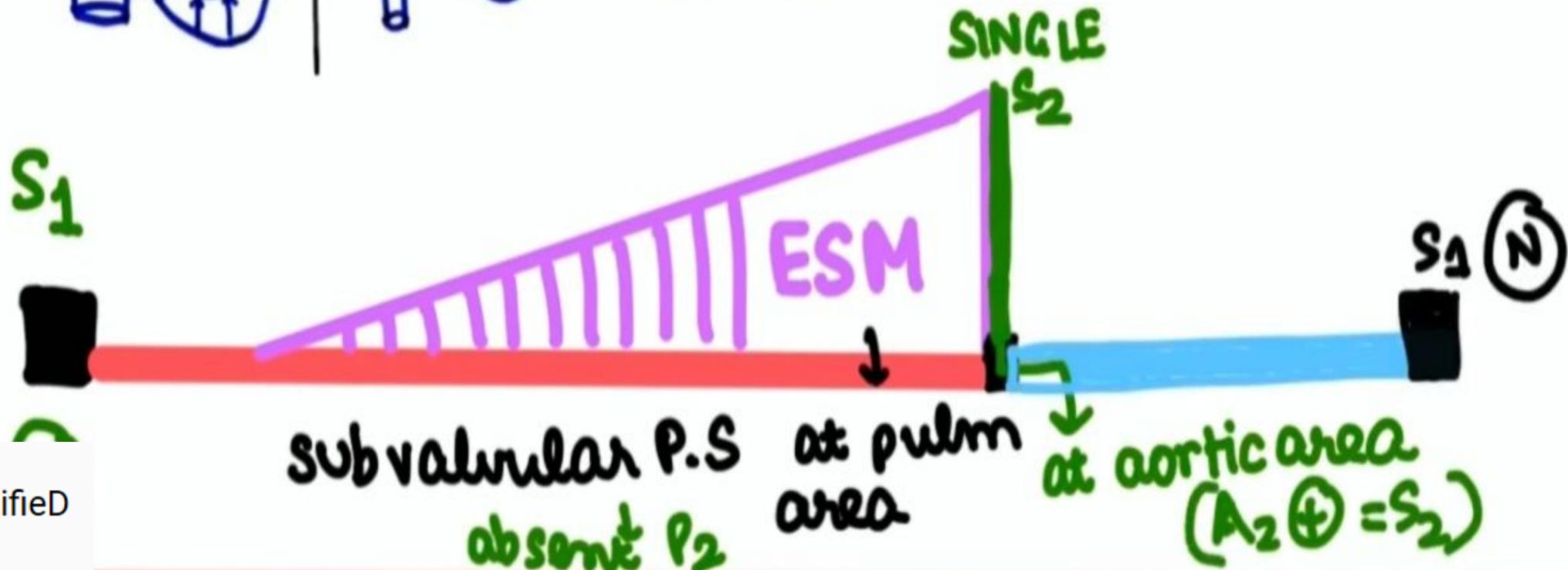
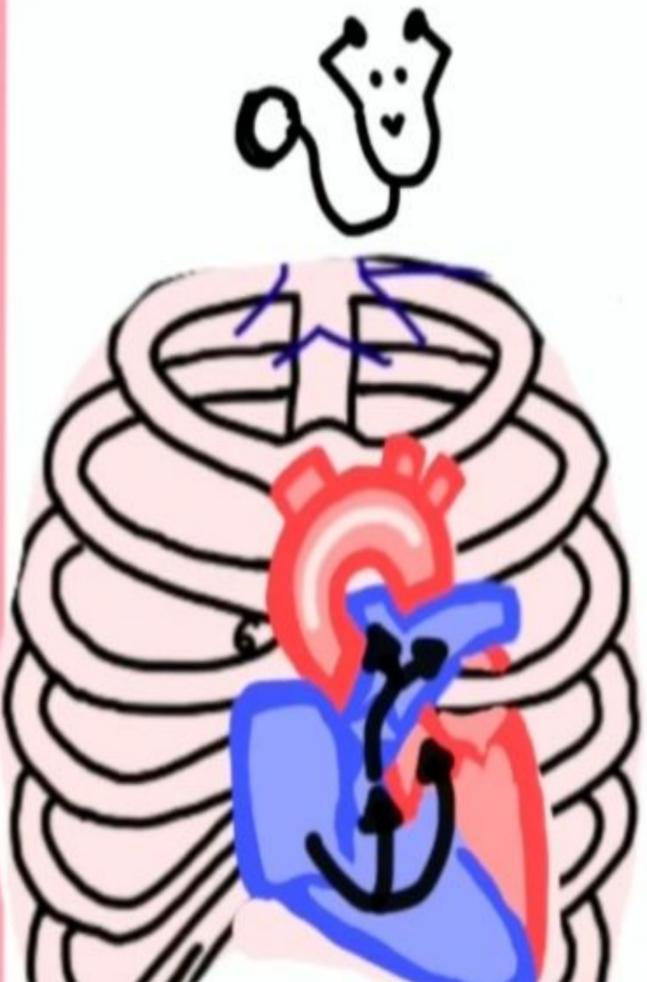
Back - x



