

Radiology minor oral exam



عليكم الرجوع للسلایدات والانترنت للامراض خلال دراستكم

***الجزء الاول من الملف عبارة قائمة لاهم واكثر الاسئلة تكرارا لكل دكتور, والجزء الثاني هو اسئلة مع صور.

Dr Mohammad Ammar

-Venogram

(if there was DVT, you will see accumulation of the Organic Iodine (the Contrast)) لازم تتدربو على صور من النت

Or varicose vein

-Hysterosalpingogram, what are indications of HSG?

Ex.pic of bifid uterus (bicornuate uterus), Biconuate unicollous

- **ovarian calcification** >>calcification in the right iliac bone

-CT scan of brain of pt. with hydrocephalus

Ex. - Brain CT scan without contrast, axial section dilated lateral ventricles >> hydrocephalus

- **urethrogram showing double ureter with history of micturition difficulty**

Unilateral double ureter may be Right or left

-Osteoarthritis

-**Translucent, irregular, ill-defined margins** lesion in the humerus, tibia(bone lesions)

-**Compressed vertebrae in the of the neck**

-**X-Ray of knee (sometime normal knee pic.) or with benign lytic lesions**

- **chest X Ray with Chilaiditi's syndrome**

-**Air under the diaphragm bilaterally**

- **Sialogram ,:**

*What do we investigate in this procedure ? Ans: "salivary glands", and mention them ? " parotid, submandibular, sublingual"

* What is the gland here ? " submandibular "

* Do we have any abnormalities in this image ? الصورة مش واضحة حتى بالإمتحان، لذلك " أنا وصفت له مبدأها

if there is any filling defect >> suggest salivary duct obstruction - stone "-

-normal CT scan

- an X-ray- pleural effusion

>>obliteration of R. costophrenic angle, wide mediastinum

-How many Ventricle in the brain mention their names while pointing on them?

-CT scan: intracerebral h and intracranial h

-Lumbarization Of S1 vertebrae

-chest X Ray with mediastinum mass

-lytic lesion in the distal part of the femur with sclerotic rim , no cortex distraction >> benign

-chest X Ray :the diaphragm was pushed up at the level of fourth anterior rib >> Ddx ?

-exophytic bone protrusion.

- Chest X-ray, AP apex of heart toward the right & abnormal appearance under the diaphragm " not clear in the film " >> dextrocardia / most likely situs inversus

****هذا رابط ملف صور مهم جدا لدكتور عمار بكرر منه اسئلة وفيه امراض مش مش مذكورة بالمحاضرات بس بسال عنها :**

<https://drive.google.com/file/d/11kmtjJd3pIp-NSPdDU6CE26osqrFEYm/view?usp=sharing>

Dr Jehad

دكتور جهاد بسأل من مادة النظري وكل الاجابات موجودة بالمحاضرات والسلايدات

-Indication of Gadolinium?

-Indication of barium meal?

Ans: 1- gastric or duodenal ulcer 2- hiatal hernia 3- GERD 4- suspected gastric ca 5- gastric mass 6- pyloric stenosis

- What is the best study for recent brain hemorrhage? & the best study for brain infarction?

Ans: for recent brain hemorrhage >> CT scan without contrast

for brain infarction >> MRI

-best study disc prolapsed

-contrast of MRI

-What are the uses of ultrasound in the skeletal system?

Ans: 1- congenital hip displacement 2- soft tissue lesion/ abscess 3- joint effusions such as baker's cyst

-segments of the lung مهم حفظ سلايدات الموضوع بالتفصيل

For example:

What are the segments of the middle lobe of the right lung?

Ans: Medial segment & Lateral Segment

what are the segments of upper lobe of left lung...

-anterior/ middle/ posterior mediastinal mass causes?

For example, if the question about Anterior >> Causes of anterior mediastinal mass 1- Thymoma 2- Teratoma 3- Thyroid (retrosternal goiter) 4- Lymphoma + pericardial cyst & diaphragmatic hernia (Morgagni Hernia)

-Definition of Avulsion fracture?

Ans: a fracture in which a fragment of bone gets detached from the site of insertion of a tendon or ligament

-What is the best study for the gallbladder?

Ans: Ultrasonography

-What are the common extra-axial brain tumors?

Ans: 1- Meningioma 2- Neuroma 3- Pituitary Tumors 4- Mets

- What is the name of MRI contrast?

Ans: Gadolinium

-The most common indication for urethrogram?

Ans: urethral strictures

- barium swallow with Oesophageal atresia and situs inversus

يعني ممكن على الصورة الوحدة يكون في اكثر من abnormality بس بكونو واضح المطلوب

-X ray of knee lateral view with lytic lesion surrounded by sclerotic rim most likely benign lytic lesion

-what is the contrast in CT? NICM

-define pathological fracture?

- best study for spine fracture? CT

-best study for disc prolapse? MRI

-Indication of gastrografin?

Ans: Gastrografin is used as an oral contrast to delineate the GI tract in cases when barium is contraindicated as in:

1- suspected perforated viscus

2- post operation

3- Meconium ileus

-causes of small bowel obstruction?

causes of small bowel obstruction are: •Surgical adhesions •Hernia •Intraluminal mass gallstone (in gallstone ileus)

-Indication of abdomen x Ray?

-Air under diaphragm causes?

Post laparotomy or laparoscopy, Post peritoneal dialysis, Viscus perforation

-how to differentiate between normal air under diaphragm and peritoneum?

-brain CT, name the study and the abnormality... (must be full answer)

("don't say skull CT")

-brain ct with epidural hematoma

*Full answer be like >> Brain CT scan, axial view, showing biconvex lens-shaped hyperdense area in the right cerebral hemisphere that doesn't cross the sutures, typical findings of Epidural

يعني بتذكر كل شيء عن الصورة بالتفصيل وهذا بنطبق على كل الصور مش بس النزيف***

-brain ct with subarachnoid haemorrhage

-abdomen x-ray, name the study, mention the abnormality, what's your next step?

Example: Abdominal X-ray showing Gallbladder stones

What's your next step? Ans: Ultrasound ,Why? To rule out cholecystitis

-abdomen x Ray with multiple air fluid level or with gallbladder stones

-chest x Ray with bilateral hilar lymphadenopathy

>>sarcoidosis

-Tension pneumothorax, pneumothorax... (From slides) + how to determine centralization

We look for the distance between the transverse process of the vertebra and the medial side of clavicle bilaterally

-IVU doses —> 1cc/kg adult

1.5cc/kg infant

Up to 100cc

In Normal IVU (if he points to an area of discontinuity in the ureters, say that it's peristalsis, not a stricture).

-Sagittal MRI section (t1) with multiple hyperintensities indicates tumors

-Normal barium follow through but delayed picture

يعني كانت الصبغة موجودة في الامعاء الدقيقة والغليظة))

- normal KUP name the study

- pelvic x ray with intrauterine device... Determine the gender of pt and describe the finding.

- x Ray chest and abdomen film of a child find abnormalities :

Ex.1 barium swallow ...oesophageal atresia

2-situs inverses totalis (heart apex on right +liver on left+ gastric air bubble on right) ..."don't be confused with air under diaphragm)

3-if there is other abnormalities

- barium follow throw and barium reach colon

(normally it should be only in small intestine + the black shadow in colon is haustration #not skipped lesions)

-Contraindication of barium meal

Ans perforation viscous

-In CXR how we know if it is central and normal exposure?

Distance btw spinous process, two end of clavicle should be equal. And vertebral disc behind heart should be nearly seen.

- name the ventricles & locate them on pic

There are four ventricles: two lateral ventricles, the third ventricle, and the fourth ventricle.

- Pa /ap difference

T1/T2 differences

Dr Haneen

- Ct scan of anterior mediastinal mass, mention the causes
- chest x-ray of air under diaphragm and mention the causes
- MRI of malignant tumour most likely medulloblastoma
- chest x-ray of lung tumor
- bone tumor, osteosarcoma-

(Sunburst appearance that indicates osteosarcoma)

- Brain CT scan of epidural hematoma and what is the difference between it and subdural hematoma (according to shape and etiology)
 - pic of emphysema (mention the characteristics)
 - pic of pneumonia
 - pic of pathological fracture (how could you define it)
- ex. pathologic fracture in the diaphysis of humerus with a lytic lesion.

-pic of ct scan for hamartoma (popcorn lesion) >>Benign single lesion in the lung round well defined (hamartoma)

-Brain MRI

-most common malignant brain tumour in children is?

-pituitary microadenoma

-Chest x-ray >Chilaiditi's syndrome

-MCUG —> normal , ask if it for male or female

-MRI t2 —>hydrocephalus, ask about each ventricle where is it

-MRI t2 —>intracerebral mass, astrocytoma or it's haemorrhage?

-Collapsed lung

-Female with IUD

-Child with oesophageal atresia barium swallow

-Brain mri T1 multiple well defined hyperintense lesions most consistent with brain mets

-Abdominal X-ray multiple air fluid levels and centrally dilated bowel loops... small bowel obstruction

-What are the contraindications of a barium meal

-what are the 4 extra axial brain tumours

-solitary pulmonary mass pic and asking for DDx

-linear fracture

-chest x-ray showing air under diaphragm (called pneumoperitoneum and mention its causes)

- non-ossifying fibroma

ankle x-ray showing well defined mixed lytic sclerotic lesion at the distal metaphysis of tibia located peripherally surrounded by sclerotic margin and no bone destruction, no periosteal reaction and no soft tissue involvement consistent with a benign lesion.

