STANDARD TREATMENT WORKFLOW (STW)

Post Asphyxial Management of Neonates


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**Standard Treatment Workflow (STW)**

**POST-ASPHYXIAL MANAGEMENT OF NEONATES**

**ICD-10-P21.0**

**IMMEDIATE MANAGEMENT OF AN ASPHYXiated NEONATE**

- Need for Positive pressure ventilation (PPV) at birth or referred with history of delayed cry at birth

- **PPV for 60 seconds or more**
- **Delayed cry and resuscitation details not available**

Assess 15 minutes after birth or at admission

1. Lethargy or irritability?
2. Absent spontaneous movements?
3. Absent sucked and Moro’s reflex?
4. Abnormal movements / limp, jerks, cycling, shivering, sucking movements which are persistent and monotonous?
5. Respiratory distress?
6. Features of shock?

Check vitals and blood glucose

- **Temperature, heart rate, respiratory rate, oxygen saturation, capillary refill time**
- Chock blood glucose

**Stabilisation and Supportive Treatment**

- Secure airway
  - IF SpO2 <91%, start O2 by prongs/hood
  - IF respiratory distress persists, follow STW for respiratory distress; consider CPAP. If chest retractions or persistent hypoxia
  - Start IV 10% dextrose at 60 mL/kg/day
  - Maintain normal temperature; avoid hyperthermia
  - Target blood glucose of 40-125 mg/dL
  - IF infant has seizures, follow STW for seizure

**NEONATE WITH MODERATE OR SEVERE HYPOXIC-ISCHEMIC ENCEPHALOPATHY**

**FULFILLS ALL OF THE FOLLOWING CRITERIA?**

- ± 36 weeks gestational age
- > 1500g birth weight
- ≥ 6 hrs old
- Admission temperature 36.3-37.4°C

- All of the following are fulfilled:
  - pH < 7.0 or base excess ≤ 6.0 on cord or arterial blood gas done within 1 h of life
  - Apnea score >1 at 10 minutes or at least 10 min of PPV
  - History of acute perinatal event (such as but not limited to placental abruption, uterine rupture, cord prolapse)

**FURTHER TREATMENT TO SEVERE HIE (FETT)**

- Writen protocol and facility for therapeutic hypothermia and level-3 intensive care available?

- IF yes, refer to higher centre

**PROVIDE SUPPORTIVE TREATMENT**

- Secure airway
  - IF SpO2 <91%, start O2 by prongs/hood
  - Start IV 10% dextrose at 60 mL/kg/day
  - Maintain normal temperature; avoid hyperthermia
  - Target blood glucose of 40-125 mg/dL
  - IF infant has seizures, follow STW for seizures

**Abbreviations**

- **BE**: Base excess
- **CBC**: Complete blood count
- **CRP**: C-reactive protein
- **CSF**: Cerebrospinal fluid
- **HIE**: Hypoxic-ischemic encephalopathy
- **NICU**: Neonatal intensive care unit
- **PPV**: Positive pressure ventilation
- **SNCC**: Special newborn care unit

**Steps in the Algorithm**

1. Mobilising the neonate (FETT) as a dedicated team in neonatal units
2. Most infant with severe asphyxia needs to be managed in the NICU
3. Whenever feasible, target temperature of 33-36°C
4. Termination of resuscitation, if considered to be futile

**References**