

Prognostication & Communication in Acute Severe Stroke

Srivieng Pairojkul
Karunruk Palliative Care Center

Unique Challenges Facing Patients, Their Families and Clinicians With SABI

- Sudden, unexpected, & devastating neurological insult
- Treatment decisions must be made quickly
- Decision making about goal of care have to occur between clinicians and surrogate decision-makers
- Patients either die acutely or survive with a wide range of disability
- * Accurate prognostication & Sensitive conversation & *

Major Predictors of Ischemic Stroke

- Age >65y increased chance of dying in 2 mo.
- Neurologic impairment: NIHSS
- Comorbid increased poor outcome: AF, CA, CAD, dementia, dependency, DM, MI, renal dysfunction
- Size and location of infarct: MCA, basilar A.
- Stroke mechanism: cardioembolic, large artery worse.
- Complications: pneumonia, MV, GIB, CHF, PE.

Category	Score/Description		Date/Time Initials	Date/Time Initials	Date/Time Initials	Date/Time Initials	Date/Tin Initials
Level of Consciousness (Alert, drowsy, etc.)	0 = Alert 1 = Drowsy 2 = Stuporous 3 = Coma						
LOC Questions (Month, age)	0 = Answers both correctly 1 = Answers one correctly 2 = Incorrect						
LOC Commands (Open/close eyes, make fist/let go)	0 = Obeys both correctly 1 = Obeys one correctly 2 = Incorrect						
Best Gaze (Eyes open - patient follows	0 = Normal 1 = Partial gaze palsy 2 = Forced deviation						
Visual Fields (Introduce visual stimulus/threat to pt's visual field quadrants)	0 = No visual loss 1 = Partial Hemianopia 2 = Complete Hemianopia 3 = Bilateral Hemianopia (Blin	d)					
Facial Paresis (Show teeth, raise eyebrows and squeeze eyes shut)	0 = Normal 1 = Minor 2 = Partial 3 = Complete						
5a. Motor Arm - Left 5b. Motor Arm - Right (Elevate arm to 90° if patient is sitting, 45° if supine)	0 = No drift 1 = Drift 2 = Can't resist gravity 3 = No effort against gravity	Left					
	4 = No movement X = Untestable (Joint fusion or limb amp)	Right					
a. Motor Leg - Left b. Motor Leg - Right (Elevate leg 30° with patient supine)	2 = Can't resist gravity 3 = No effort against gravity 4 = No movement X = Untestable	Left					
		Right					
Limb Ataxia (Finger-nose, heel down shin)	0 = No ataxia 1 = Present in one limb 2 = Present in two limbs						
Sensory (Pin prick to face, arm, trunk, and leg - compare side to side)	0 = Normal 1 = Partial loss 2 = Severe loss						
Best Language (Name item, describe a picture and read sentences)	0 = No aphasia 1 = Mild to moderate aphasia 2 = Severe aphasia 3 = Mute						
Dysarthria (Evaluate speech clarity by patient repeating listed words)	0 = Normal articulation 1 = Mild to moderate slurring of words 2 = Near to unintelligable or worse X = Intubated or other physical barrier						
Extinction and Inattention (Use information from prior testing to identify neglect or double simultaneous stimuli testing)	0 = No neglect 1 = Partial neglect 2 = Complete neglect						
	Level of Consciousness (Alert, drowsy, etc.) LOC Questions (Month, age) LOC Commands (Open/close eyes, make fist/let go) Best Gaze (Eyes open - patient follows examiner's finger or face) Visual Fields (Introduce visual stimulus/threat to pt's visual field quadrants) Facial Paresis (Show teeth, raise eyebrows and squeeze eyes shut) Motor Arm - Left Motor Arm - Right (Elevate arm to 90° if patient is sitting, 45° if supine) Motor Leg - Left Motor Leg - Right (Elevate leg 30° with patient supine) Limb Ataxia (Finger-nose, heel down shin) Sensory (Pin prick to face, arm, trunk, and leg - compare side to side) Best Language (Name item, describe a picture and read sentences) Dysarthria (Evaluate speech clarity by patient repeating listed words) Extinction and Inattention (Use information from prior testing to identify neglect or double	Level of Consciousness (Alert, drowsy, etc.) LOC Questions (Month, age) LOC Commands (Open/close eyes, make fist/let go) Best Gaze (Eyes open - patient follows examiner's finger or face) Visual Fields (Introduce visual stimulus/threat to pt's visual field quadrants) Facial Paresis (Show teeth, raise eyebrows and squeeze eyes shut) Motor Arm - 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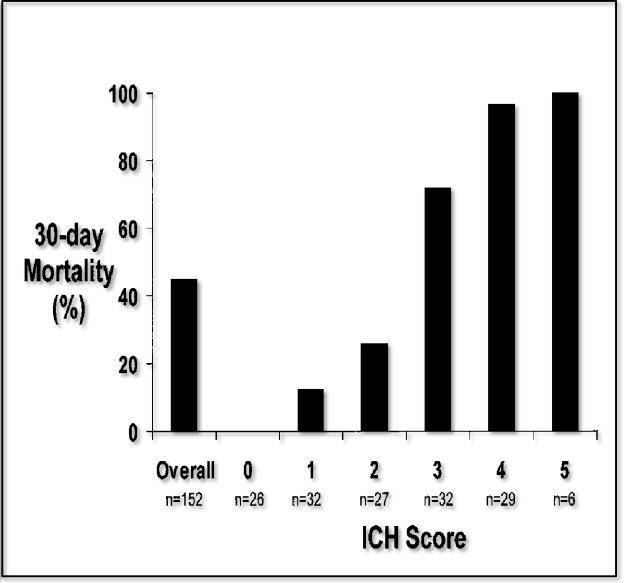
NIHSS

