



Prognostication & Communication in Acute Severe Stroke

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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.

AHA/ASA Guideline. Guidelines for the management of patients with acute ischemic stroke. 2013;44:870-947.

AHA/ASA Guideline. Guidelines for the management of spontaneous intracerebral hemorrhage. Stroke 2010;41:2108-29.

Appelros P, et al. Stroke 2002;33:2357, Soriano-Tárraga C, et al. Scientific Report 2018;8:41,

Category	Score/Description		Date/Time Initials	Date/Time Initials	Date/Time Initials	Date/Time Initials	Date/Time Initials
1a. Level of Consciousness (Alert, drowsy, etc.)	0 = Alert 1 = Drowsy 2 = Stuporous 3 = Coma						
1b. LOC Questions (Month, age)	0 = Answers both correctly 1 = Answers one correctly 2 = Incorrect						
1c. LOC Commands (Open/close eyes, make fist/let go)	0 = Obeys both correctly 1 = Obeys one correctly 2 = Incorrect						
2. Best Gaze (Eyes open - patient follows examiner's finger or face)	0 = Normal 1 = Partial gaze palsy 2 = Forced deviation						
3. 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 (Blind)						
4. Facial Paresis (Show teeth, raise eyebrows and squeeze eyes shut)	0 = Normal 1 = Minor 2 = Partial 3 = Complete						
5a. Motor Arm - Left	0 = No drift 1 = Drift 2 = Can't resist gravity 3 = No effort against gravity 4 = No movement X = Untestable (Joint fusion or limb amp)	Left					
5b. Motor Arm - Right (Elevate arm to 90° if patient is sitting, 45° if supine)		Right					
6a. Motor Leg - Left	0 = No drift 1 = Drift 2 = Can't resist gravity 3 = No effort against gravity 4 = No movement X = Untestable (Joint fusion or limb amp)	Left					
6b. Motor Leg - Right (Elevate leg 30° with patient supine)		Right					
7. Limb Ataxia (Finger-nose, heel down shin)	0 = No ataxia 1 = Present in one limb 2 = Present in two limbs						
8. Sensory (Pin prick to face, arm, trunk, and leg - compare side to side)	0 = Normal 1 = Partial loss 2 = Severe loss						
9. Best Language (Name item, describe a picture and read sentences)	0 = No aphasia 1 = Mild to moderate aphasia 2 = Severe aphasia 3 = Mute						
10. Dysarthria (Evaluate speech clarity by patient repeating listed words)	0 = Normal articulation 1 = Mild to moderate slurring of words 2 = Near to unintelligible or worse X = Intubated or other physical barrier						
11. 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						
TOTAL SCORE							

