

NIHSS Assessment in the Complex Patient



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Learning Objectives

At the conclusion of this course participants will be able to:

- ▶ **Identify areas of the NIHSS that are most problematic with regards to uniformity**
- ▶ **Demonstrate how to score the patient who is aphasic using NIHSS**
- ▶ **Implement scoring techniques for the patient who is encephalopathic, using NIHSS**

1a-Level of Consciousness

- ▶ **0- alert**
 - ▶ **1-not alert, but arousable by minor stimulation**
 - ▶ **2-not alert; requires repeated stimulation to attend**
 - ▶ **3- responds only with reflex motor or autonomic effects**
- 

Patient #1- Mixed Aphasia



Patient #2- Low level of arousal



1b-Level of Consciousness Questions

- ▶ **What month is it?**
- ▶ **How old are you?**

- ▶ **0- answers both questions correctly**
- ▶ **1- answers one correctly**
- ▶ **2-answers neither correctly**



Patient #1- Mixed Aphasia

- ▶ **Guttural sounds**
- ▶ **Frustrated**
- ▶ **Few spoken words but non-sensical**

Asked to nod if it's:

- ▶ **March, April, or June**
- ▶ **Are you**
 - **70?**
 - **72?**
 - **75?**

Patient #2 Low level of arousal

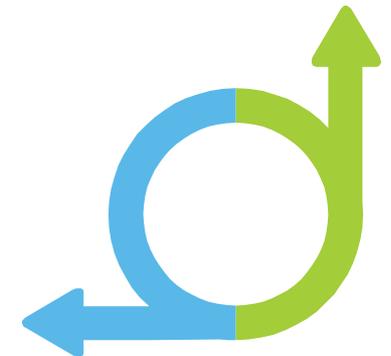
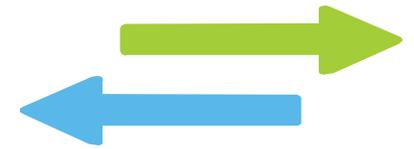
- ▶ **No response to questions asked**



1c-Level of Consciousness Commands

- ▶ **Open and close your eyes**
- ▶ **Grip and release your hand**

- ▶ **0-performs both tasks correctly**
- ▶ **1- performs one task correctly**
- ▶ **2-performs neither task correctly**



Patient #1- Mixed Aphasia

- ▶ **She can close her eyes and open them, to command**
- ▶ **She cannot make a fist, to command**