- ≤ 6 Good prognosis mobility, return to work
- 7-10 good prognosis 46%
- 11-15 good prognosis in23%
- ≥ 16 dead or severe handicap
- Every increasing mark of NIHSS → decrease in 17% of good result at 3 months

Adams HP. Neurology 1999;53:126.

Determination of ICH Score

Component	ICH Score Points				
GCS score					
3-4	2				
5–12	1				
13–15	0				
ICH volume, cm³					
≥30	1				
<30	0				
IVH					
Yes	1				
No	0				
Infratentorial origin of ICH					
Yes	1				
No	0				
Age, y					
≥80	1				
<80	0				
Total ICH Score	0–6				



Triggers for Serious Conversation

General:

- Age >80 years
- Metastatic CA, adv dementia, or other serious comorbidity
- Surprised question +
- **Emergent** (Very early hours to 1 day)
- Intubation and MV
- Emergent brain surgery (eg. decompressive craniotomy, clot evacuation, external ventricular drain placement)

Triggers for Serious Conversation

Early (days to weeks)

- >3 days intubation
- Starting artificial nutrition
- Considering transition from ET to tracheostomy
- New infection, reintubation, readmission to ICU

Late (months and years)

- Discharged to NH, LTC
- Event driven: any unexpected change or decline (new infection, intubation, readmission to hospital)

Establishing Goals of Care

Uncertainties and biases in prognostication Communication is not a single event, but serial conversations

Very early

 Educate on - What life might be like, "imagine the unimaginable" "disability paradox"

Early treatment decisions (weeks)

- Tracheostomy, PEG
 - Shift to comfort VS. continue burdensome treatment = All or nothing
 - → Third strategy time-limited trial What to look out for & provide a clear follow up plan for reevaluation

Best Case, Worst Case, and Most Likely Case

- Best case...recovers, able to talk and interact, likely needs help with ADL
- Worse case...not wake up, need life support for long-term
- The most likely scenario is......

"How much better do you think Mr/Ms.....would have to be to have a life that is meaningful for him/her?"

"If Mr/Ms.....could be a part of this conversation now, what do you think he/she would say?"

Anticipatory guidance – help patients & family prepare for anticipated developments, expect complications and plan for potential decisions.

Shared Decision-Making: Balance Between Paternalism and Autonomy

Autonomy

Shared decision-making

Prognosis is

uncertain

Paternalism

Prognosis is

certain

Patient values guided all decision making

Any question or commence?

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