-duodenum atresia

- where we see Foot and ankle deformities of children

Down syndrome (Talus bone)

-Thalamus

-Double barium enema with obstruction

-MCUG stage 4

-Craniocaudal mammogram

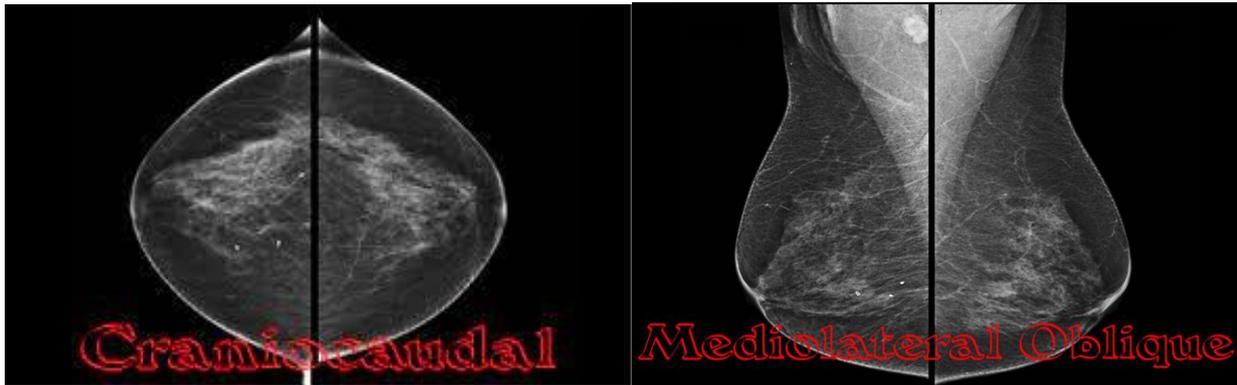
-Hiatal hernia

-Ultrasound gallstone

-Anterior horn of lateral ventricle

-Rib fracture

1. Pictures of mammography:
 what is this? **Mammography CC, mammography MLO**



2. Picture of DMSA **with scarring of the left kidney**

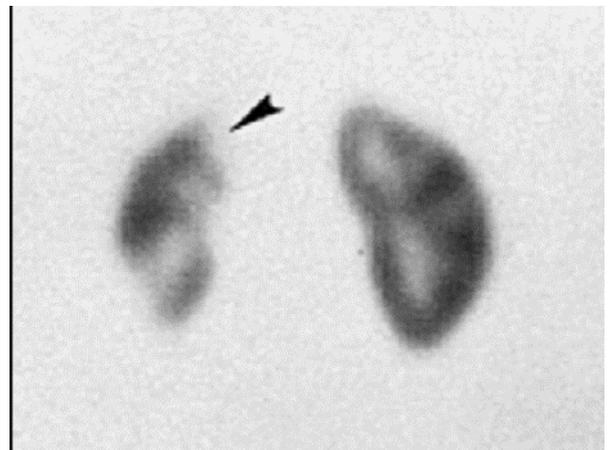
what is this?

What is it used for?

What lesion can you see in this image?

What could be the underlying pathology?

*most common cause in pediatrics :
 Recurrent UTI (acute pyelonephritis)
 due to **reflux**



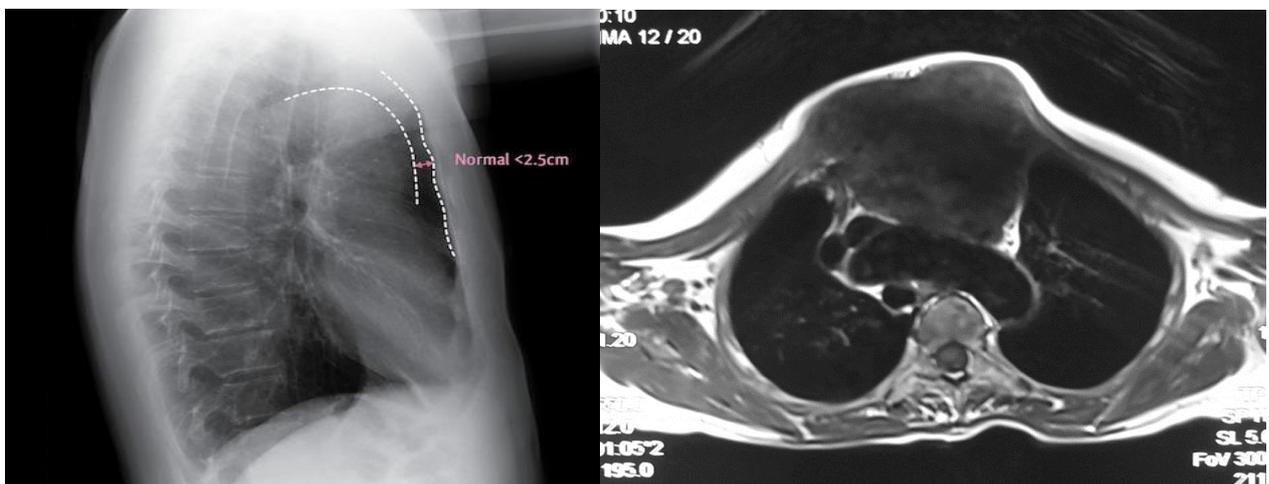
3. picture of lateral view chest X-ray

what is this area called? **Anterior mediastinum - retrosternal space**

give 4 causes for the following picture

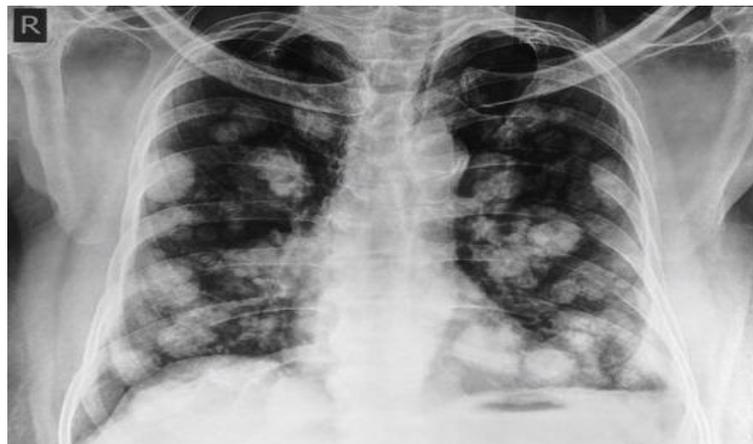
Anterior mediastinal masses:

Teratoma, Thymic tumour, Thyroid enlargement/tumour, Lymphoma

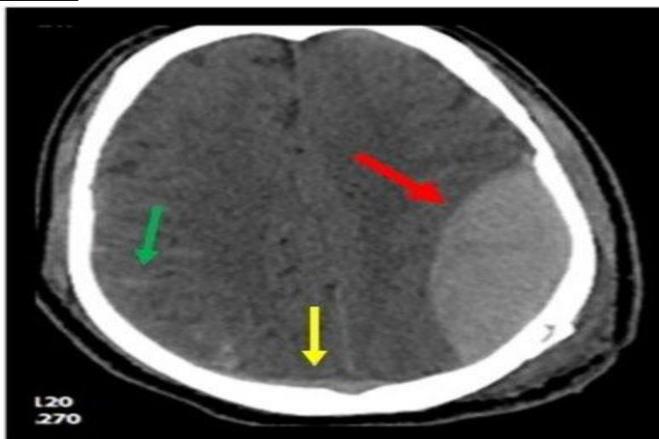


4. Picture of the lung with **cannon-ball** sign (what is this sign called? What tumors cause it ?give the most 3 common causes of it)

- 1) Kidney cancer
- 2) Lung cancer
- 3) Breast cancer



5. CT scan of the brain showing **epidural hemorrhage** (what could be the cause? What is the injured vessel? Which lobe of the brain is this? **Parietal lobe**)



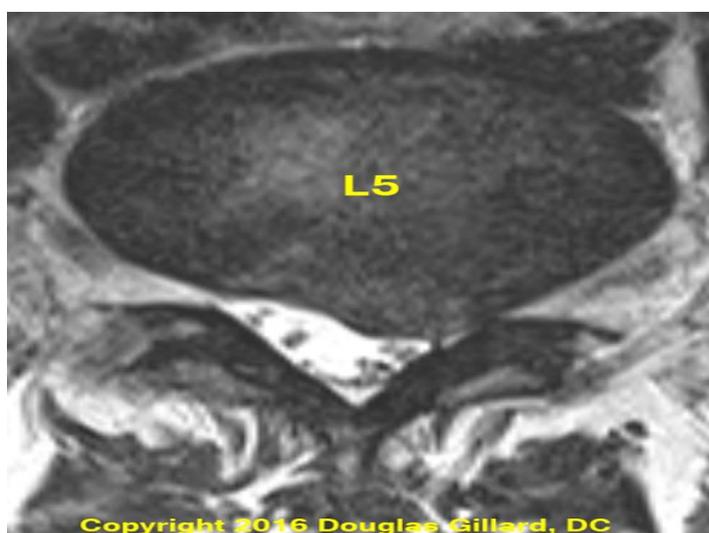
6. X-ray of the fibula (what is the lesion?)

There is lucency in the proximal epiphysis, well-defined, no cortical destruction, no peri-osteal reaction... Most probably a benign non-aggressive tumor

7. chest X-ray for a patient with trauma (what can you see? Tension pneumothorax.. The cause? Injury



