



## IAP Neonatology Chapter

### IAP Neonatology Fellowship Exam October 2020

#### Theory Paper 2

**Time: 3 hours**

**Total Marks–100**

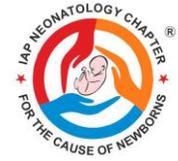
- **Attempt all questions.**
- **Write in legible handwriting.**
- **Write answers to the point.**
- **Quote evidence / studies wherever required.**

**Question 1:** A term, 2.2 kg infant in the postnatal ward of a local hospital had sudden unexpected postnatal collapse (SUPC) at 36 hours of life and is brought to your NICU. At admission, the neonate is hypotonic, non-responsive to stimuli, and has features of shock. Antenatal records are not immediately available (**20 Marks**)

- A. What points in the antenatal/postnatal history would you like to elicit? (4)
- B. Briefly describe three conditions that could result in SUPC. (6)
- C. Outline the initial management of this infant. (6)
- D. A blood gas at admission shows metabolic acidosis with elevated lactate. What are some possible explanations for this finding? (4)

**Question 2:** The hospital infection control committee contacts you to discuss a recent outbreak of sepsis in the NICU. They are concerned that the organisms are carbapenem-resistant, and want you to work with them on an Antimicrobial Stewardship Program (ASP) for the NICU. (**20 Marks**)

- A. Discuss how to conduct a situational analysis to plan the ASP. (4)
- B. What are the core components of an ASP at the health-care facility level? (6)
- C. How is the ASP linked to infection prevention and control? (4)
- D. What is the AWaRe classification (World Health Organization) of commonly used antibiotics? Name at least 2 antibiotics in each group (6)



**Question 3:** 28 day preterm baby born at 28 weeks of gestation with a birth weight of 980 g is having pallor. His heart rate is 144/min. He is on low flow oxygen with FiO<sub>2</sub> of 25%, his weight gain in the last week was 15g/kg/day. His PCV is 23%. He is on full enteral feeds by palladai. His blood group is A +ve. Mothers blood group is O+ve. **(20 Marks)**

- A. Does this baby need transfusion? Justify. (2)
- B. Discuss the reasons for anaemia in this neonate. (5)
- C. Enlist the measures to reduce donor exposure in preterm neonates. (3)
- D. What is restricted transfusion strategy for preterm neonates? Discuss pros and cons. (5)
- E. Outline the precautions to be taken prior to transfusion in preterm neonates. (5)

**Question 4:** A preterm neonate born by LSCS at 31 weeks with a birth weight of 900 g to a mother with pregnancy induced hypertension and severe oligohydramnios. Antenatal doppler were suggestive of reversed end diastolic flow. The infant was born by LSCS and the Apgar score were 3 at 5 min and 7 at 10 min. On day 7 of life baby developed abdominal distention with palpable bowel loops and altered blood in the nasogastric aspirate was noted. X ray abdomen was suggestive of pneumatosis and ultrasound abdomen was suggestive of bright linear branching echoes in the entire liver with no free fluid. Baby is on ventilation for recurrent apnea. **(20 Marks)**

- A. Mention the complete diagnosis and reasons for the same. (3)
- B. Enlist the risk factors for such a disease in this neonate. (4)
- C. List the indications for surgery. (3)
- D. Discuss the preventive strategies. (7)
- E. X ray vs Ultrasound in the diagnosis. (3)

**Question 5:** A 37 weeks early term neonate weighting 3.1 kg was delivered by LSCS because of prolonged labour. Neonate was severely depressed at birth and required extensive resuscitation including chest compression and medications. Write about the following: **(20 Marks)**

- A. Criteria for defining HIE. (5)
- B. Initial management plan of this neonate in NICU (5)
- C. Criteria for starting therapeutic hypothermia and its contraindications (5)
- D. How will you plan the follow up of this baby? (5)