Radio lec#6

CRC#2

Make urself familiar with the Radiological appearance of the disease , the essential pathophysiology and the category that’s related to management and prognosis of the lesion whether it needs chemotherapy blood tests or resection or biopsy or nothing, General features of the disease look at the radiograph

Qs in the exam : arrows and what is the structures (anatomy) or what's this section of a CT scan or what do u feel about the margin of this lesion or the effect of this lesion

Refer to this to see the radiographs

<https://elearning.ju.edu.jo/file.php/5045/Bone_diseases_manifested_in_the_jaws_Metabolic_disease_CRC.pdf>

Systemic and bone diseases

CASE #1

What type of radiograph is this ? it’s a panoramic radiograph

A kid or adult ? adult those are all permanent teeth

The lost teeth are they congenitally missing or extracted ? extracted

So this is a partially edentoulus adult pt

Also the roots are thin , loss of lamina dura everywhere , radiolucency in the lower border of the man.

The left radiolucenct lesion is well defined un corticated causing alittle bit of resorption to the adjacent roots , maximum size of 3 cm ( u use the molars as a ruler u imagine how many molars would fit in the lesion)

The right lesion looks like the left one radiolucent well defined the left one causes resorption and the right displacement to the (someone interrupted the dr here so she didn’t say )

So this is an osteopenia related disease so >>hyper parathyrodism

if this is a female we can also say this is an osteoporosis if there's no localized lesions

if also a male or female we can say this is osteomalasia as well (this isn’t rickets because its effect on teeth is much more than this)

This is a typical brown tumor associated with hyper parathyrodism

CASE#2

What type of radiograph is this ? reconstructed panorama

A normal panorama is a full pic it's thicker than 1 mm or something and there's superimposition and magnification and the cervical spine appears

This radiograph has no magnification its 1:1 there's no cervical spine no airways no tongue no superimposition neither in hard nor soft tissues it’s arithmetically drawn so it’s a reconstructed panorama

Normal or abnormal?

Abnormal

Multiple missing teeth

 Multiple Multifocal radio opacities in the man.

Cemento osseous dysplasia >> in early onset it's radiolucent and then it increases the opacity and then it becomes completely opaque

There's target lesions (white black white black..)

If it wasn’t multiple we could think it’s a complex odontoms for ex

A student asked why isn’t this a radiograph of a pt with gardner's syndrome (multiple osteomas)

>>1st the dr had the cbct so she knew those aren’t osteomas because osteoma by definition makes projections in the cortical bone

2 its about the area and the projection multiple osteomas make expansion so a panoramic layer should be thick enough to cover the area and this one is really thin and then we must see the projection in this radiograph it showed a little expansion while an osteoma would cause a much more bigger expansion

3 the target lesions are inside the outer cortex (the outer cortex is a thin cortex) while osteomas bekamlo the outer cortex so the cortex becomes thicker and less sharp and u would see the other signs of expansion

CASE#3

Reconstructed panorama

The other pic is multiple axial radiograhgs

 Expansile mixed density lesion on the left maxilla extending from the midline to the molar area causing remodeling of the floor of the sinus and the borders of the incisive canal

Mixed density lesions mean that the lesion itself is making the calcification inside it

The students suggested those 2 DDs : Cemento ossifying fibroma and fibrous dysplasia both of these lesions are radioopaque

Cemento ossifying fibroma is well defined because it’s a benign neoplasm however fibrous dysplasia is a bony disease that has a genetic link so all of the bone cells are affected so it looks like a ground glass with ill defined borders

COF is more localized and dramatic so its >> COF in the maxilla

And the ill defined lesion in the mandible is just bone loss due to perio disease

CASE#4

Panoramic radiograph conventional

multiple impacted teeth there's denser bone >> so this is osteopetrosis

(dense cortex-like bone in places where a tuberculate bone and bone marrow spaces should exist )

There's radiolucencies related to of the impacted teeth(I think?) it seems like there's a communication between it and the oral cavity and this seems like the start of an inflammatory reaction and this is serious because in these pts we r concerned about osteomyelitis

\*it's rare to see a solitary bone cysts in these pts

CASE#5

A single multilocular radiolucent lesion, expansile with the mandible, bilateral, septated, ill defined>> cherubism

The ant. Teeth look narrow because they're too forward into the machine so they seem smaller t(the dr thinks that this pt is class 3)

Remember : too forward into the machine >> narrow

Away from the machine becomes wide

The lateral ceph. For the same pt

These lesions require no treatment unless they're causing aesthetic problems

CASE#6

How old is this pt? ~5 yrs

Cotton wool in the head goes with>1.behcet disease (but this is not the age of It and behcet disease is bilateral )

This is 2.fibrous dysplasia it displaced the canal upward - ill defined lesion – expensile – the right age –below the id canal

CASE#7

PAs

 This is a periapical cemento osseous dysplasia

Mixed density lesion (can't hear) clinically do a vitality test

This is the intermediate phase in late stages it would be completely radioopaque and earlier it was radiolucent

CASE #8

Part of a panorama

Lower 6 with a mixed density lesion mainly radioopaque surrounded by a radiolucent rim and it pushed the canal downward , the roots of 6 are resorbed and its tender

This is a cemetoblastoma

So mixed density lesion mainly radioopaque surrounded by a radiolucent rim in the lower mandible usually around the 6 with extreme root resorption and the tooth is painful it’s a cemetoblastoma

Incidental finding

CASE#9

Widened bone marrow spaces we start thinking its

1.osteoporosis but this pt is very young

2.hypophosphasia or hypophosphatemia but if these affect a pt in this age it would affect the teeth too like hypocalcified and pitted and there would be problems in the roots as well

3.hyperparathyrodism

the sharp trabecular patters that separates the bone marrow spaces excludes that this may be a metabolic problem of the bone because if it was the trabeculates would be gone too

4. hemolytic anemia >> that’s the diagnosis the bone marrow is pushing the spaces to expand