Cheatography

5002 Case 3 Cheat Sheet

by bee.f (bee.f) via cheatography.com/180201/cs/38491/

Case

- 37 y.o. SE carpenter
- R neck, upper traps & arm pain following RTA (road traffic accident) 3 weeks ago
- 20mph, rear ended by a car going 30mph, airbags went off

- Neck ache 5/10
- Sharp arm pain (when present) 7/10
- Neck pain hasn't changed
- Arm pain becoming more frequent

AF: Changing position, trying to stretch neck
- **RF:** Painkillers (ibuprofen 1-2 200mg / day)
- **AA:** neck movement, work, cannot go gym (normally does cardio& weights 3x / week)
- **Associated:** numbness in lateral forearm +thumb; diminished grip strength

- Wakes 4-5x / night due to pain
- Usually sleeps on front but now has to sleep on side

- Saw GP 3 days after accident - Dx w/ whiplash (predicted 2-3 month recovery time)

Discussion

Working diagnosis:
- Whiplash associated disorder (WAD) & C6 radiculopathy
→ Initially would classify as WAD grade II, but w/ later onset of neurological symptoms it could be classified as WAD grade III, but more likely as a C6 radiculopathy

Considering age:
- Most likely cause of **C6 radiculopathy** is a ***disc herniation***
- IVD's are very **strong when healthy** & need major force to be damaged ∴ although there's a temporal association between the onset of these symptoms & the whiplash injury it's likely that the trauma worsened some pre-existing asymptomatic disc derangement
→ Don't make casual link between the RTA & the onset if the C6 radiculopathy; it's best to say "there appears to be an association between the RTA & onset of the C6 radicular symptoms", without MRI before & after RTA we cannot assess the damage caused to the disc

Suggestive Cx disc herniation:
- Pts with suggestive of this should also be assessed for signs of **Cx myelopathy** *(fine motor skills, pain / stiffness in the neck, loss of balance, trouble walking)*

"Easter egg":
- The "easter egg" in this case were the urinary symptoms which were *unrelated* to the presenting complaint but **not normal** & ∴ should be included conditions list

Learning outcomes

WAD diagnosis & management:

☐ ***Signs & symptoms:***

- Neck pain & stiffness: pain may be localised / spread to shoulders, upper back, or arms
- Headache: may be dull or throbbing in nature
- Dizziness: even lightheadedness / vertigo
- Fatigue: may be due to disrupted sleep or increased stress
- Cognitive dysfunction: problems w/ concentration, memory, & other cognitive functions
- Blurred vision: (or difficulty focusing)
- Tinnitus: ringing in ears
- Anxiety & depression
- Numbness or tingling: (or weakness) in arms or hands

☐ ***Imaging:***

- X-rays: rule out fractures or dislocations
- CT scans: more accurate at detecting fractures, dislocations, & other injuries
- MRI: more detailed for soft tissue in the neck, discs, ligaments, & nerves *(most sensitive imaging modality for detecting soft tissue injuries)*
- Ultrasound: detects tears or other injuries in the muscles

☐ ***Management:***

- Acute stage: pain management (NSAIDS), rest, & gentle ROM exercises, ice therapy (reduce inflammation & pain)
- Sub-acute: manual therapy to help restore ROM, strengthen the neck muscles, & reducing pain; cognitive-behavioural therapy to help pts cope w/ emotional & psychological impact of the injury
- Chronic stage: managing long-term effects of the injury, manual therapy, exercise (maintain muscle strength) & pain management strategies

By **bee.f** (bee.f)
cheatography.com/bee-f/

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Learning outcomes (cont)

Cx radiculopathy diagnosis & management:

☐ ***Signs & symptoms:***

- Neck pain: may be sharp or dull, & may radiate to the shoulder, arm or hand
- Numbness & tingling: "pins & needles" sensation in neck, shoulder, arm, or hand
- Muscle weakness: neck, shoulder, arm, or hand, may make it difficult to grip objects or perform other daily activities
- Reflex changes: diminished or absent
- Reduced ROM: neck, shoulder, arm, or hand
- Headaches: often located in the back of the head or neck
- Loss of coordination: particularly in the hands or fingers, may make it difficult to perform fine motor tasks

☐ ***Imaging:***

- X-rays: initial assessment, rule out fractures or spinal instability
- MRI: most commonly used, detailed images of soft tissues, spinal cord, nerve roots, & IVDs; can help identify the location & severity of nerve compression or irritation
- CT: useful in identifying bony abnormalities that may be contributing nerve compression or irritation
- EMG: measures electrical activity in muscles &nerves, used to confirm diagnosis of Cx radiculopathy & determines the severity of nerve damage

☐ ***Management:***

- Mild to moderate: rest & activity modification, manual therapy, medications, steroid injections
- Severe symptoms: in this case conservative treatment failed & surgery is needed

Cx myelopathy diagnosis & management:

☐ ***Signs & symptoms:***

- Weakness: arms & legs
- Numbness & tingling: arms, legs, hands, & feet
- Loss of balance & coordination
- Changes in reflexes: hyperreflexia or diminished reflexes
- Bowel or bladder dysfunction: in severe cases
- Neck pain: result of compression or damaged spinal cord

☐ ***Imaging:***

- MRI: most commonly used, detailed images of spinal cord, etc; also show areas of compression or damage to the spinal cord
- CT: bony structures & any abnormalities that may be compressing the spinal cord
- X-ray: identify bone abnormalities that may be compressing the spinal cord
- Myelography: injecting a contrast material into the spinal canal to help visualise there spinal cord & nerves; used if MRI not available or contraindicative
- EMG: confirms diagnosis & helps determine location & severity of nerve damage

☐ ***Management:***

- Mild to moderate: rest & activity modification, manual therapy, medications
- Severe symptoms: in this case conservative treatment failed & surgery is needed

Most common causes of increased frequency of urination in a 37 y.o. female:

- UTI
- Overactive bladder: muscles contract involuntary, causing sudden urge to urinate & frequent urination
- Pregnancy: hormonal changes that increase the frequency (especially 1st & 3rd trimester)
- Interstitial cystitis (IC): chronic condition that causes pain & discomfort in the bladder & pelvic region
- Diabetes: result of high blood sugar levels, which can lead to increases urine production
- Bladder or kidney stones: increased urination along w/ pain during, blood in urine, & lower abdominal or back pain
- Medications: (e.g. diuretics) can increase urine production

Physical Examination Findings

Sensation

- C6 dermatome: reduced sharp sensation

Cx AROM + PROM

- RR, RLF, & ext, all increase neck & shoulder / upper traps pain, movement guarded

TTP

- Locally over the upper traps & middle-lower Cx

Clinical tests

- **R maximal foraminal compression:**
- **Purpose:** diagnosis Cx nerve root compression causing Cx radiculopathy
- **Findings:** reproduces sharp arm pain as well as neck pain
- **Cx distraction:**
- **Purpose:** joint space increased to relieve pressure on nerve root
- **Findings:** relieving
- **Arm squeeze test:**
- **Purpose:** distinguish Cx nerve root compression from shoulder disease
- **Findings:** R 5/10 mid. upper traps, 2/10 in upper & lower upper arm
- **Lhermitte's sign:**
- **Purpose:** looking for electric like shock
- **Findings:** local neck pain but no pain into arms or legs

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