

-Orthopedics lecture 1:

orthopedic science: science concerned with bones, joints, muscles, tendons, ligaments and nerves.

Orthopedics disorders classification:

- inflammatory: rheumatological disease
- Metabolic
- congenital: skeletal dysplasia
- traumatic

Diagnosis:

1-history:

2-Examination and laboratory

1-most common symptom is pain which can be analyzed by SOCRATES

-Pain sudden today: is septic arthritis

-pain chronic: as osteoarthritis

-Site: خليه ياشر على مكان الوجه

-Lower back pain and lower limb pain: could be sciatica

*sciatica like pain: in vascular claudication

2-Stiffness: التيبس

-stiffness from pain is not a true stiffness

*stiffness pathology mainly intraarticular or capsule or moving tendon

Example: patient with giant cell tumor in hamstring muscle or soft tissue tumor he will not able to extend his leg this is due to "tendon contracting"

*بنفرق هل هو stiffness ول pain بال physical exam اذا قدرت افرد الرجل فهو من ال pain
السبب

3- locking حيككي كتفي علق مثلا

bone fragment entrapped in the joint due to mechanical cause

- as tear in meniscus in knee
- intra articular tumor: as synovial chondromatosis

-if there is no special maneuver done by the patient to overcome the locking it is not a true locking لو فش حركة معينة بعملها عشان يفك تعليقه رجله

- **stiffness of the joint is normal anatomy and the difficulty of movement comes from the inflammation as rheumatoid arthritis but in locking there is abnormal fragment or tumor.**

4-Swelling: localized or generalized

sudden onset or gradually دعرف هو

على عمر طويل بفكر في tumor زي osteochondroma

لو موجود و مرات بختفي حتى حفر في ganglion

-ganglion: is a fluid filled swelling

-sudden onset swelling is inflammatory process

-multiple joint: systemic disease as thyroid disorders

-painful: acute inflammatory process or trauma

-swelling without fluid: in synovial membrane thickening mainly in autoimmune disease.

5-deformity:

real or pain related: differ by examination بقدر ارجعه لوضعه ول لا

6-muscle weakness:

mainly related to neurological disorders

*ligamentum hyperlaxative: ليونة شديدة في المفاصل بصير معه خلع كثير و يرجعه لحاله

*patella dislocation: 1-giving way من ضعف العضلات

2-anterior cruciate ligament tear: true dislocation

past medical history:

-delay walk: if there is a past medical history of admission in his neonatal period with jaundice it could be due to kernicterus and cerebral palsy

- patient with crohn's: osteoporosis لو اجي ب

ممکن يكون بسبب علاجه الستيرويد

Family history:

dwarfism, skeletal dysplasia

other systemic disease:

-as sacroiliitis with only symptom is in GIT

clinical exam: start from the gait when patient come

Radiology:

*X-ray: for bone, foreign body and abnormal soft tissue swelling
or hint for gas forming organism "c.d" ___> air bubble

-AP and lateral position

*C.T:

-give More morphological and anatomical details

-3 dimension

-weak on **not showing osteomyelitis**

only can seen by CT if there is sequestra: it is a peice of dead bone in chronic phase.

-CT more carcinogenic

*US:

-Operation dependant

-use in detect fluid collection

-screening method for DDH

*MRI:

-Gold standard method

-show tumors, ligaments and soft tissue injury as meniscus cruciate ligament

-osteogenesis imperfecta: disease diagnosed by clinical genetic counseling.

*bone scan:

the ideal isotope is technetium-99m

in multiple phases "injection, absorption and excretion"

*lab results:

-ESR for inflammation and autoimmune

-WBCs for infection

-platelets: for bleeding tendency as a preoperative preparation

-ca: hyperparathyroid and cystic lesion in bone ---> brown tumor

-muscle enzyme: creatinine kinase, LDH and myoglobin

myoglobin for crush injury and renal failure

-bone biopsy for bone tumor