8. MRI for intervertebral disc at L 5- herniation is paracentral:

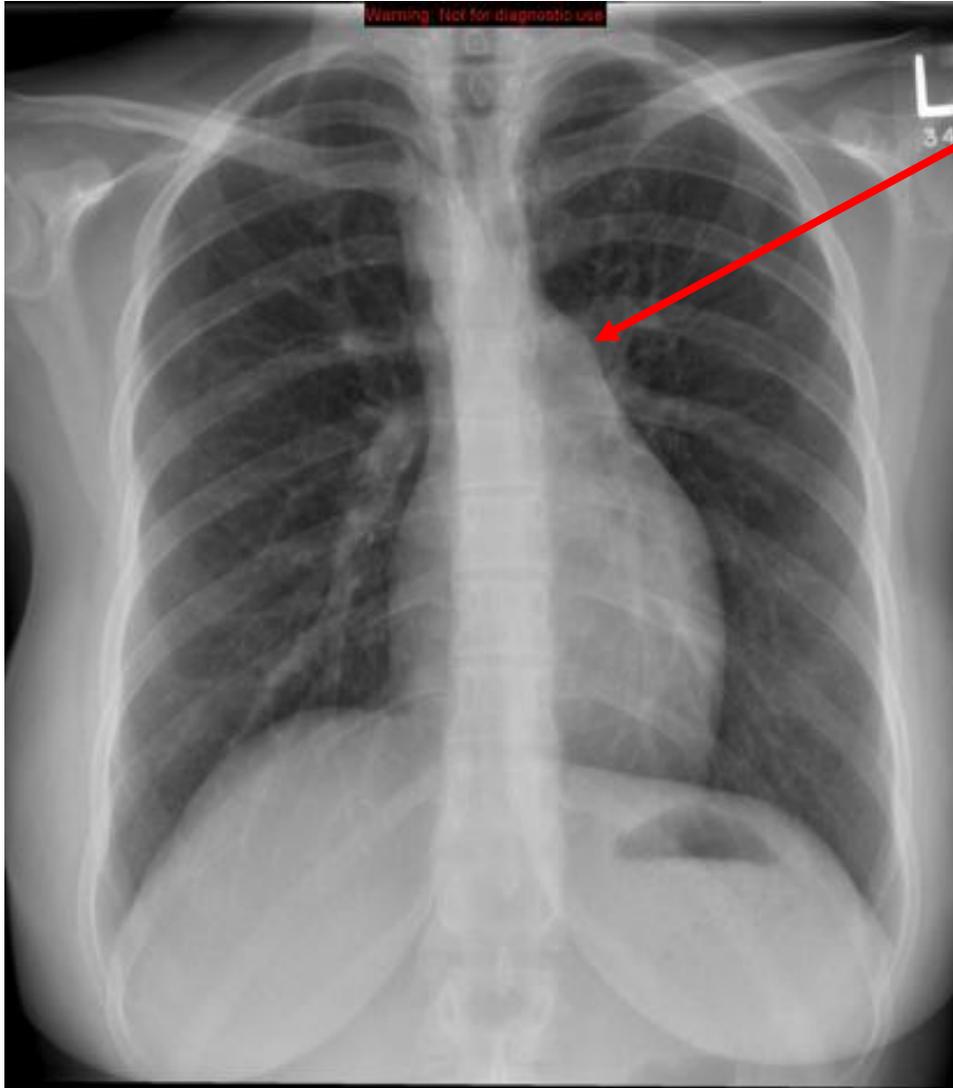


9.IVU with duplex ureters



10.Give 3 indications for gastrographine

1. allergy from barium
2. Perforation
3. Post-operative
4. meconium ileus (in neonates).



Arch of aorta

Q: name the labelled structure:

Q: name the labelled structure:



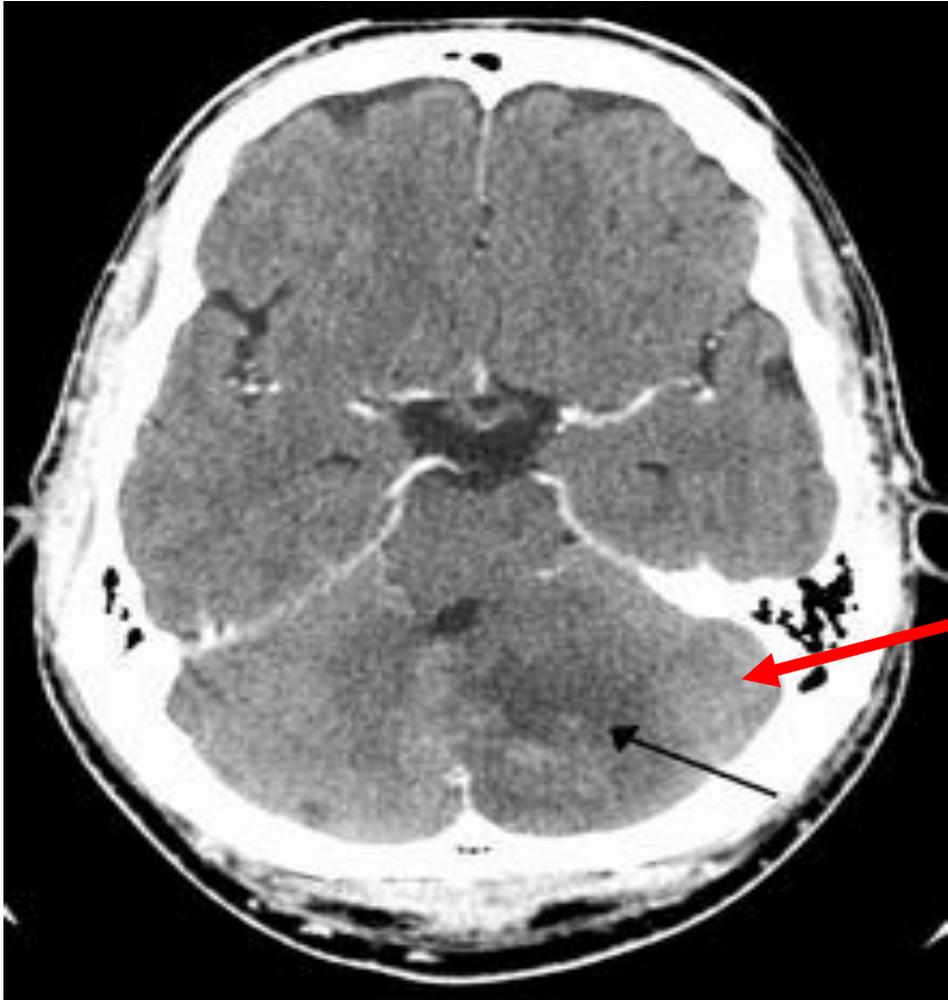
Retrosternal space

Q: name the labelled structure:



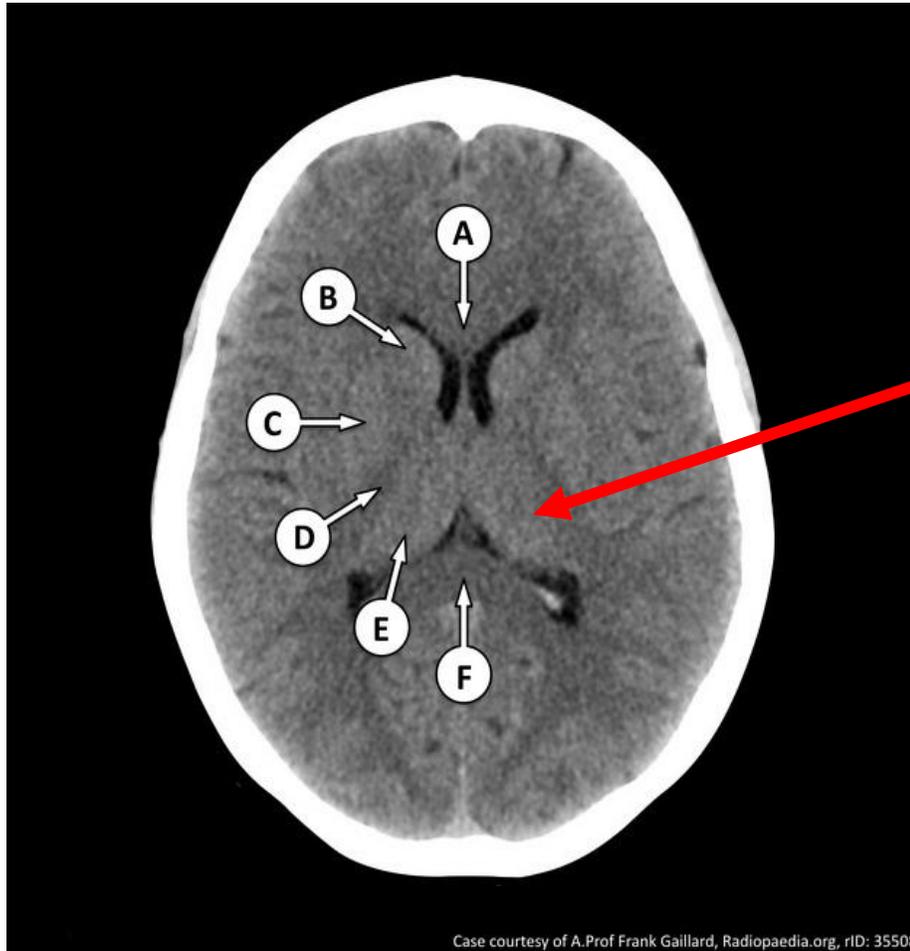
Greater
trochanter

Q: name the labelled structure:



Cerebellum

Q: name the labelled structure:



thalamus

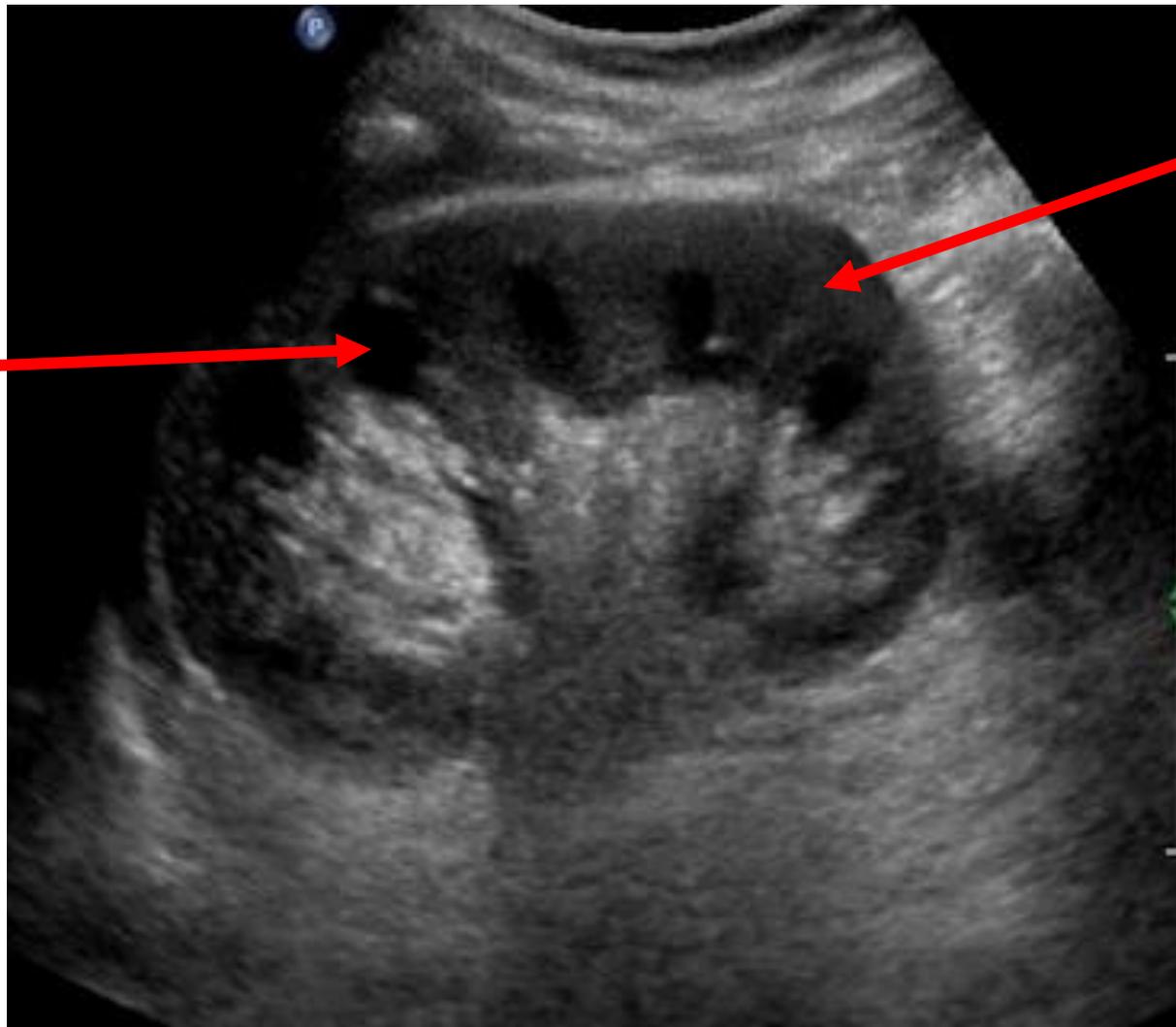
Q: name the labelled structure:

