MRCPCH revision: upper and lower limb neurological exam

S Constantinou

- Intro
- Top tips
- Structure of examination
- WIPER
- General inspection
- walking aids, orthotics, wheelchair
- Posture – leg scissoring, hemiplegia, SMA, Arms, Legs, Face
- DWARFS: deformity (champagne bottle /pes cavus) / dysmorphism, wasting, asymmetry, rashes, fasciculations, scars (tendon release) / skin
- Walking – normally, sides of feet (spasticity, hemiplegia) heel toe / tandem, tip toes, heels, run! Rhombergs test
- Position on bed: Tone, Power, Coordination, reflexes and sensation upper and lower limbs
- Tips!
- Compare like for like
- Tone – relaxed / distracted!
- Power – isolate each muscle group, MRC grading
- Coordination – finger-nose, disdidochokinesis, heel-knee-shin
- Reflexes – relaxed / jendrassik
- Biceps – C5 / C6, Supinator C6, Triceps C7
- Knee jerk L3 / L4, Ankle S1/S2
- PLANTARS! So important! Upgoing in <1 yr or in UMN lesion, usually downgoing
- Sensation – cotton wool light touch if short for time

FOCUS ON:

GAIT

- Heel-toe /tandem→ ATAXIA?
- Tip toe walking – S1 S2 myotomes?
- Heel walking – L4 – L5 myotomes?
- Run – brings out subtle hemiplegia / diplegia in CP
- Rhombergs – feet together eyes closed – positive when unsteadiness only when eyes closed and not open i.e. sensory ataxia.
- Positive rhombergs test due to: 1. proprioception 2. visual distubrnace 3. vestibulat apparatus
- If unsteady eyes open and eyes closed, then more likely to be cerebellar in origin

CEREBELLAR:

- Most patients don't have cerebellar problems
- DANISH + Rhombergs test!
- Dysdiadochokinesis, Ataxia, Nystagmus, Intention tremor, Speech (slurred /staccato), hypotonia . Hyporeflexia.
- Tumour, stroke, trauma
- Congenital causes – Friedrichs ataxia, Arnold chiari, MS, phenytoin / lead poisoning
- Friedrichs artaxia – cerebellar signs AND peripheral neuropathy – positive rhombergs – ataxia is sensory, but also have cerebellar signs (hyporeflexia, nystagmus). Pes cavus / kyphoscoliosis. Examine heart – HCM.

UPPER / LOWER MOTOR NEURON LESIONS:

- **Rule 1 – what's the same: any lesion, upper or lower → weakness / reduced power. If you don't use it, you loose it → wasting.**
- **Rule 2 – UMN 2 things up (increased tone, increased reflexes), LMN 2 things down (reduced /normal tone, reduced reflexes)**
- **Rule 3: Bonus sign! UMN – clonus. LMN – fasciculations.**

Take your time working these things out in the exam!!

NEUROCUTANEOUS SYNDROMES:

- **NF1 /2:** axillary / inguinal freckling/ neurofibromas/ café au lait macules.
- Examine eyes (fields, optic nerve gliomas), kyphoscoliosis and tibial bowing
- MDT – know them!
- **TS**: ash leaf macules, adenoma sebaceum, periungal fibromas, shagreen patches, café au lait macules
- LD / seizures. Also need cardiologist /nephrologist in their MDT

Outtro, with thanks to DragonBytes!