









Appendix 3- Neonatal Encephalopathy Examination Scoring Sheet

Patient Identifier

| Date | Exam 1 <small>Time_____</small> | Exam 2 <small>Time_____</small> | Exam 3 <small>Time_____</small> | Exam 4 <small>Time_____</small> | |
|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|---|
| 1- Observe spontaneous activity | 0 | 0 | 0 | 0 | Normal |
| | 2 | 2 | 2 | 2 | Decreased = decreased frequency or amplitude of spontaneous facial and extremity movements |
| | 3 | 3 | 3 | 3 | Absent |
| 2- Observe for Heart rate | 0 | 0 | 0 | 0 | Normal |
| | 1 | 1 | 1 | 1 | Tachycardia = resting HR 160-180. Only occasionally decreased to 120 |
| | 2 | 2 | 2 | 2 | Bradycardia = resting HR 80-90. Only occasionally increases to 120 |
| | 3 | 3 | 3 | 3 | Variable = resting HR varies considerably without a consistent baseline |
| 3- Observe for respiration | 0 | 0 | 0 | 0 | Normal |
| | 2 | 2 | 2 | 2 | Periodic Breathing = 3 or more respiratory pauses \geq 3 sec separated by normal breathing and $<$ 20 sec. Often associated with shallow breathing |
| | 3 | 3 | 3 | 3 | Apnea = no breathing for \geq 20 sec or $<$ 20sec with HR changes or O2 desaturation |
| 4- Observe for posture | 0 | 0 | 0 | 0 | Normal |
| | 1 | 1 | 1 | 1 | Mild Distal Flexion = fingers, toes in mild flexion, incomplete extension of fingers when stroked on dorsal surfaces. Thumbs flexed, adducted, opposed across palms "cortical thumb" |
| | 2 | 2 | 2 | 2 | Strong Distal Flexion = fingers and toes in strong flexion, incomplete extension of fingers when stroked on dorsal surfaces. Thumbs flexed, adducted, opposed across palms "cortical thumb" |
| | 3 | 3 | 3 | 3 | Decerebrate = Head, neck and back are arched in extension (opithotonus), elbows are extended, wrists are pronated and hips are abducted. |
| 5- Observe for level of consciousness | 0 | 0 | 0 | 0 | Use Auditory stimulation, Visual stimulation and Tactile stimulation to assess level of consciousness Normal |
| | 1 | 1 | 1 | 1 | Hyperalert = full wakefulness with eyes open/staring but decreased frequency of blinking/tracking. Spontaneous motor activity normal or decreased with lowered threshold to all stimulus types Irritable = lowered threshold with excessive responses to all stimulus types. Can be seen with varied states including hyperalert, lethargy or obtundations |
| | 2 | 2 | 2 | 2 | Lethargic = slightly delayed but complete response to stimuli with slightly increased threshold for eliciting responses and decreased spontaneous activity Obtunded = delayed and incomplete response with marked increased threshold to all sensory stimuli and little or no motor activity. |
| | 3 | 3 | 3 | 3 | Stupor = no spontaneous eye opening to tactile stimulation elicits poorly sustained eye opening. Responds only to strong noxious stimuli. Absent gag and corneal reflex Coma = no eye opening with vigorous tactile stimulation |
| 6- Tone | 0 | 0 | 0 | 0 | Normal |

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| | | | | | | |
|--|--|---|--|--|---|--|
| Assessment | 2 | 2 | 2 | 2 | Hypotonic = focal or generalized decreased resistance to passive movement. Associated with greater extension of extremities than normal Flaccid "Flat on the mat" appearance. Maybe associated with frog-leg posturing with arm and hips/legs lying in abduction | |
| | 3 | 3 | 3 | 3 | | |
| | Arm Recoil: Quickly extend (straighten) both arms; put next to body. Count to two. Let go. Repeat 3 times. | | | | Leg Recoil: Take both ankles, bend hips+ knee. Quickly extend when infant not pushing. Let go. Repeat 3 times. | |
| | Normal- Arms flexes and remains flexed  | | Hypotonia  | | Normal: Complete Fast Flexion  | |
| | | | | | Hypotonia:  | |
| Ventral Suspension: Hold baby horizontal under the belly. Look at posture of back, arms, legs and head. | | | | | Head Lag: Pull baby to sit by the wrists and support head slightly. | |
| Normal: Back straight, head in line with body, limb flexed  | | Hypotonia:  | | Normal: Lifts head in line with body  | | |
| | | | | Hypotonia:  | | |
| Vertical Suspension: Hold baby upright by placing hands under axillae Normal: No Slip through Hypotonia: Slip Through | | | | | | |
| 7- Reflexes | | | | | | |
| Sucking reflex | 0 | 0 | 0 | 0 | Normal Weak Weak/Incoordinated Absent | |
| | 1 | 1 | 1 | 1 | | |
| | 2 | 2 | 2 | 2 | | |
| | 3 | 3 | 3 | 3 | | |
| Moro Reflex | 0 | 0 | 0 | 0 | Normal Exaggerated Weak/Incomplete Absent | |
| | 1 | 1 | 1 | 1 | | |
| | 2 | 2 | 2 | 2 | | |
| | 3 | 3 | 3 | 3 | | |
| Light Reflex | 0 | 0 | 0 | 0 | Normal Dilated Constricted Unequal/ Fixed dilated | |
| | 1 | 1 | 1 | 1 | | |
| | 2 | 2 | 2 | 2 | | |
| | 3 | 3 | 3 | 3 | | |
| Total NE Score | | | | | | |