

## IAP Neonatology Chapter

### IAP Neonatology Fellowship Exam Feb 2018

#### Theory Paper 2

Time – 3 hours

Total Marks – 100

#### Attempt all questions

- 1) A pregnant woman presents at 32 weeks with PROM. The obstetrician orders tocolytics, antibiotics, and dexamethasone. However, the labor progresses and she delivers after 18 hrs with a BW of 1600 gms. After birth, the baby has labored breathing.
  - a) Discuss the delivery room management of such a case. (4)
  - b) Discuss the surfactant therapy in this case. (3)
  - c) If intubated, which ventilator mode will you choose in this case, which results in least lung injury? Give reasons. (3)
  - d) How would you diagnose early onset sepsis in this case? (3)
  - e) At 36 hrs of life the ABG shows pH =7.08, pCO<sub>2</sub>=95, pO<sub>2</sub>=36 on a setting of 24/5, 80% O<sub>2</sub>, 0.4 sec and 50/mt on SIMV PC mode. Discuss. (3)
  - f) Discuss the weaning process. (4)
  
- 2) A full-term male infant was born via repeat cesarean delivery to a 30-year-old G3P2 mother. The infant did well in the delivery room, with Apgar scores of 8 and 9 at 1 and 5 minutes, respectively. On postnatal day 3, the infant was unable to breast-feed and became hypothermic and jittery. Soon, his clinical condition deteriorated rapidly to extreme lethargy. The infant was rushed to the NICU. The initial vitals were HR=180/mt, RR=64/mt, SpO<sub>2</sub> 96% RA in room air, GRBS was 78 mg% and BP was 62/33 mm Hg.
  - a) Discuss the differential diagnosis in such a baby with encephalopathy. (6)
  - b) How would you plan the initial laboratory investigations. (6)
  - c) Sepsis screen including CSF analysis was negative, The ABG showed 7.44/32/72/-2. Interpret and narrow the possibilities. (4)
  - d) Discuss the treatment plan. (4)
  
- 3) A 690-g female infant is born at 27 weeks' gestation after spontaneous preterm labor. There were no other prenatal risk factors. The baby is started on parenteral nutrition and consists of dextrose, sodium, and protein.
  - a) The baby's serum electrolytes at 36 hours are as follows:143/8.2/110. Discuss the risk factors, etiology, pathophysiology and prevention of hyperkalemia in this neonate. (6)
  - b) Schematically represent the ECG findings and their progression. (3)
  - c) Explain the management of hyperkalemia. (5)
  - d) The baby developed NEC the next day and was put on prolonged TPN (3 weeks). The serum phosphorous at 3 weeks was 2.5 mg/dl and serum calcium was 8.2 mg/dl. Discuss the problem and management. (6)
  
- 4) A 32 weeks severe IUGR, oligohydramnios with abnormal Doppler parameters born with a birth weight of 950 grams. Baby is stable on CPAP after INSURE.

- a) When are you going to start TPN? What is the dose of aminoacid and lipid in the first few days? (5)
  - b) What are the essential monitoring to be done in baby on TPN? (5)
  - c) When you are going to start MEN and how are you going to increase it in the first 1 week of life? (5)
  - d) How are you going to monitor the postnatal growth? (5)
- 5) You got a referral call about a term baby born with history suggestive of asphyxia and want to refer to your center where total body cooling facility available
- a) What advice you will give to referring pediatrician about points to take care before transport? (4)
  - b) What are the inclusion criteria to decide suitability for total body cooling? (4)
  - c) How you monitor a baby undergoing total body cooling? (4)
  - d) what are the MRI/MRS prognostic factors in predicting long term neurodevelopmental outcome? (4)
  - e) How to arrange long term follow up of babies undergone total body cooling? (4)