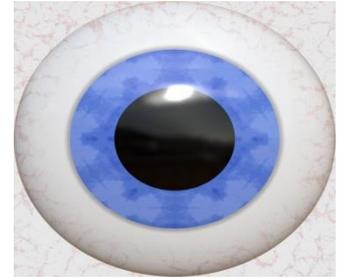


Patient #2: Low level of arousal

- ▶ **Can squeeze hand to command**
- ▶ **Cannot follow other simple commands**



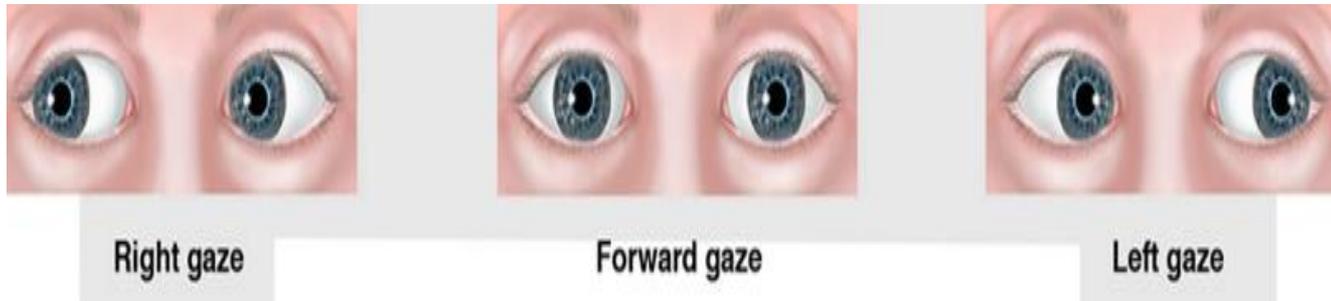
2- Best Gaze



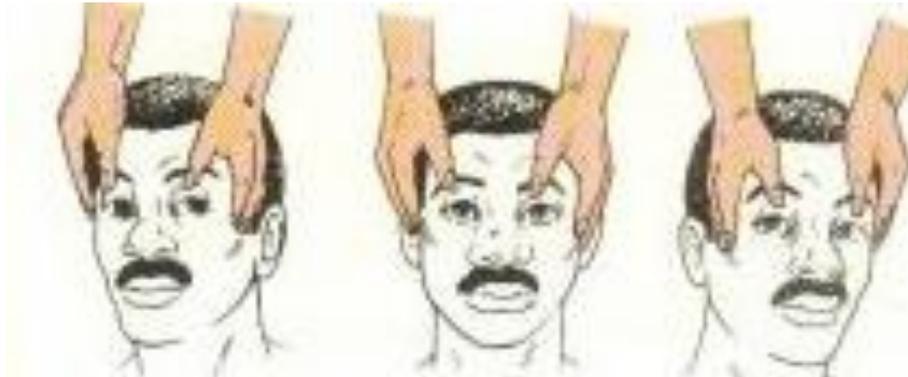
- ▶ **0- normal**
 - ▶ **1- Partial gaze palsy**
 - ▶ **2- Forced deviation or total gaze paresis**
-
- ▶ **Patients with conjugate deviation overcome by voluntary or reflexive activity) and those with isolate peripheral nerve paresis are scored 1**

Patient #1: Mixed Aphasia

- ▶ **Using confrontation with eyes directed into patient's eyes**
- ▶ **She is able to follow right and left with conjugate eye movements**

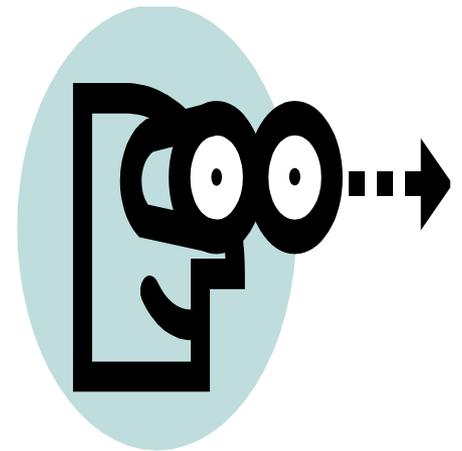


Patient #2: Low level of arousal



3-Visual Fields

- ▶ **Confrontation, finger counting or visual threat (upper and lower quadrants)**
- ▶ **0- no visual loss**
- ▶ **1- partial hemianopia**
- ▶ **2- complete hemianopia**
- ▶ **3- bilateral hemianopia**
- ▶ **Score 1 for extinction and record in item 11; Blind pts are scored 3**



Patient #1: Mixed Aphasia

- ▶ **Use of Visual Threat:
Blinks in both eyes**

BLINK BLINK

Patient #2: Low level of arousal

- ▶ **Use of Visual Threat:
Blinks in one eye only**

4-Facial Palsy

- ▶ **0- normal symmetry**
- ▶ **1- minor paralysis (asymmetrical smile, flattened nasolabial fold)**
- ▶ **2- partial paralysis (lower face)**
- ▶ **3- complete paralysis**



Facial Asymmetry

- ▶ **Patient #1-aphasia**



- ▶ **Patient #2- low arousal**



5-Motor Arm

- ▶ 0- no drift
- ▶ 1- drift
- ▶ 2- some effort against gravity
- ▶ 3- no effort against gravity
- ▶ 4- no movement
- ▶ UN- amputation



Patient #1 : Aphasia

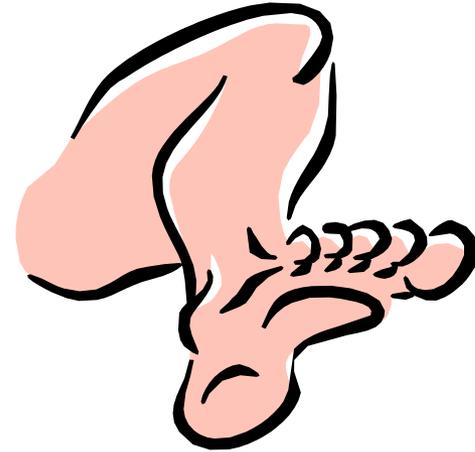
▶ **Demonstration**

Patient #2 : Low Level of Arousal

▶ **Demonstration**

6-Motor Leg

- ▶ 0- no drift
- ▶ 1- drift
- ▶ 2- some effort against gravity
- ▶ 3- no effort against gravity
- ▶ 4- no movement
- ▶ UN- amputation



