

# Neurology for GPs

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- Headache
- Back pain
- Dizziness
- Carpal Tunnel Syndrome
- Multiple Sclerosis
- Parkinsons Syndrome
- Dementia

# Meningitis

## Neck Stiffness

### Kernig's Sign

- Loss of the ability of a supine patient to completely straighten the leg when it is fully flexed at the knee and hip

### Brudzinski's Sign

- Bending the patient's neck usually produces flexion of the knee and hip.
- Passive flexion of the lower limb on one side causes a similar movement in the opposite limb.

# Headache

- Meningitis
- Encephalitis
- Migraine
- Cluster Headaches
- Tension Headache
- Drug overuse headache
- Subarachnoid Haemorrhage

# Avoid Opioids

# Is the Headache Serious?

- Sudden onset and severe
- Persistent and progressive/ change in characteristic
- New onset neurological, cognitive or personality change
  - Unilateral Visual symptoms, double vision, poor balance
  - Not visual, sensory or speech =?aura
- Pressure related
- Fever
- Head trauma (last 3 months)
- Immune suppression
- Cancer elsewhere

# Two Week Rule Brain/ CNS

- “Progressive subacute loss of central neurological function on examination”
- Abnormal CT/ MRI
- Symptoms suggestive of brain cancer

# Migraine - diagnosis

- 4->72 hours
- Unilateral or bilateral
- Associated with other symptoms e.g. sensitivity to light, sound, nausea & vomiting, aura (sensory, speech or visual disturbance)
- +/- headache
- <15 days per month = Episodic migraine
- ≥15 days per month = Chronic migraine



# Migraine - treatment

## Acute

- Oral triptan, NSAID, aspirin 900mg or paracetamol
- + anti-emetic (even without nausea)
  
- If oral not helping then non-oral of above

## Prophylaxis

- Topiramate or Propranolol
- Gabapentin
- Acupuncture
- Riboflavin
- Transcranial Magnetic Stimulation

# Tension Type Headache - diagnosis

- 30 minutes → continuous
- Bilateral
- Mild/ moderate
- Pressing/ tightening/ non-pulsating pain
- Not aggravated by routine activities
- No associate symptoms
- <15 days per month = Episodic
- ≥15 days per month = Chronic

# Tension Type Headache - treatment

## Acute

- Aspirin, paracetamol, NSAID

## Prophylaxis

- Acupuncture
- (Amitriptyline, 75mg)

# Medication Overuse Headache

- Taking triptans, opioids, ergots or combination analgesics for  $\geq 10$  days per month
- Paracetamol, aspirin or NSAID for  $\geq 10$  days per month
- Has developed or worsened over a three month period

Stop medication abruptly and wait one month

# Cluster Headache - diagnosis

- 15 -> 180 minutes
- Unilateral
- Severe
- +/- restlessness/ agitation
- Sharp/ boring/ throbbing
- Red/ watery eye, nasal congestion, swollen eyelids
- Alternate days -> 8/ day
- Remission >1 month = Episodic
- Remission <1 month = Chronic

# Cluster Headache - treatment

New – refer

Acute

- 100% Oxygen
- Nasal triptan

Prophylaxis

Verapamil

# Headache - examination

- BP
- Fundoscopy
- Scalp
- Cranial nerves
- Limbs for power and sensation
- Cerebellar function

# Avoid Opioids



# Back Pain

## **Mechanical**

- Sudden onset?
- Lower
- Not mid line
- Not young or old!
- No radiation
- Eased by rest

# Back Pain

## Fracture

- Age
- History of trauma
- Steroid use

## Inflammatory

- Younger
- Long history
- Nocturnal symptoms
- Morning stiffness
- Improves with exercise

# Back Pain

## Sciatica

- +/- Back pain
- Leg pain below knee
- Parasthesia (Dermatome)
- Numbness (Dermatome)
- Weakness (Myotome)

## Spinal Stenosis

- +/- Back pain
- Leg pain only on standing or walking, not on cycling; eased by stopping or bending
- Parasthesia (Dermatome)
- Numbness (Dermatome)
- Weakness (Myotome)

