Overview of Examination of the Dizzy Patient

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Goals of the Exam
- Quantify functional status
- Identify medical problems
- Quantify vestibular deficit
- Quantify neurological deficit
- Identify psychological problems

Strategy of the exam
- Order for your convenience
  I. Standing
  II. Sitting
  III. Frenzel basic tests
  IV. Special tests
- Save potentially disturbing tests (e.g. vestibular testing) for the end
- Expand exam as needed based on history or previous examination

I. Standing
- Gait and Romberg
  - (not “Rhomberg”)
- Motor power in lower extremities
- Blood pressure/Pulse standing

Romberg
It is best to use eyes closed (ECTR)
Normal persons should be able to stand in ECTR for 6 sec:
Head extended ECTR for 6 seconds is in upper 25th percentile

Standing -- Motor power
- Is patient’s unsteadiness due to weakness?
  - Stand on heels and toes
  - Deep knee bend
- Tell patient you are checking for power.
- You also should be checking for consistency – if can’t do Romberg, but can do this, not inconsistency
II. Essential Cranial Nerves

- Vision
- Oculomotor
- Hearing

II. Vision

- Visual acuity
  - Is patient (nearly) blind?
  - Can patient see with both eyes?

8th nerve: Dynamic Illegible ‘E’ test (DIE test)

- Distance vision with head still
- Distance vision with head moving
- Normal: 0-2 lines change
- Abnormal: 4-7 lines change

II. Oculomotor

Does patient have double vision, nystagmus?
Can patient track?

- Range, alignment and gaze
- Saccades
- Pursuit

II. Gaze Testing

- Move finger to the limits of lateral gaze (bury sclera) – if can’t bury, may have oculomotor palsy
- Move finger to limits of vertical gaze
- Do eyes reach end-gaze?
- Is there end-gaze nystagmus?
Gaze nystagmus

- Alexander's Law

II. Hearing -- 8th nerve

- Screen Hearing
  - Rubbed fingers (high frequencies)
  - Tuning forks (Good but slow)

Motor

- Deep tendon reflexes
- Babinski sign
- Tremor
- Tone

Coordination

- Finger to nose (FTN), fine finger movements
- Rapid alternating movements (RAM)

Sensory Examination

- Vibration sense (ankles)

III. Frenzel Goggles (Video is best)
Optical Frenzel Goggles

- Inexpensive (about $500)
- Portable – take on the road
- A little limited – can’t do vibration, head-forward or cross-cover
- Can get hot, bulbs burn out and break

Frenzel – routine test

Spontaneous Nystagmus Test

- Observe nystagmus in light and dark
  - Acute vestibular disorders have strong horizontal “jerk” nystagmus.
- Many other types of nystagmus

Frenzel – Routine Vibration

- Method: Apply 60-120 hz vibration to SCM, first one side, then the other. 5 seconds is enough.
- Shower massagers work well for this and are inexpensive.
- Use Video Frenzel goggles – optical Frenzels don’t work.
- Compare nystagmus before and during

Vibration Induced Nystagmus

- Unidirectional horizontal nystagmus strongly suggests contralateral vestibular lesion.

Frenzel -- Routine Positional Testing

- Dix-Hallpike testing
  - For BPPV
- Situational testing
  - Lateral canal
  - Head vs. Body position testing (prone)

IV Frenzel – Situational Head-shaking test

- Method: 20 cycles of horizontal head rotation
- Frenzel goggles to monitor nystagmus prior to and following head-shaking.
- Positive – substantial change in nystagmus following head-shaking. Usually beats away from bad ear.
### IV Frenzel Situational Tests

**Pressure sensitivity**

- **Valsalva test**
  - 2 seconds of exhale against closed glottis (to increase CSF pressure)
  - Torsion is sensitive for SCD
  - Small amounts of horizontal is common and of unknown significance

### IV Frenzel Situational Tests: Hyperventilation

- 30 seconds of brisk HVT
- If a change in nystagmus (other than DBN)
  - Irritable vestibular nerve (tumor, v. neuritis)
  - Seizure (very rare)
  - Anxiety (dizzy, no nystagmus)

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**More details**


**More movies**

www.dizziness-and-hearing.com