Scaphoid
bone



Q: name the labelled structure:

Pyramid
(cortex)



Medulla

Q:Describe the finding and give the diagnosis



Describe the lesion....

Diagnosis: osteoarthritis

Describe the finding and give the diagnosis



Describe the finding ...

2 diagnosis: Medulloblastoma or ependymoma or any other intraxial tumor



Describe the finding and give the diagnosis

Benign Lytic bone lesion

Question :
name the study and the finding



Ultrasound

Gallbladder stone with
acoustic shadow +
describe the stone



Question :
name the study and the finding

Barium swallow , bird peak/rat tail
sign = achalasia

Question: Give the name of the sign and the cause



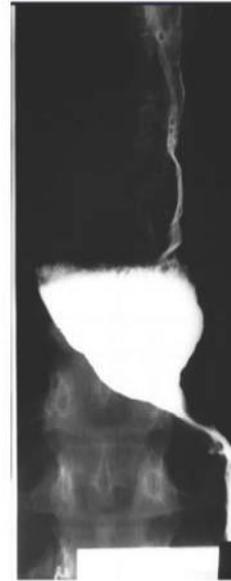
Double bubble sign

Cause: Duodenal atresia

- Q1 Name the study?
Q2 Describe the findings?
Q3 Give Dx?

**there is a lab error because
haustra of large bowel appears
in barium follow through study**

achalasia



Barium swallow : achalasia



Examiner : Doctor د. صهيب

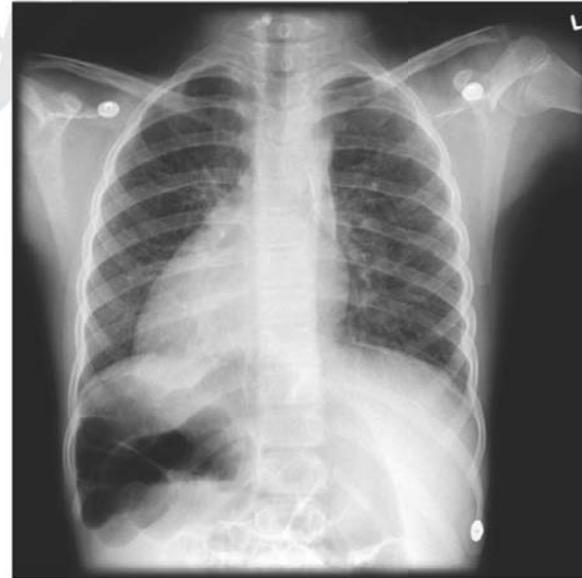
اسئلة د. صهيب صورة وبتناقش معك فيها
الصور مش من السلايدات لكن على نمطها

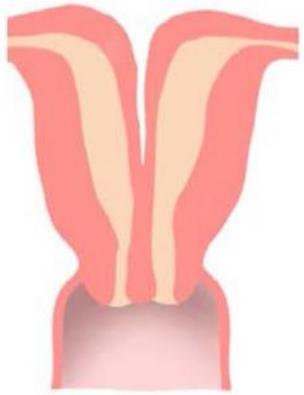
Bone lytic lesion

ليش benign
-1 no bone
distruction
2- narrow
transitional
zone
3- regular
margin or
sclerotic margin



Dextrocardia with situs iversus





Bicornuate bicollis



Examiner : Doctor د. محمد عمار



- Sialogram (for salivary glands)
- We use syringe and inject a small amount of contrast into gland duct and image it.
- We use lemon to increase salivation
- It's contraindicated in case of infection, if pus appeared stop the procedure immediately.
- We use it to detect stones



Examiner : Doctor Ahmad Abu-Ain

Questions:

- 1-IVU, showing duplicated ureter
-how did you know its an IVU? No catheter inserted in bladder and time is shown on the picture
- 2- Plain abdominal film showing lytic lesion on iliac bone, the picture show artifact also (intra-uterine device)
-I didn't find the picture.
- 3- plain abdominal film showing dilated loop located peripherally with multiple air fluid levels indicating large bowel obstruction (not the exact picture)
- 4-chest x-ray, AP view showing radiolucent circular lesion in the right middle lobe (Dr Ammar show the same picture the day before the exam and said it's a pericardial cyst but in the exam Dr. Ahmad told me its not 😊)
- 5- normal chest x-ray the Dr. asked me what I think about the exposure, is it inspiratory or expiratory film? (count the ribs) When do we use Inspiration-Expiration film??
كان بده 3 اسباب



IVU



لجنة الأطباء

Examiner : Doctor Sohaib

Questions:

1-Anterior mediastinal mass

Differential diagnosis :

teratoma , thymoma , thyroid , lymphoma

It caused tracheal deviation so most probably it's thyroid mass.



2-Urethrogram showing multiple strictures , most probably caused by trauma (instrumentation) or std
Parts of urethra in male ??

الصورة كان فيها كمان اشي ابنورمال بس ناسية شو يعني ما جاب نفس هاي تماما



3-There's lytic lesion in the fibula , surrounded by a sclerotic rim ,, there's narrow zone of transformation between normal and lesion , no soft tissue formation , no destruction of bone

All of which are indicative of benign lesions

Give differential diagnosis : osteochondroma , bone cyst, Abscess



4-Situs inversus Check xray markings
لانه الصورة ممكن تكون مقلوبة



د. أحمد أبو عين



**T- tube
cholangiogram**



ERCP

SEE EXTRA PHOTOS FROM GOOGLE 😊

د. أحمد أبو عين



**Spinal MRI T2 with a mass Intradural
extramedullary**

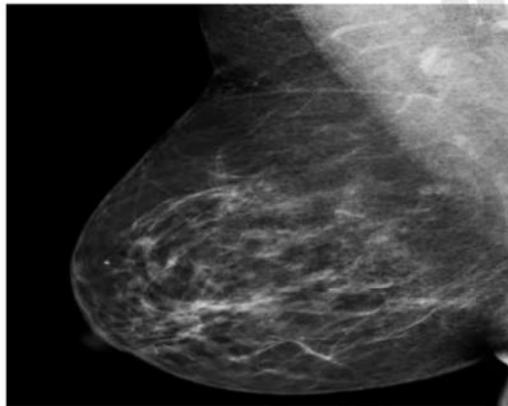
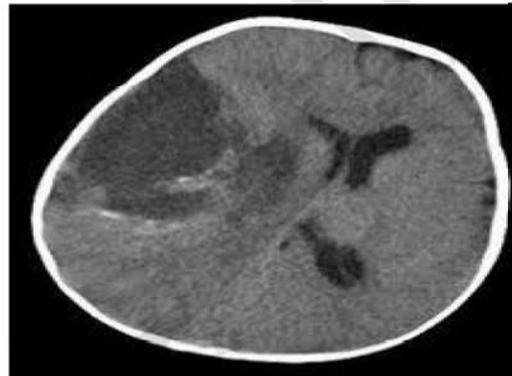
**Give possible types can form here :
Schwannomas
Meningeomas**

Dr.Ahmad abu-ain

Describe the image :

Brain CT scan , **represents** hypodense in right cerebral hemisphere in parietal region and it shifts the midline to the left side

Indicates : Mass:



Describe what you see :

Mammogram

Tell me the views of it :

- 1.Craniocaudal
- 2.Mediolateraloblique



Describe it :

chest x-ray for radius . Ulnar .