Auscultation



T.O.F





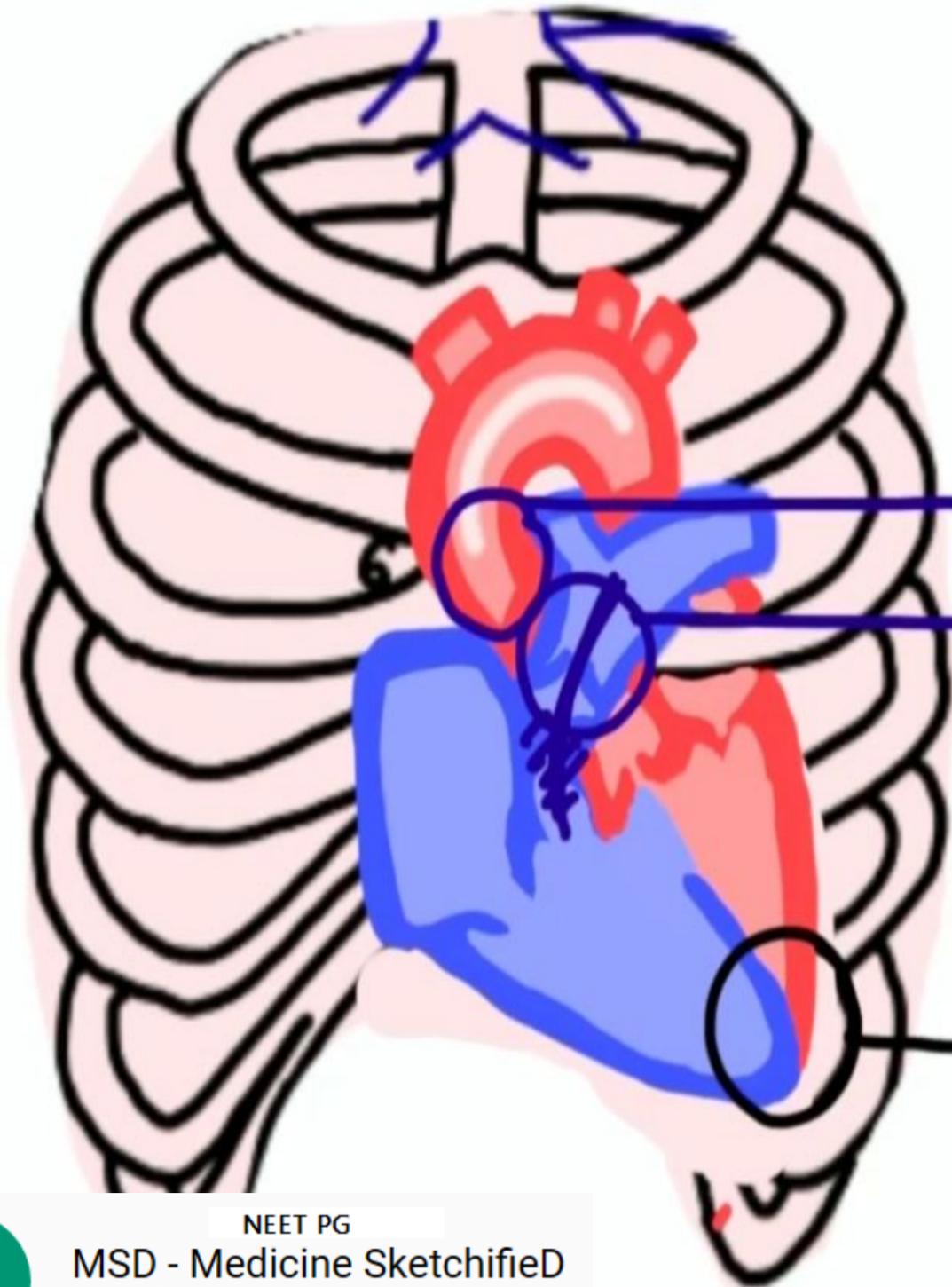
Auscultation

- S_1 S_2 S_3 S_4
✓ Abn ⊖ ⊖

- Murmurs

TOF = subvalvular
pulmonary
stenosis

↓
so ESM ⊕
EJECTION SYSTOLIC → IN ⊕
MURMUR → IN ⊕
ICS



SINGLE S_2 (A_2)

