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APPENDICES

APPENDIX A

Instruction for the assessment of the FOUR (Full Outline of UnResponsiveness) score

1. For eye response: grade the best possible response after at least three trials in an attempt to elicit the best level of alertness.
 - E 4: indicates at least three voluntary excursions. Tracking with the opening of one eyelid will suffice in cases of eyelid edema. If tracking is absent horizontally, examine vertical tracking. Alternatively, two blinks on command should be documented.
 - E 3: indicates absence of voluntary tracking with open eyes.
 - E 2: indicates eyelids opening to a loud voice.
 - E 1: indicates eyelids open to pain stimulus
 - E 0: indicates no eyelids opening to pain.
2. For motor response: grade the best possible response of the arms.
 - M 4: indicates that the patient demonstrated at least one of three hand positions with either hand.
 - M 3: indicates that the patient touched the examiner's hand after a painful stimulus.
 - M 2: indicates any flexion movement of the upper limbs.
 - M 1: indicates extensor response to pain.
 - M 0: indicates no motor response to pain, or myoclonus status epilepticus.
3. For brainstem reflexes: grade the best possible response; pupillary and corneal reflexes, cough reflex to tracheal suctioning.
 - B 4: indicates pupillary and corneal reflexes are present.
 - B 3: indicates one pupil wide and fixed.
 - B 2: indicates either pupillary or corneal reflexes are absent.
 - B 1: indicates both pupillary and corneal reflexes are absent.
 - B 0: indicates pupillary, corneal and cough reflexes are absent

4. For respiration: grade the best observed respiration.

R 4: spontaneous breathing pattern in a nonintubated patient and grade simply as regular.

R 3: spontaneous breathing pattern in a nonintubated patient and grade simply as Cheyne-Stokes

R 2: spontaneous breathing pattern in a nonintubated patient and grade simply as irregular.

R 1: indicates spontaneous respiratory pattern or self triggering of the ventilator in mechanically ventilated patients.

R 0: indicates no patient-generated breaths on the ventilator.

APPENDIX B**Case record form**Identification number Age Gender: 1 Male 2 FemaleDiagnosis Level of consciousness: 1 Awake 2 Drowsy 3 Stupor 4 Coma**FOUR Score****Eye response**

- 4 = eyelids open or opened, tracking, or blinking to command
- 3 = eyelids open but not tracking
- 2 = eyelids closed but open to loud voice
- 1 = eyelids closed but open to pain
- 0 = eyelids remain closed with pain

Motor response

- 4 = thumbs-up, fist, or peace sign
- 3 = localizing to pain
- 2 = flexion response to pain
- 1 = extension response to pain
- 0 = no response to pain or generalized myoclonus status

Brainstem reflexes

- 4 = pupil and corneal reflexes present
- 3 = one pupil wide and fixed
- 2 = pupil or corneal reflexes absent
- 1 = pupil and corneal reflexes absent
- 0 = absent pupil, corneal, and cough reflex

Respiration

- 4 = not intubated, regular breathing pattern
- 3 = not intubated, Cheyne-Stokes breathing pattern
- 2 = not intubated, irregular breathing
- 1 = breathes above ventilator rate
- 0 = breathes at ventilator rate or apnea

FOUR = Full Outline of UnResponsiveness.

FOUR score

Eye response

Motor response

Brainstem reflexes

Respiration

Total score

| Feasibility of the FOUR score | Definitely not agree | Probably not agree | Uncertainly | Probably agree | Definitely agree |
|---|-------------------------|-----------------------|-------------|-------------------|---------------------|
| 1. The score is easy to learn | 1 | 2 | 3 | 4 | 5 |
| 2. Clinically relevant | 1 | 2 | 3 | 4 | 5 |
| 3. Easy to use | 1 | 2 | 3 | 4 | 5 |
| 4. Obtained in an appropriate time | 1 | 2 | 3 | 4 | 5 |
| 5. A potential alternative for consciousness assessment | 1 | 2 | 3 | 4 | 5 |
| 6. Undisturbed the patients | 1 | 2 | 3 | 4 | 5 |
| 7. Will be used personally if it becomes accepted in general | 1 | 2 | 3 | 4 | 5 |

Glasgow Coma Scale

Eye opening

Spontaneous 4
 To speech 3
 To pain 2
 No response 1

Best motor response

Obeys 6
 Localizes 5
 Withdraws 4
 Abnormal flexion 3
 Extends 2
 No response 1

Best verbal response

Oriented 5
 Confused conversation 4
 Inappropriate words 3
 Incomprehensible sounds 2
 No response 1

GCS

Eye opening

Best motor response

Best verbal response

Total score

| Feasibility of the GCS | Definitely not agree | Probably not agree | Uncertainly | Probably agree | Definitely agree |
|--|----------------------|--------------------|-------------|----------------|------------------|
| 1. The score is easy to learn | 1 | 2 | 3 | 4 | 5 |
| 2. Clinically relevant | 1 | 2 | 3 | 4 | 5 |
| 3. Easy to use | 1 | 2 | 3 | 4 | 5 |
| 4. Obtained in an appropriate time | 1 | 2 | 3 | 4 | 5 |
| 5. A potential alternative for consciousness assessment | 1 | 2 | 3 | 4 | 5 |
| 6. Undisturbed the patients | 1 | 2 | 3 | 4 | 5 |
| 7. Will be used personally if it becomes accepted in general | 1 | 2 | 3 | 4 | 5 |

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Researches:

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- Can electrocardiogram electrode replace bispectral index electrode?

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