AP view for infant

Represents fracutre in distal radius

Old or new : old (because there is formation of bullos

الدكتور جاب صورة مش واضحة كثير بس كان فيها swelling and bullos

Describe it :

Chest x ray , AP view (count the anterior ribs)

Represents : widening in mediastinum and cardiomegaly



Dr : Mohammad ammar

Dr:haneen

الصور الي بالمسلايدات

-air under diaphragm

(describe it , causes)

,pneumothorax , Epidural

hematoma ,Subarachnoid

hematome ,dextrocardia

(situs inversus),pleural

effusion



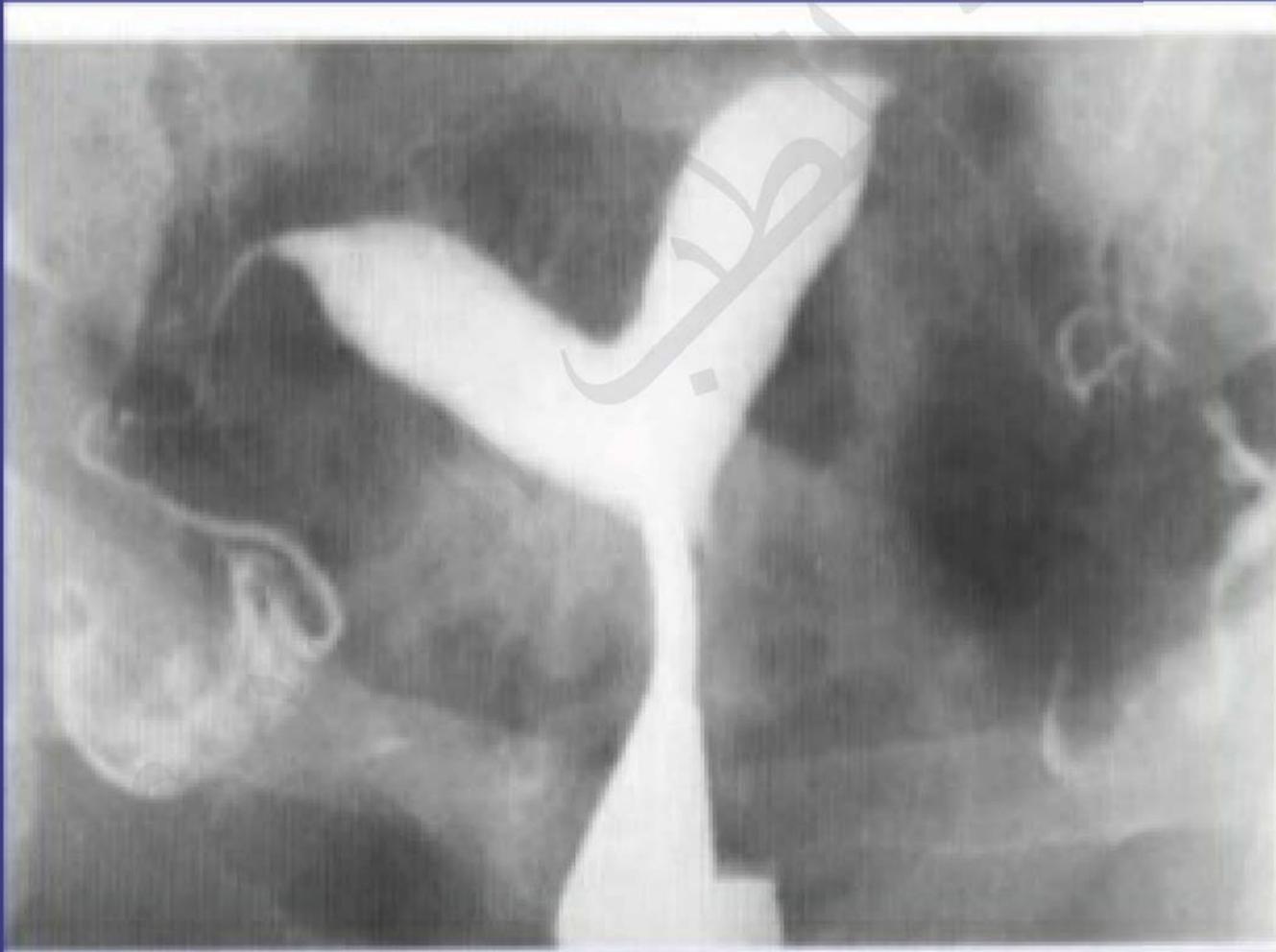
Double contrast
barium enema

Represents : push the
bowel above its
normal location



Hysteosaplinogram

الدكتور محمد عمار
Hysterosalpingogram
Bifid uterine cavity



الدكتور محمد عمار

Normal sialogram of the submandibular duct



الدكتور محمد عمار

صورة axial brain ct

لواحد male (طلب شو جنس المريض وكان مكتوب اسمه فبين إنه ذكر)

كانت الصورة فيها ال lateral ventricles كثير dilated

Suggestive of hydrocephalus

وسأل شو هي ال ventricles الموجودين عند الانسان وطلب أحدهم على الصورة

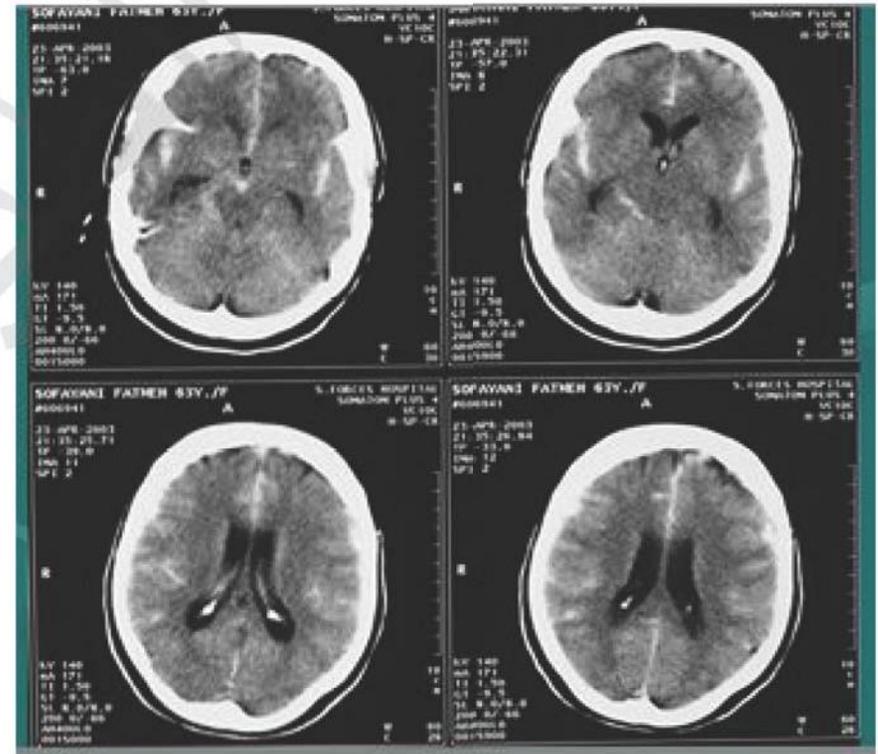
5-CT scan without contrast showing hyperdensity in regions of interhemispheric fissures , sylvian fissures , cerebral sulci ,basal cisterns

-Most common causes : rupture of aneurysm , hypertension , trauma

-Locate sylvian fissure

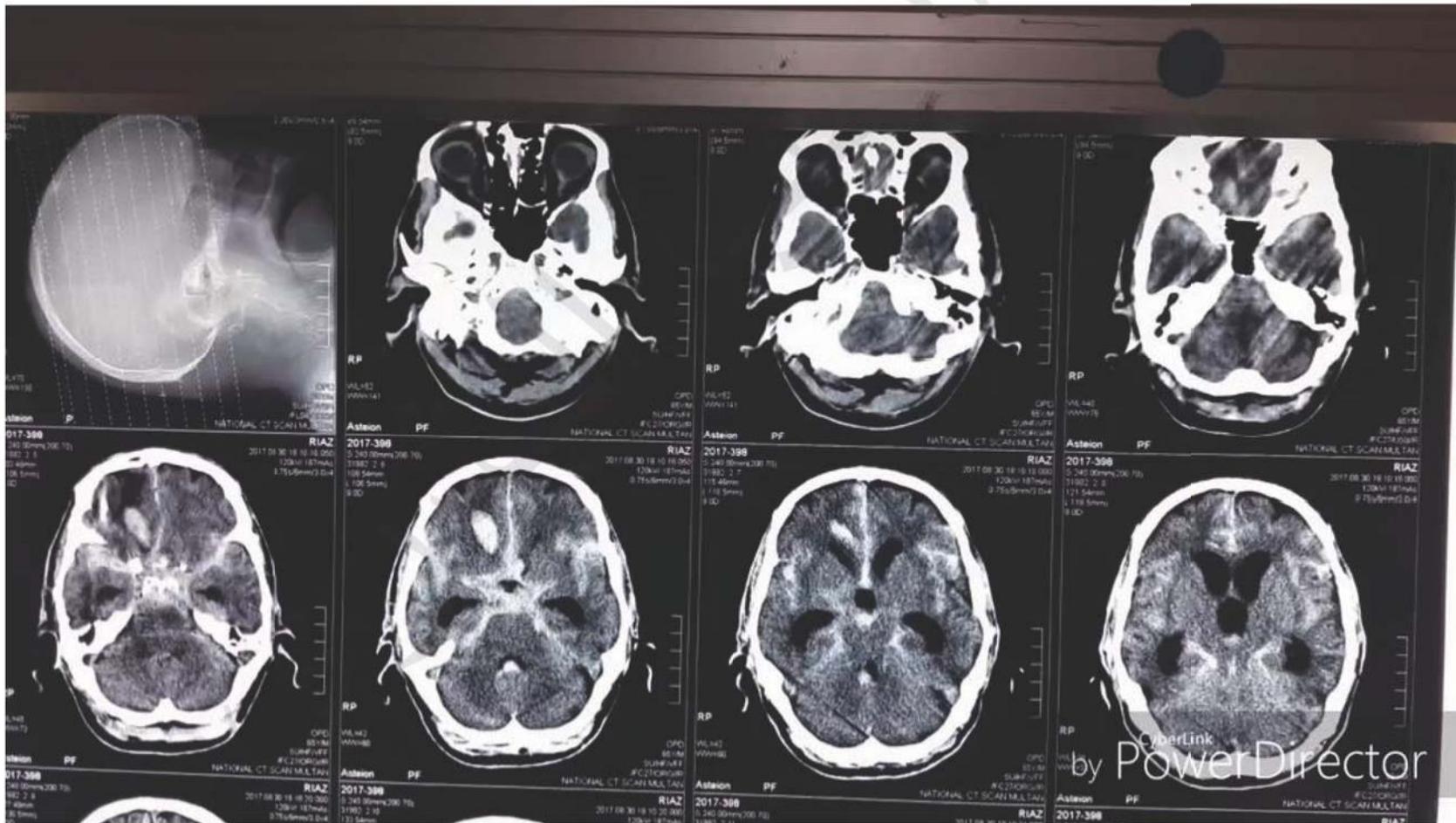
-What is your next step ? Mri to know the cause of SAH