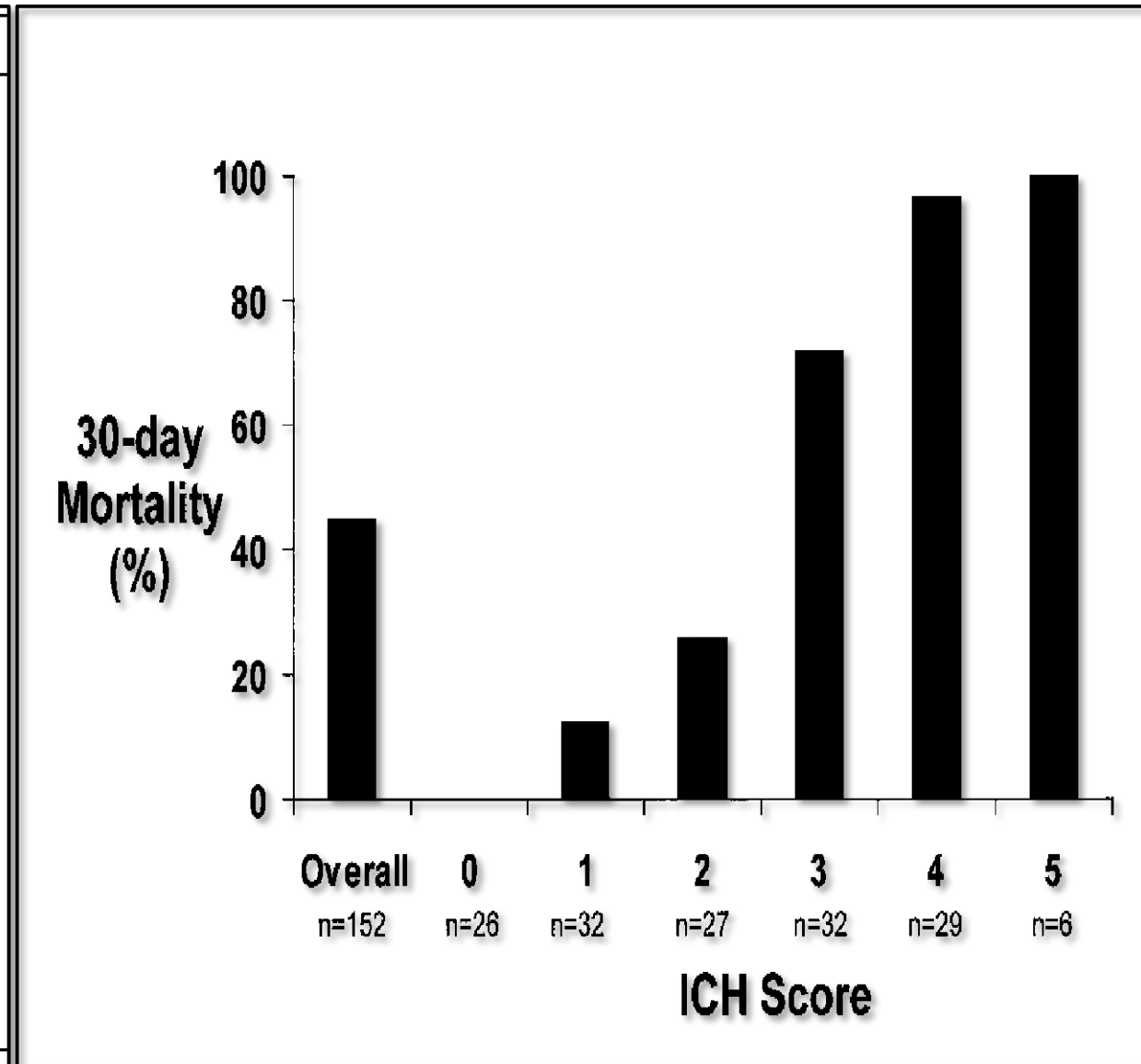
NIHSS

- ≤ 6 Good prognosis
mobility, return to work
- 7-10 good prognosis 46%
- 11-15 good prognosis in 23%
- **≥ 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

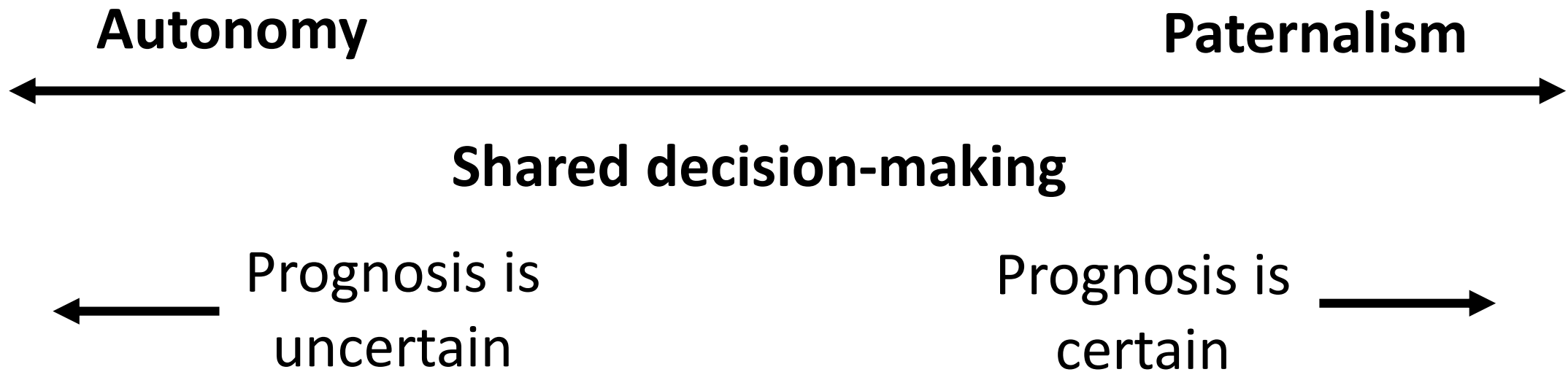
- Best case...recovers, able to talk and interact, likely needs help with ADL
- Worse case...not wake up, need life support for long-term
- The most likely scenario is.....

“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



****Patient values guided all decision making****

Any question or commence ?

Next case conference – 27 January 2021

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