ABSENT P_2

S_1 ⊕

EJECTION SYSTOLIC
MURMUR

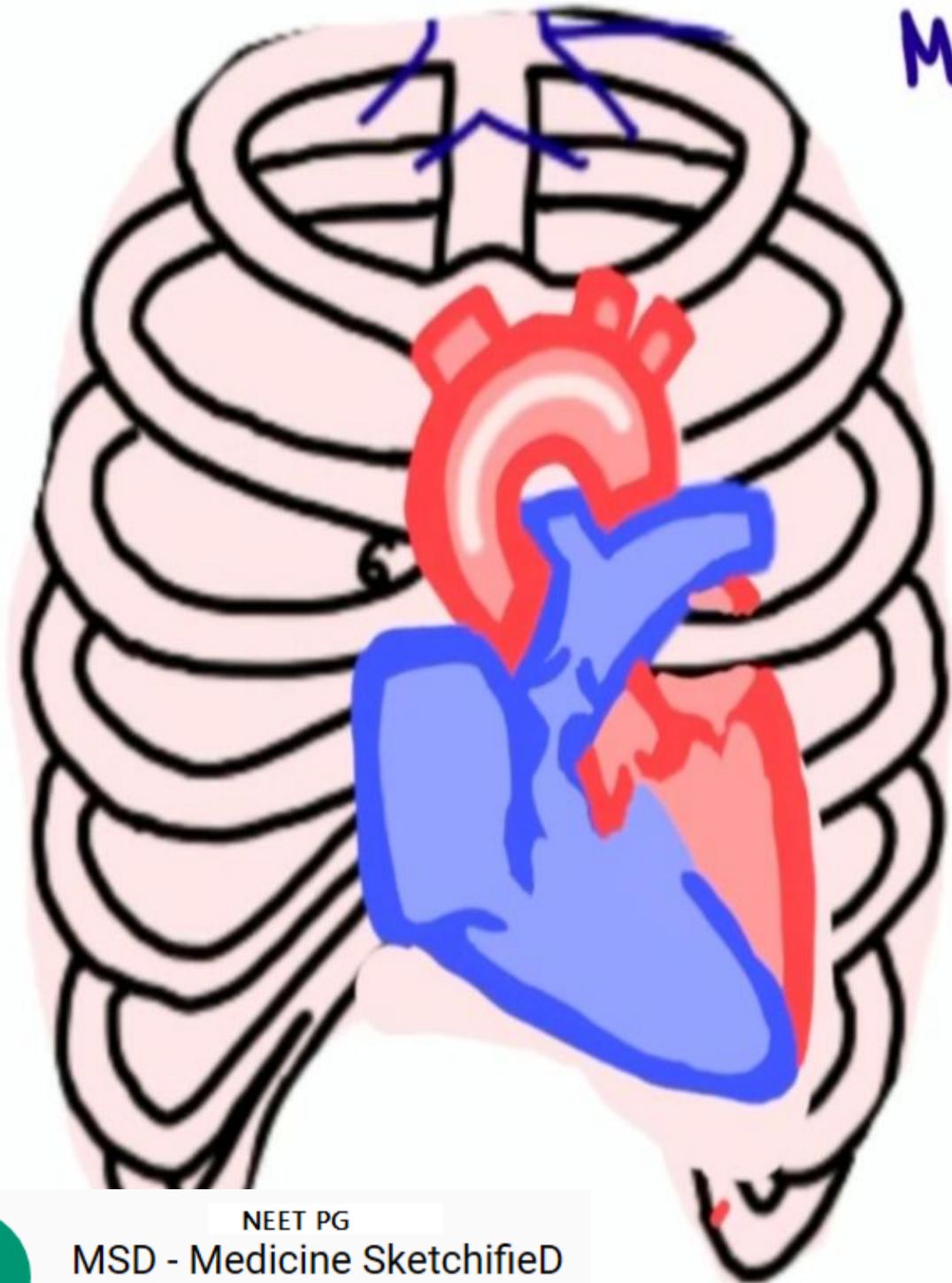




Auscultation

EJECTION

- MURMUR - TIMING - SYSTOLIC
- GRADE - 4/6 (THRILL ⊕)
- QUALITY - HARSH
- CONDUCTION / RADIATION - X
- BEST HEARD - DIAPHRAGM
- PITCH - ↑
- LOCATION - PULMONARY, ⊕ 2ND ICS, ⊕ 3RD ICS
- ↑ WITH INSPIRATION &



EXAMINE OTHER SYSTEMS :

- RS
- CNS
- Abdomen





△'s WRITING:-

- Congenital
- Cyanotic heart disease
 - R → L shunt
- pulmonary stenosis
- probably Tetralogy of Fallot
- not in Atrial fibrillation, not in Failure, without signs of I.E