بس الصورة كان فيها views اكثر من هاي

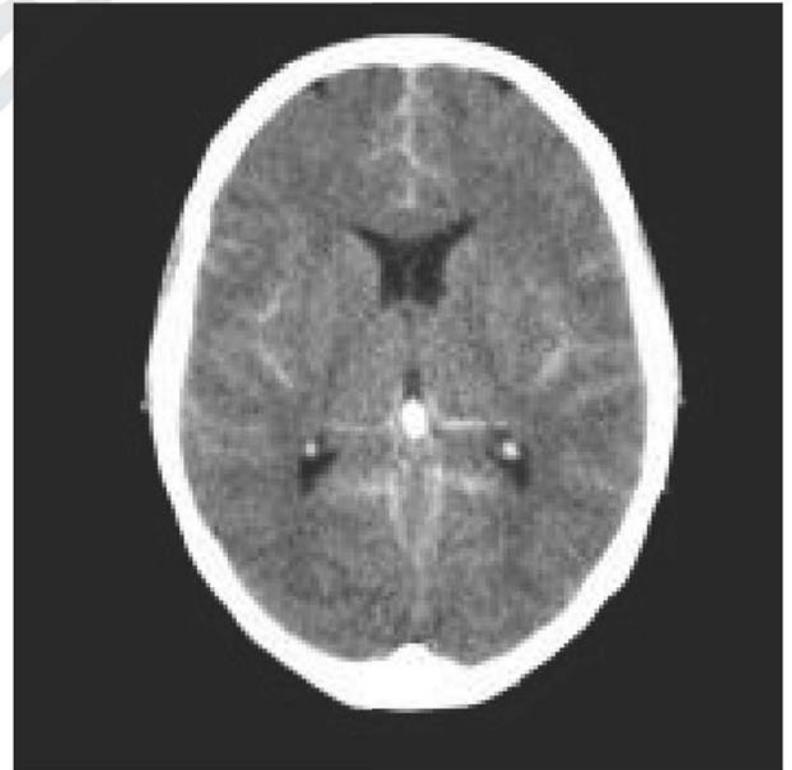


الدكتور صهيب Axial brain ct

The patient has subarachnoid hemorrhage
طلب احكي الاماكن التي بصير فيها haemorrhage وأحدد لهم
عالمصورة



Brain CT with SAH : seen in basal cistern
,salyvian fissure ,inter hemispheric fissure
and btw sulci



Brain CT with epidural hematoma

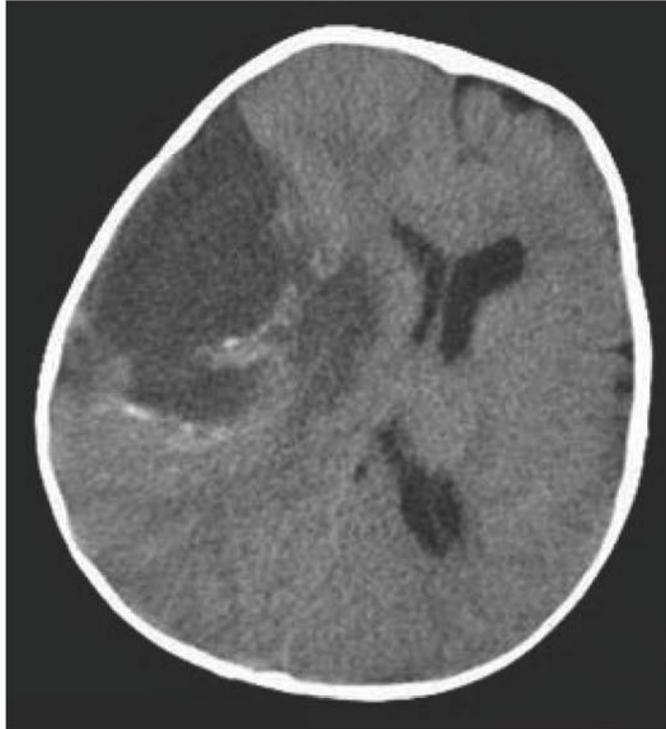


Brain CT with sup dural hematoma



Contusion





At exam it was a CT film not one pic and the mass was heterogenous (two densities)

د. أحمد أبو عين

Study Name : Axial CT scan of the brain
Description : I can see a well defined heterogenous (not the same pic) mass on the right frontoparietal lobes causing compression on the Rt. Lateral ventricles and midline shift
don't say infarction (infarction doesn't cause midline shift)

Infarction on right parietal lobe *

- not the same pic but close

it was crescent in shape so at beginning I said it is a chronic subdural hemorrhage , but doctor said that pt came with **a left side numbness** so I said then its an infarction .



25



Hx : headache
-dilated lateral
ventricle
*hydrocephalus

الدكتور صهيب

Lytic lesion surrounded by a sclerotic rim in the tibia
لازم نحكي إنها benign وبسأل كيف بتحدد إنها
well defined margin (إذا كان عندها) malignant
وطلب أذكر أمثلة على benign lesions



X-RAY for femur : lytic lesion

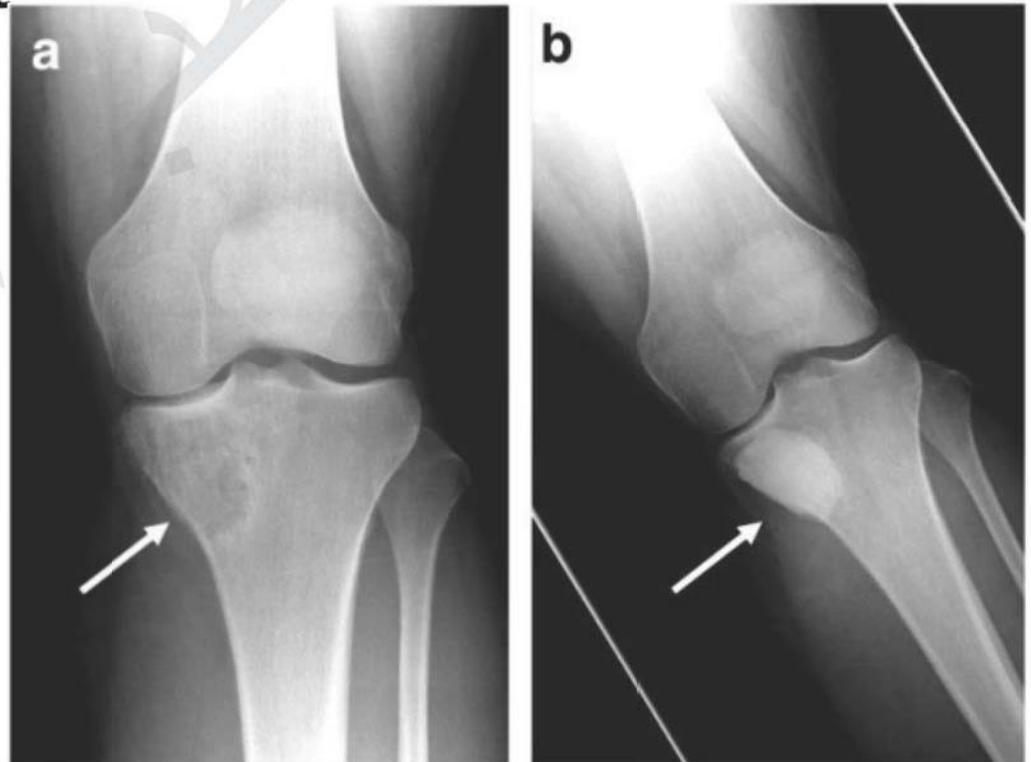


الطبيب

جنت

جنت

Knee x-ray with lytic lesion :
Benign ,will defined sclerotic
Margin , the is no bone
Destruction and no soft
Tissue involvment



الدكتور صهيب

Lytic lesion in the acetabulum

يعني هاي صورة قريبة شوي من إلتى إجت في الامتحان

Mostly malignant

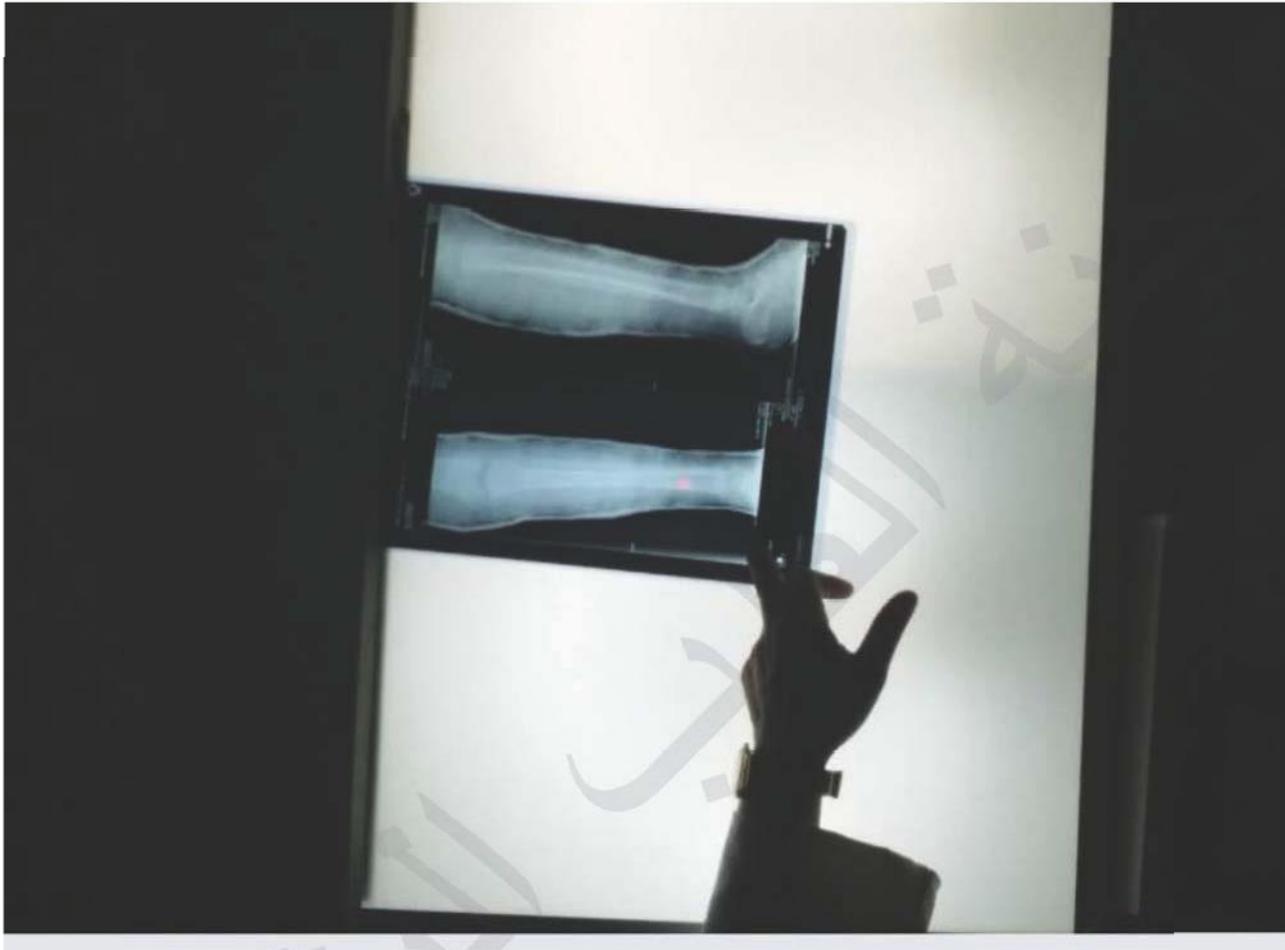
بسأل من وين إجت (primary and secondaries)

