wrist deformities: rare 1 in 600 live births.the problem in it is association congenital abnormalities.

*Radial dysplasia:
pathology discover at birth
complete absent radius
complete radial deviation in wrist
our rule: exclude other congenital anomalies.
treatment early is serial casting and stretching to prevent soft tissue contracture.
final treatment: centralization of the forearm by fixation of the ulnar with proximal carpal bone. at age of 3 years

*Madelung's deformity:
-injury in the growth plate of distal radius. "misalignment of the 2 long bones when met with wrist'"
-congenital or post-traumatic
-wrist grow from the ulnar and dorsal side only
-can do all the normal functions by the arm. "cosmetic deformity"
-treatment; Ulna shortening with or without radial lengthening.

*Kienböck's disease:
-avascular necrosis of the lunate bone.
-Unknown cause but the most theory explain it: repetitive microtrauma and pressure over the lunate bone from lunate fossa in the distal radius.
-In normal the radius and ulna are at the same level but there is a normal variant called "negative ulnar variance" which means the ulna will be shorter. it will increase the risk for this deformity
-in 2nd decade of life
-protein c and s deficiency also increase risk
-painful pathology " مش قادر يعصر ليمونة"
-X-ray could be normal in early stages, in clinical exam there is tenderness over the lunate fossa.

-Golden test: MRI shows avascular necrosis of the lunate bone.
-Treatment: 1-radial shortening or ulna lightning
but in late stage: **Proximal row carpectomy** by remove four of the eight bones in the wrist joint it will lead to loss of power of hand so it preferred in adults

*Tears of the triangular fibrocartilage TFCC:
-one of the major causes of ulnar side pain
-injury at the triangular fibrocartilage complex. like meniscus
-cannot use his wrist
treatment: 1-conservative
-debridement but affect stability

major ulnar wrist pain causes:
-TFCC
- Kienböck
-EXTENSOR carpi ulnaris tear
-Flexor carpi ulnaris tear

*Ulnocarpal impaction:
-painful ulnar side of the wrist
-impaction of extensor and flexor carpi ulnaris
-treatment: local injection NSAIDs
if failed: ulnar shortening to decrease the pressure between ulna and lunate

*De Quervain's disease:
-Tenovaginitis specific at the first dorsal compartment.
-first dorsal compartment: abductor pollicis longus and extensor pollicis brevis.
-mostly affect female
-complain: pain and tender at the radial side
could be swelling and redness
-predisposing factor: any rheumatological disease as gout.
-treatment: treat underlying cause

rest, NSAIDs, local injections,surgical release
surgical release: incision vertical or oblique or transverse over the radial styloid
-Finkelstein's test: confirmatory test.

*Ganglion;
-synovial fluid over it a sheath, come in invagination of the tendon sheath or joint capsule

-mostly in the dorsum of the wrist between the scapholunate joint.
-swelling not painful
-up to 30% with surgery will recurrent

*Carpal tunnel syndrome:
-Median nerve compression at wrist level.
-clinical picture: pain, tingling, paresthesia at 3,5 fingers.wake up at night to shake hand
-negligent case: thenar muscle wasting
-typical case: paresthesia at 3,5 fingers but in some cases if there is anastomosis at ulnar and median nerve it will lead to paresthesia at other 1,5 fingers.
-predisposing factors: postmenopausal, thyrotoxicosis, hypothyroidism, obesity, age, DM…….

-is a clinical diagnosed

Hand

-most common anomalies in hand: polydactyly and syndactyly
polydactyly: mostly soft tissue redundant

* Dupuytren's contracture:
-fibrosis of the palmar aponeurosis.

-gradual flexion of the ring finger
-unknown causes
-there is genetic predisposition
-increase risk in chronic diseases as DM and alcoholic liver disorders
-treatment:
indication of surgery: flexion deformity of pip and mcp more than 20 degree flexion due to function problem
percutaneous release of palmar aponeurosis or zig-zag incision.

*Ulnar 'claw-hand' (intrinsic-minus deformity):
-hyperextension of the MCP Joint and flexion of PIP joint.
-caused by interosseus muscle paralysis
-treatment: release
-DXs: ulnar nerve injury

*Shortening of intrinsic muscles (intrinsic-plus deformity):
-flexion at the MCP joints with extension of the IP joints.

*Ischaemic contracture of the forearm muscles:
-called Volkmann ischemia
-rare complication of forearm fracture or supracondylar fracture treated with full cast missed with fibrosis.
-difficult to treat

*'Mallet' finger:
-injury at the attachment of the extensor tendon to the terminal phalanx.
-treatment:
Acute injury treated by mallet splint. will lead to hyperextension of DIP
chronic; reconstruction surgery "Myodesis"
-Acute less than 6 weeks

*Ruptured extensor pollicis longus:
-due to rheumatoid arthritis.
-treatment: tendon transfer

*Boutonnière and swan neck: hand deformities involved in RA

treatment: according to functional deficit
-Boutonnière caused by central slip of the extensor tendon

'trigger finger:
-fibrous process in the annular ligaments "MCP, DIP AND PIP" joints due trauma or idiopathic cause.
-pain at the level of metacarpophalangeal joint and tenderness at late stage: snap sound when open hand.
-treatment: local injection at distal wrist crease

*Acute infections of the hand:
-one of the most disabling diseases and should be treated immediately carefully.
-اكثر بعاملين الحرف دخلت خشبة صغيرة بايده بعد اكم يوم بصير الاعراض
-present with acute tender finger
lately with septic features
could be febrile
-sausage like shape sign, kanavel sign: indicate tendon sheath injury
-treatment: antibiotic
incision and drainage

*Acute paronychia: infection under the nailfold.
*Apical abscess: a small collection of pus under the end of a nail.
*Intradermal abscess: a collection of pus on the palmar surface of the finger or hand
-Rehabilitation after treatment to prevent permanent stiffness.

Neck
*Torticollis:
-abnormal posture of the neck at which the chin directed to the contralateral site and head to the same side due to fibrosis of sternocleidomastoid.

المشكلة بعد سنين حيعمل facial asymmetry

- Unknown cause. there is a theory: intrauterine event lead to sternocleidomastoid ischemia
  - بنلاحظها اما انو البيبي بينام عجهة وحدة بس او بتحس كتلة بالرقبة

-treatment: 1-Exclude DDH
2-stretching exercise
3-if failed: surgery at age 5-6 years "sternocleidomastoid aplasia of clavicle" then urgent physiotherapy
fibrosis and band resolve by aging

Secondary torticollis:
causes
-in Down syndrome patients start with surgery due to risk of atlantoaxial subluxation.
-Sandifer syndrome: in some children who have a GERD and acid reflux can lead to neck muscle spasm
- retro pharyngeal abscess due to tonsilitis
-cervical disc prolapse

*Acute Cervical disc prolapse:
-clinical picture: neck pain radiate to clavicle, arm or under scapular region and numbness
-adult active patient or elderly with chronic symptoms of the clinical picture
-Acute or chronic
-our role: clinical exam to roll out nerve compression "weakness or impaired sensation"
-investigation:
-X-Ray:firstly show loss of cervical lordosis
2- show narrowing of the disc space.
-MRI: show the specific place of disc at canal
normally: healthy disk appears white if lost means chronic degenerative discopathy.

-treatment: muscle relaxant, analgesia or physiotherapy
if failed after 6 weeks of treatment or appear a new sign of weakness or nerve compression→ then surgery.
-don't forget to roll out neurological disorders as myasthenia gravis