

Pathology

MISS

Lec1

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Benign'

Giant cell tumor of bone :

-locally aggressive neoplasm of adults.

متجلى عن الأفعال ولا يقل عن عمر 20

epiphyses of long bones .

And if the patient is 45 years of old, this is the most Common differential of giant cell tumor of bone, so They go in and take a biopsy and sometimes they just Resected.

rare malignant behavior:

cells contain high levels of RANKL:

Trx: curetting or resection

ANEURYSMAL BONE CYST

cyst inside the bone filled with blood

metaphysis of long bones.

is not a true neoplasm (probably reactive condition caused by previous trauma or infection)

-Affects adults 10-20 y

-Trx: curetting , resection

If it is localized like this lesion in the upper fibula probably you can remove it without impact on the function of the lower limb in the patient
ماتتس كالأوقيفة

X-ray

It has a bubble appearance expanding the cortex of the bone without infiltration to the extracortical space.

Histologically

- 1) it is sheets wall to wall → little interstitial.
- 2) multi-nucleated Giant cells
- 3) osteoclast like giant cell, so the tumor cell Are the giant cells and the one in between (the single mononuclear cell).

Sometimes they call it **osteoclastoma** because the primary histology is composed of numerous wall to wall osteoclast like multi-nucleated giant cells.

Non ossifying fibroma fibrous cortical defect metaphyseal fibrous defect (

FIBROUS DYSPLASIA (FD):

abnormality of bone genesis due to mutations in GNAS1 gene (cAMP mediated osteoblast differentiation).

(GNAS1) mutation

→ (cAMP)

needed in



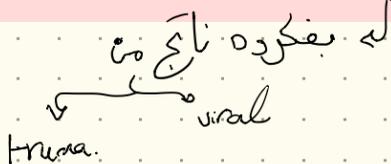
osteoblast differentiation

This is the bone (tibia) and there is a lesion here which is not destroying the surrounding structure, it is not elevating the periosteum, it is well circumscribed. *كثير معدة الاطراف*

not a true neoplasm

Metaphysis in long bone

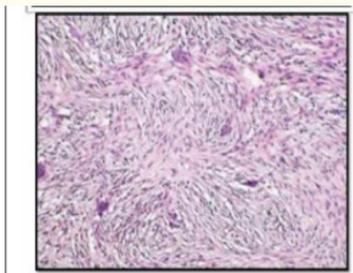
May resolve spontaneously



group of diseases or syndromes.
Monostotic: affecting one bone
Polystotic: multiple bone

Histology

: bland fibroblastic proliferation



maxillary and mandibular bone of the face causing what we call cherubism in children

Mazabraud syndrome: FD (whether it is monostotic or polystotic) + soft tissue (myxoma) (not a common tumor of soft tissue)

benign in mucous

McCune-Albright syndrome: polystotic FD + café-au-lait
1) endocrine abnormality.
2) -polystatic fibrous displasia
3) (cafe) pigmentation of the skin
4) precocious puberty

Abnormal bone that's somehow similar to Paget disease!

بصورتها طريقتا histologically

McCune-Albright syndrome has a Chinese letters appearance

Paget disease the bone appears in a mosaic pattern (pathognomic).

IT chinese letters



METASTATIC TUMORS TO BONE:

Much more common than primary bone tumors

-Usually multiple and axial (vertebral bodies, shoulders, pelvic)

-In adults

In children

children, you don't see carcinoma (very rare)

- 1) Neuroblastoma,
- 2) Wilms tumor (kidney)
- 3) rhabdomyosarcoma

Lungs are the major cause of bone metastatic both in female and males because we have a lot of females who are smokers now.

In adults the most common metastatic to the bone is carcinoma and the most type of carcinoma which cause to the bone is adenocarcinoma (gland forming carcinoma)

most are carcinomas; lung, prostate, breast, kidney, thyroid & liver

Lytic, blastic, mixed

Lytic, Cals

bone destroying

* more common

- multiple areas vertebral body pelvic bone femur

blastic, E6

+ bone forming

+ prostate commonly blastic metastatic