# Cauda Equina Syndrome

- Severe low back pain
- +/- leg pain below knee (uni or bilateral)
- Urinary retention
- Faecal incontinence
- Leg weakness
- Saddle anaesthesia (S3-5)
- Sexual dysfunction
- Gait disturbance

# Back Pain - examination

## No Radiation

- Back tenderness
- Range of movement
- Breast?
- Abdomen?
- Waddell's Test

## Radiation

- Back
- Leg sensation
- Leg power
- Straight leg raising  
(pain below the knee)
- Sciatic nerve stretch test  
(additional pain)
- Ankle reflexes
- Anal tone
- Perianal sensation

# Dizziness

- Rotatory Vertigo – Vestibular - ENT
- Unsteadiness – Neurological
- Light headed - Ground coming up - Cardiovascular

# Dizziness

Balance

Need 2 of 3 of:

- Vision
- Vestibular function
- Proprioception

# Dizziness - Examination

BP, Pulse and Heart Sounds

Ears

Facial sinuses

Cranial nerves

F2N

Gait, H2T walking

Rhomberg

Turn on spot

Limb power & sensation if appropriate



# Carpal Tunnel Syndrome - diagnosis

Numbness or tingling in fingers, wrist or hand?

- Spare little finger?
- Worse at night?
- Wake up at night?
- Hand weakness?
- Shaking, holding it or warm water improve symptoms?
- Driving, holding a phone, typing worsens symptoms
- Have splints or injections helped?

≥3 positive = Carpal Tunnel Syndrome

≥2 positive + Phalen's Test = Carpal Tunnel Syndrome

# Carpal Tunnel Syndrome – examination?

- Neurological
- Vascular
- Phalen's Test
- Tinnel's Test

# Carpal Tunnel Syndrome - treatment

33% resolves spontaneously

- Night splint
- Steroid injections
- Surgery – severe, progressive deficit or not improving

# Multiple Sclerosis

## Focal symptoms

- Reduced vision in one eye with painful eye movements
- Diplopia
- Ascending sensory disturbance
- Ascending motor disturbance
- Sensory symptoms travelling down back into limbs
  
- Evolve over 24 hours, persist and improve after days/ weeks

# Multiple Sclerosis

## Investigations

- FBC, ESR, CRP
- U&E, LFTs, Calcium
- Thyroid
- A1c
- B12
- HIV

# Multiple Sclerosis

## Care

- Neurology
- General Health
- UTIs
- Fatigue – amantadine
- Spasticity – baclofen, gabapentin, dantrolene, benzodiazepines
- Neuropathic pain
- Cognition
- Emotional
- Oscillopsia – gabapentin
- Balance difficulties – vestibular rehabilitation

# Parkinson's Disease

1% >60 y/o, 2% >80 y/o

Diagnosis

- Bradykinesia
- One of: rigidity, rest tremor, postural instability

Refer

# Parkinson's Disease

## Non-motor symptoms

- Depression - venlafaxine
- Fatigue
- Orthostatic hypotension - fludrocortisone
- Insomnia - melatonin
- Dementia
- Psychosis
- Melanoma



# Dementia

Inability to make new memories

# Dementia – assessment

## 6 Item Cognitive Impairment Test

- Year
- Month
- Give Name & Address
- Time
- 20 ->1
- December -> January
- Recall Name & Address

0-7/28 = normal

# Dementia – assessment

## **GP assessment of Cognition Test GPCOG**

- Give Name & Address
- Date
- Clock Face & time (11:10)
- News item
- Recall Name & Address

9/9 = normal

5-8/9 = need informant interview

0-4/9 = impairment

# Focused Examination

[http://learning.bmj.com/learning/module-intro/quick-neurological-exam.html?moduleId=10060869&locale=en\\_GB&utm\\_source=marketing\\_email&utm\\_medium=email&utm\\_campaign=bmjl&utm\\_content=bmjl\\_weekly&utm\\_term=quick\\_neurological\\_exam\\_primary\\_care](http://learning.bmj.com/learning/module-intro/quick-neurological-exam.html?moduleId=10060869&locale=en_GB&utm_source=marketing_email&utm_medium=email&utm_campaign=bmjl&utm_content=bmjl_weekly&utm_term=quick_neurological_exam_primary_care)