وبده امثلة بالحالتين

كانت الصورة لواحده female وحكالي كيف عرفت

ولو كانت male ممكن تيجي من ال prostate





- In the lower region there's a lytic lesion
- (there's a back slap so it may not appear very well)

الدكتور محمد عمار

Hip & knee x ray

ال history كان لولد عنده knee pain

موجود lytic lesion على ال femur

ما تعلق على إنه ال cartilage متضخم, هاد طبيعي عند واحد لساته صغير وبنموا

وال epiphyseal plate ما سگر عنده لسا والدكتور شدد في الهيستوري على إنه «ولد»





Arm X-Ray for a child
There is a linear fracture in both radius and ulna

Q: is it old or new ?
In the exam it was old

How did you know ?
There is callus (not ballus)
(it's a sign of bone healing)



Bone healing - Callus



AXR with small bowel obstruction



د. أحمد أبو عين



Study Name : CHEST X-Ray

Description :

**Comment on the
cardiothoracic ratio**

الدكتور محمد عمار

AP chest x ray

Multiple nodular calcifications bilaterally
Could be due to metastasis



الدكتور محمد عمار

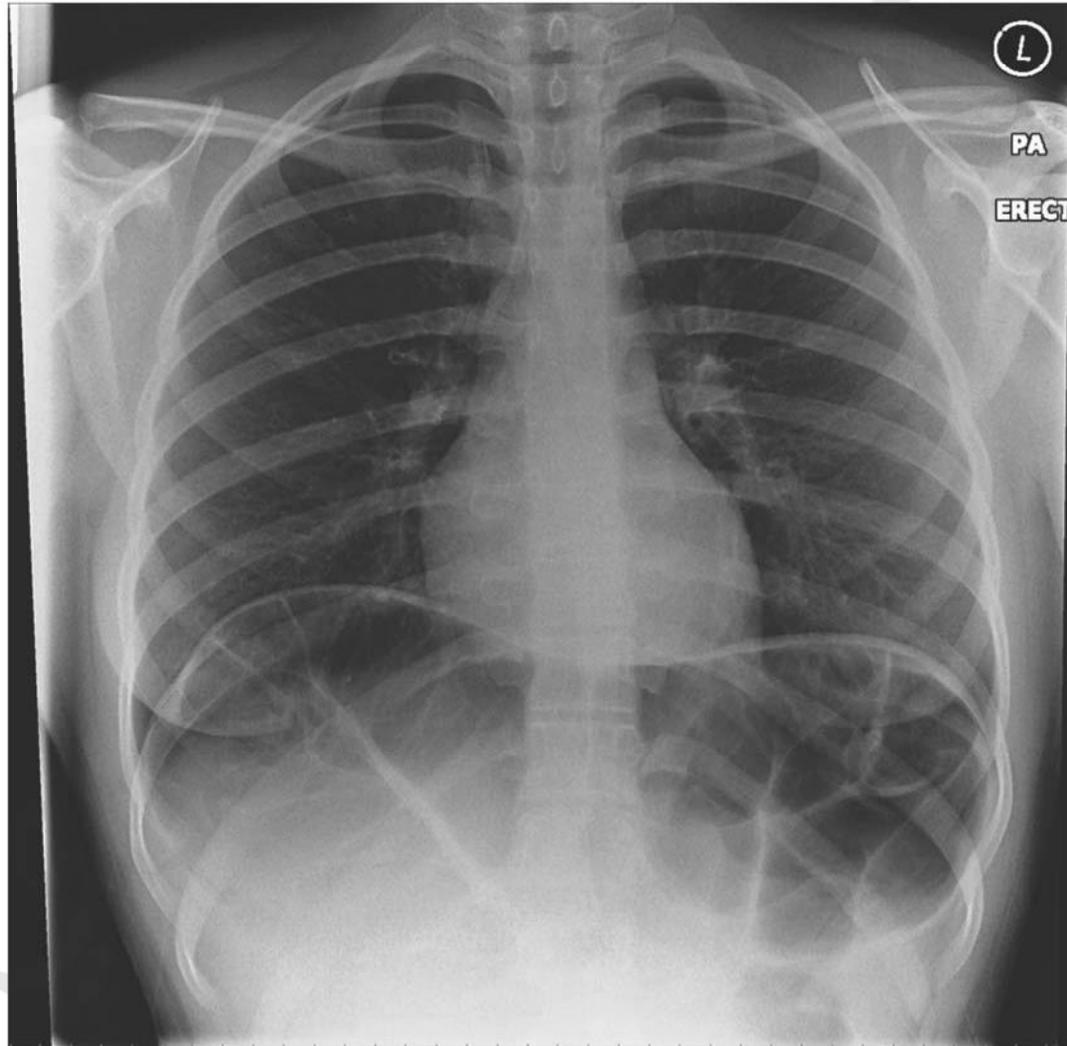
“AP chest x ray showing a distended large colon pushing the kidney & diaphragm”

ال history كان لواحد معه abdominal pain وبس

بعد البحث تبين إنه هاد chilaiditi's syndrome

بكون في colonic interposition with distended colon mimicking free interperitoneal gas

مش متأكد بصراحة من هاي الصورة, أنا حكيت الوصف إللي فوق بس احتمال أكون جاوبتها غلط



د. أحمد أبو عين



Study Name : CHEST X-Ray

Q : Do you accept this X-Ray ?

NO , because it's **overexposed** (it affects the diagnosis & management)

How did you know the overexposure ?

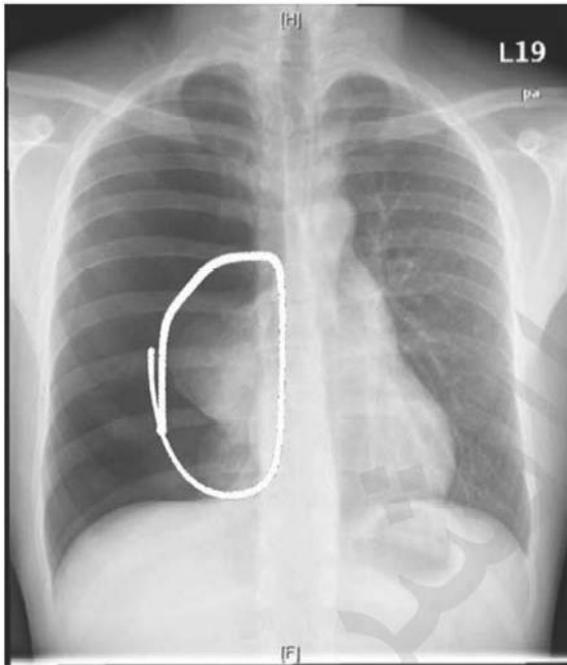
The retrocardiac disc spaces are clear and the lung fields are dark black

Q : Is it expiratory or inspiratory ?

Inspiratory , How ?

Count the ribs

Anterior midasternal mass - there is tracheal deviation - mainly thyroid



Pneumothorax with tracheal deviation
lung collapse



الدكتور صهيب

Situs inversus totalis

كان يقلب الصورة فعشان هيك لازم نسال عن ال markers بكل صورة ووين اليمين ووين الشمال

سأل عن الغازات شو هاي ولو كانت مش موجودة هون شو بنسمي هاي الحالة (dextrocardia)

كان عند المريضة artifacts فلازم نعلق عليهم ونحكي شو هدول ممكن يحاول يخربطك ويحكي زميلك حكي هيك فما تسمع منه

