FOCUSED NEURO ASSESSMENT FOR STROKE

Sam Richter BSN RN SCRN
LEARNING OBJECTIVES

• Discuss stroke assessment tools
• Correlate Cincinnati Prehospital Stroke Scale (CPSS) with Miami Emergency Neurologic Deficit Exam (MEND) and how they compliment each other
• Compare MEND with BEFAST acronym
• Define components of exam
• Tips for focused neuro assessment
• Demonstrate basic and expanded stroke exams on a normal patient
• Glasgow Coma Scale
  • Not intended for stroke, no focal deficit
  • Assesses LOC after TBI
  • 3 components
    • Eye opening, verbal response, motor response
  • Scale rated 3-15
    • 3- deep coma/death
    • 15- awake/responsive
• National Institute of Health Stroke Scale
  • Reproducible, quantifies stroke deficit
  • 0-42
  • Useful for specialist clinician
  • Impractical for EM
  • Subjective?
BE FAST ACRONYM

BE FAST

Sudden Balance Lost
Sudden Eye(s) Blur
Face Drooping
Arm Weakness
Speech Difficulty
Time to Call 9-1-1

Call 9-1-1 Now!
MEND EXAM – BEFAST EXAM!

• Combination
  • CPSS
  • NIHSS
• No extra tools
• Takes < 3 minutes
• Great quick 360 degree exam of the brain
• Consider this exam to “fine tune” your basic exam
• Practice the same repetitive neuro exam
## Breakdown - Components of NIHSS

### Mental Status
- LOC
- Questions
- Commands
- Language*
- Neglect** (not included in MEND)

### Cranial Nerves
- Visual Fields
- Horizontal Gaze
- Face Strength
- Dysarthria*

### Limbs
- R/L Arm Motor
- R/L Leg Motor
- Coordination
- Sensation*
CPSS = FAST

• Basic Exam
• Commonly used by EMS
• Initial Assessment
  • Facial Droop
  • Arm Drift
  • Speech Difficulties
• TIME TO LOAD AND GO! Or Call a stroke code!
• Show Teeth or Smile

• Abnormal Assessment- one side of face does not move as well as other side.
ARM DRIFT

• Eyes Closed
• Hold Arms Out
  • One arm does not move or drifts down
SPEECH

• “You can’t teach an old dog new tricks”
• Abnormal:
  • Wrong words or inappropriate words (Aphasia)
  • Slurred words (dysarthria)
### MENTAL STATUS
- Level of Consciousness (AVPU)
- Speech: "You can’t teach an old dog new tricks." (repeat)
- Questions (age, month)
- Commands (close, open eyes)

### CRANIAL NERVES
- Facial Droop (show teeth or smile)
- Visual Fields (four quadrants)
- Horizontal Gaze (side to side)

### LIMBS
- Motor–Arm Drift (close eyes and hold out both arms)
- Leg Drift (open eyes and lift each leg separately)
- Sensory- Arm (close eyes and touch, pinch)
- Sensory-Leg (close eyes and touch, pinch)
- Coordination-Arm (finger to nose)
- Coordination-Leg (heel to shin)
ADDITIONAL CONSIDERATIONS

• If unable to assess a component
  • DO NOT mark as abnormal, document limitation
  • Example: If patient is hemiplegic and cannot test coordination due to deficit, you cannot document as abnormal.

• Start on patients unaffected side

• Obtain other pertinent data
  • LKW?
  • Health History?
  • Recent falls?
  • Medications?