Patient #1 : Aphasia

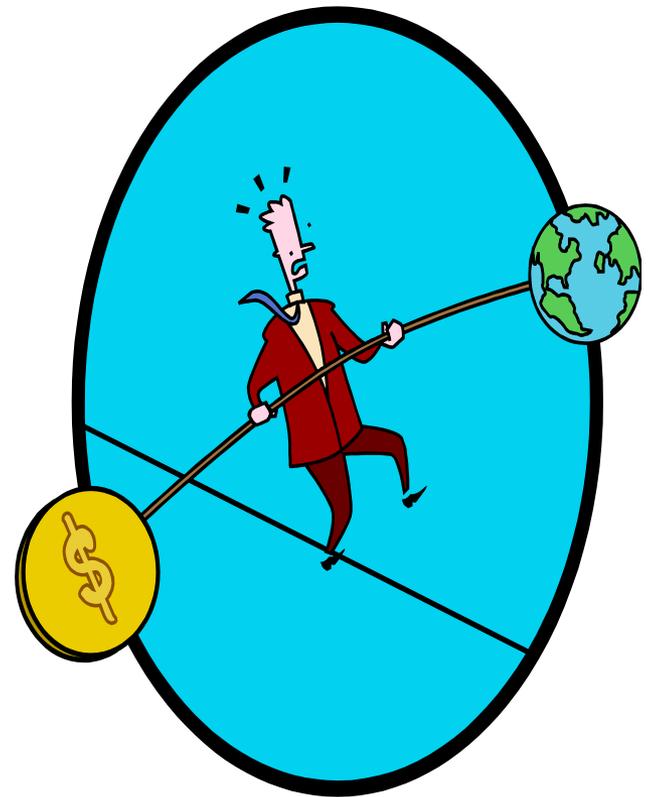
▶ **Demonstration**

Patient #2 : Low Level of Arousal

▶ **Demonstration**

7-Limb Ataxia

- ▶ 0– absent
 - ▶ 1– present in one limb
 - ▶ 2– present in 2 limbs
 - ▶ UN– amputation
-
- ▶ Score 0 for pts who are paralyzed or cannot understand



Patient #1: Aphasia



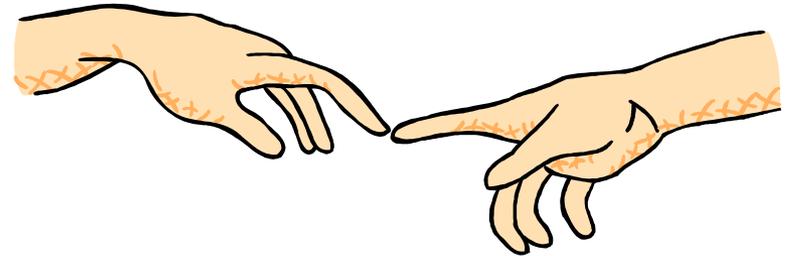
Patient #2 Low level of arousal

- ▶ **No response to commands**



8-Sensory

- ▶ **0- normal**
- ▶ **1- mild to moderate loss**
- ▶ **2- severe to total sensory loss**



- ▶ **Stuporous and aphasic pts are scored 0 or 1. Comatose pts are scored 2.**

Patient #1 : Aphasia

▶ **Demonstration**

Patient #2 Low level of arousal

▶ Discussion



9-Best Language

- ▶ **0- no aphasia**
 - ▶ **1- mild to moderate**
 - ▶ **2- severe**
 - ▶ **3- mute**
-
- ▶ **Comatose pts are scored 3**



Patient #1 : Aphasia

- ▶ **Can point to common objects:**
 - feather, chair, key, glove
- ▶ **Use of non-sensical words when describing picture**
- ▶ **Cannot read**

Patient #2 Low level of arousal

▶ Discussion



10-Dysarthria

- ▶ **0- normal articulation**
- ▶ **1- mild to moderate dysarthria**
- ▶ **2- severe dysarthria**
- ▶ **UN- intubated**



Patient #1 : Aphasia

▶ **Demonstration**

Patient #2 Low level of arousal

▶ Discussion



11-Extinction and Inattention

- ▶ **0- no abnormality**
 - ▶ **1- visual, tactile, auditory, spatial or personal inattention**
 - ▶ **2- profound hemi-inattention or extinction to more than one modality**
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#1: Aphasia &

#2 Low level of arousal

▶ Discussion

