Neurological Hand Examination

Introduction

- Wash hands, Introduce self, ask Patients name & DOB & what they like to be called, Explain examination and get consent
- Expose arms above elbows; place pillow on their lap and rest hands on
- **General inspection**: patient risk factors – pregnancy, hypothyroidism, obesity, trauma, acromegaly etc

Hand inspection

- Muscle wasting (especially thenar (median) and hypothenar eminences)
- Wrist drop (radial)
- Tremor, fasciculations

Motor Power

- Median (e.g. carpal tunnel syn)
  - Thumb abduction (patient lie hand flat on pillow with palm up and then point thumb towards ceiling – “don’t let me push it down”)
  - Pincor grip/thumb opposition (patient touches tip of thumb to tip of little finger AND “don’t let me break it”)
- Ulnar (e.g. trauma behind elbow)
  - Finger abduction (spread fingers against resistance)
  - Grip card between little and ring finger while hands vertical AND examiner tries to pull away (adduction of little finger)
  - Grip card between thumb and index finger while hands vertical AND examiner tries to pull away (if adductor pollis is weak, patient will flex the thumb to grip the card = Froment’s sign)
- Radial (e.g. saturday night palsy or humeral shaft fracture)
  - Wrist extension
  - Finger extension (all together)
  - Thumb extension (with hand vertical, point thumb to ceiling – “Don’t let me push it down”)

Sensory (Light Touch)

- With palm facing up:
  - over DIPJ of index finger (median nerve)
  - over DIPJ of little finger (ulnar nerve)
- With palm facing down:
  - anatomical snuffbox (radial nerve)

Special tests

- **Phalens test**: reverse prayer sign for 1m. Positive test = causes pain and carpal tunnel syndrome symptoms
- **Tinel’s test**: tap median nerve at its course in wrist. Positive test = tingling worsens

Function

- **Function**: test pincer grip; squeeze my fingers (C8 root); prayer sign; carry out everyday tasks e.g. undo buttons, write sentence, hold cup

Summary

- Thank patient and cover them
- Summarise and suggest further investigations you would do after a full history