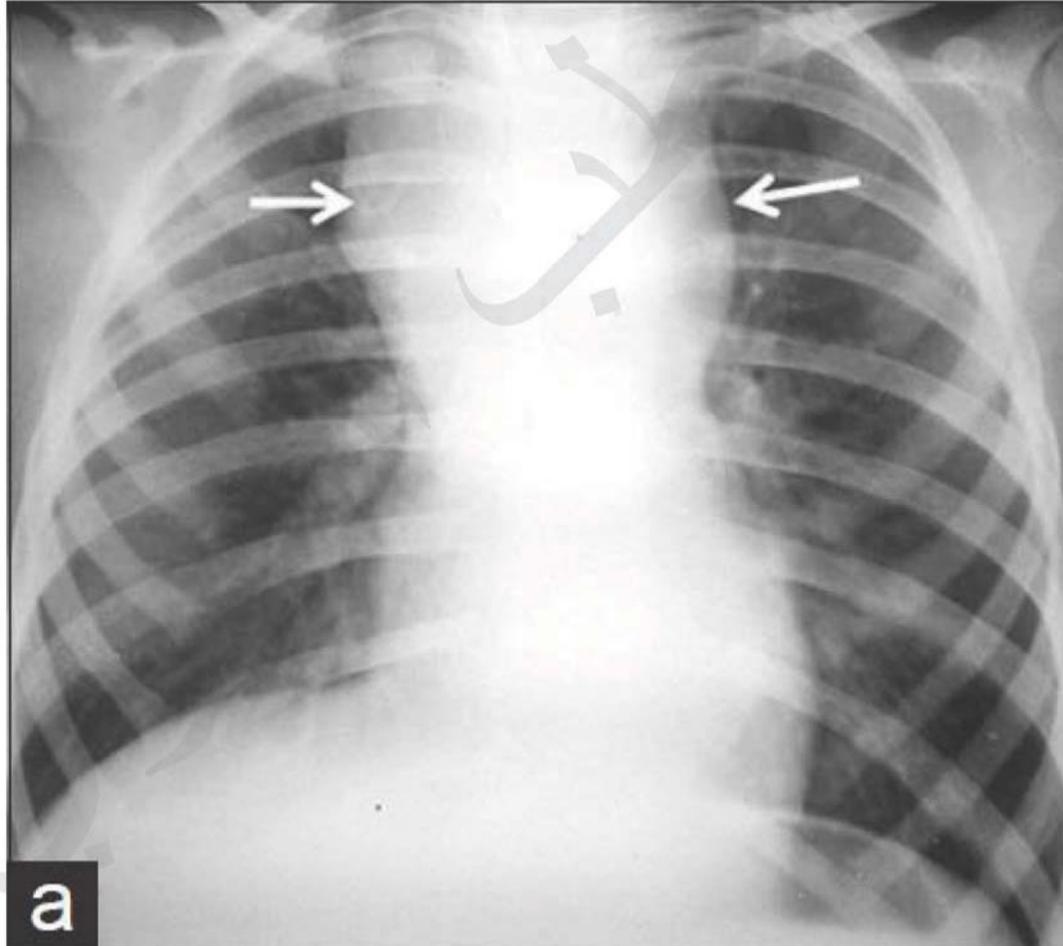


الدكتور صهيب

AP chest x ray showing anterior mediastinal widening
الصورة كان فيها shifting of the trachea لازم نحكي عنه

وسأل شو الأسباب إلي بتعمل هيك

وكممان شو أقرب سبب مناسب للصورة وكان retrosternal goiter



CXR with pnemothorax



الطبيقي

CXR : air under diaphragm



الطبيبي

لجنة

CXR with dextrocardia and situs inversus

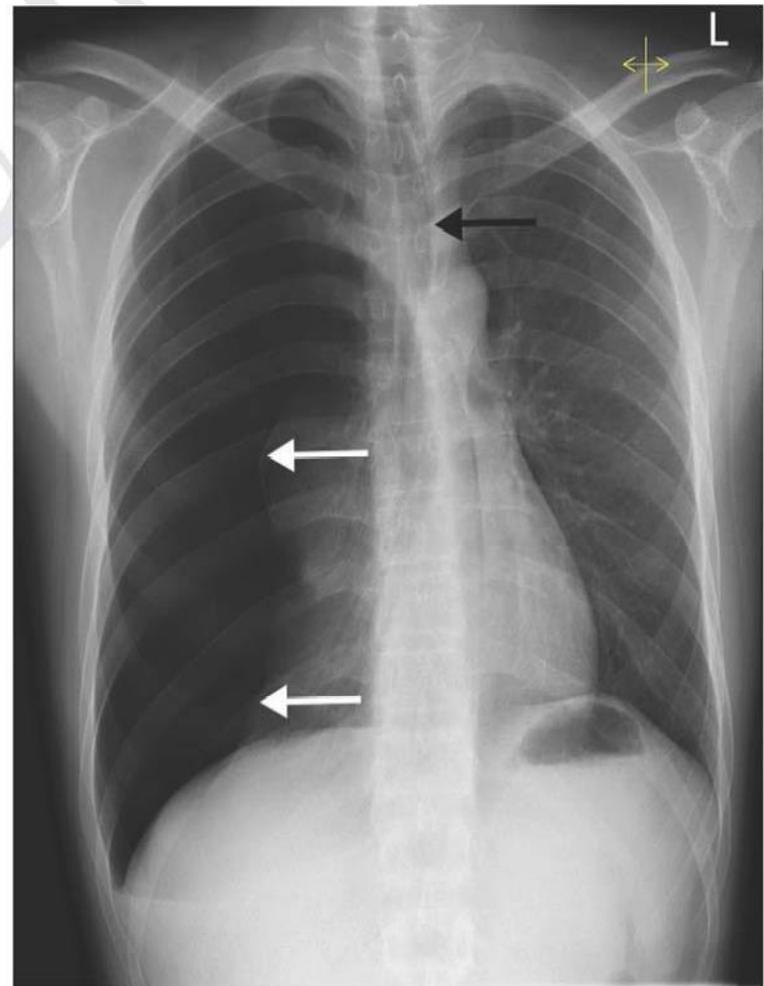


CXR with tension
pneumothorax

Lung collapse (lung edge)

Loss of marking

Shifting mediastinum



CXR with anterior mediastinal mass

5DDX:

Thymoma , teratoma ,
Hiatal hernia , cardiac cys

Retrosternal goiter

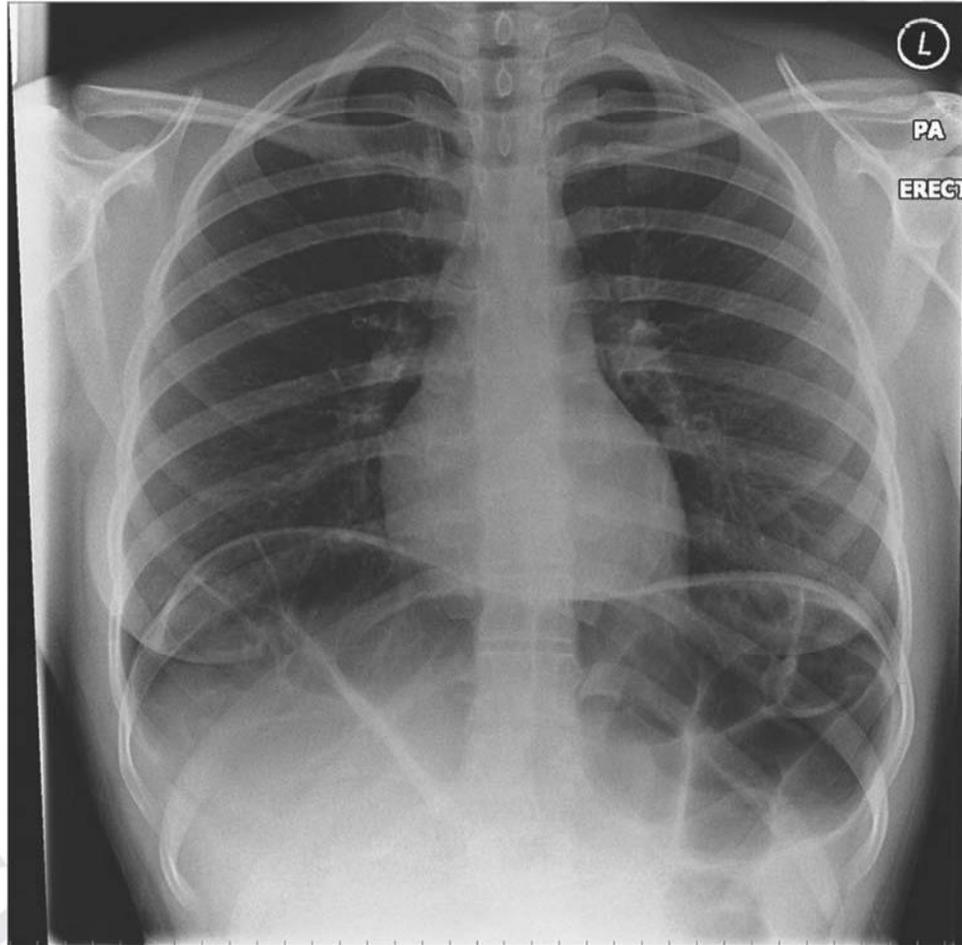
Next step : lateral view



History.. fever and cough .. Lobar pneumonia



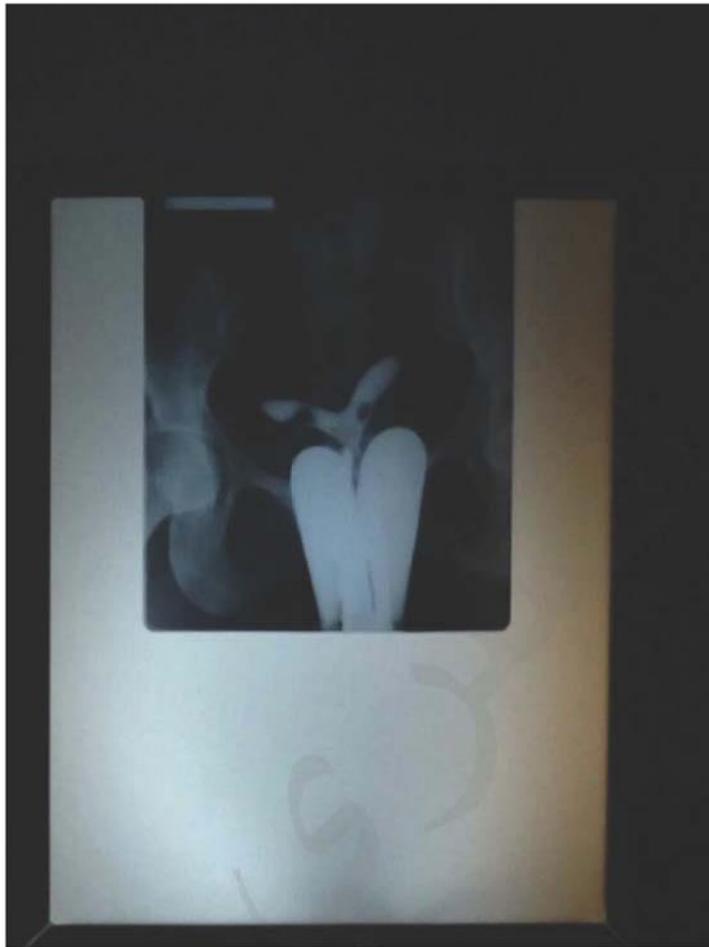
chiladitis syndrome



name of the study : Hysterosalpingogram

-*الرحم ذو القرنين

hx: each time pt get pregnant she get abortion .



الطبيب

*Not accepted chest x – ray *

- there was air under diaphragm but eventually it turned out that the pic is not accepted technically because it doesn't show the whole chest

*sorry can't find pic like it