RADIOLOGY CASE REVIEW

Ogonna Felton PGY-4
Emergency Medicine
Yale-New Haven Hospital
CASE 1

55 yo woman presents to C-side after a fall. She reports twisting her left ankle on a sidewalk after missing a step and is now complaining of left ankle pain. She denies hitting her head

PMHx: HTN

All: NKA

Meds: None

PE: Soft tissue swelling on the medial left ankle, TTP over medial malleolus, but can bear weight albeit with sig amount of pain, intact distal pulses and sensation
Mortise

Widening of medial & lateral clear space

AP

Decreased tibiofibular overlap

AP

Widening of tibulofibular clear space
MAISONNEUVE FRACTURE

- Results from forceful internal rotation of the leg on a planted foot with external rotation of the ankle.
- Occurs in 5% of all ankle fractures
- Non-weight-bearing CAM boot or cast for 2 to 3 weeks
  - Only if syndesmotic sprain without diastasis or ankle instability
- Operative
  - ORIF w/syndesmotic screw
ORIF DAYS LATER
CASE 2

28 yo man presenting with right knee pain after a fall while playing basketball, felt pop at the time, denies head strike/loc, has been limping since injury.

PMHx: None

All: NKA

Meds: None

PE: Anterior knee swelling
SEGOND FRACTURE

- Avulsion fracture of the proximal lateral tibia
- Occurs secondary to internal rotation of knee with varus stress
- ACL injuries occur 75% of the time with these fractures
- Lachmann test is sensitive in detecting ACL disruption
- Usually requires surgical intervention

Knee
CASE 3

56 yo man pw dizziness x2 days that is unrelenting associated with nausea, vomiting, blurred vision, denies headache/F/C/neck pain/recent URI symptoms, tinnitus, hearing loss, focal weakness, numbness, or speech changes.

PMHx: HTN and T2DM

PE:
- CN II-XII intact
- Horizontal beating nystagmus with leftward & rightward gaze
- Normal heel-to-shin & finger-to-nose
- Equal strength of all limbs
- Ataxia with gait (sit up & look for truncal ataxia if cannot walk)
5 D’S OF CENTRAL VETIGO

5 D’s: Point to central cause for vertigo vs peripheral cause

1. Dizziness
2. Diplopia
3. Dysarthria
4. Dysphagia
5. Dysmetria

***Important to walk patients in the ED***
### Causes of Vertigo

#### Central
- Ischemic stroke (posterior circ)
- Vertebrobasilar TIA
- CNS tumors
- CNS infections
- Trauma
- Demyelinating disorders
  - (MS, PMLE, SSPE, B$_{12}$ def, CO toxicity, CPM)

#### Peripheral
- BPPV
- Drug intoxication
- Vestibular Neuritis
- Meniere’s disease
- Migranous vertigo
HINTS EXAM

**HINTS Exam**: Head Impulse, Nystagmus, Test of Skew.

- Presence of *any one* of these three signs has a sensitivity of 100% and specificity of 96% for posterior circulation stroke²
- DWI MRI brain misses 20% of stroke in the posterior fossa in the 1st 24 – 48 hrs
- CT head has even worse sensitivity
HINTS

• **Head Impulse**: patient stares at examiner’s nose, patient’s head is quickly rotated from one side to the other. Keep looking at the patient’s eye. If there are corrective saccades when turning to the given side, this is a **positive test** and suggestive of a **peripheral** cause for vertigo. A **negative test** occurs when there are **no corrective saccades** and should raise the suspicion of a cerebellar stroke.

• **Nystagmus**: vertical or bidirectional nystagmus is central in origin.

• **Test of Skew**: cover/uncover test – vertical misalignment of eyes is suggestive of a central cause

HI Video
REFERENCES


