

**Neonatology Chapter of Indian Academy of Pediatrics  
Exam for Fellowship in Neonatology for the year 2009**

Thursday January 14, 2009

1 pm to 4 pm

**Theory exam II**

Time allowed: 3 hours

Max marks: 100

Answer any 5 out of 7 questions. Each question carries equal marks

Q. 1 Rani, a 20 day old female baby weighing 1.3 kg is brought to you in OPD. She was born at home and is being fed with diluted cow's milk as the mother is not producing sufficient breast milk. Baby is hemodynamically stable and her tone, cry and activity are good. How will you manage this case?

Q. 2 A preterm neonate with 26 weeks gestation with weight of 750 gm is being ventilated since birth with diagnosis of Hyaline Membrane Disease. At 60 hrs of life, following are the ventilator settings and ABG findings:

$\text{FiO}_2 = 0.6$ ,  $\text{PIP} = 26$ ,  $\text{PEEP} = 5$ ,  $\text{MAP} = 15.5$ ,  $\text{RR} = 66$ ,  $\text{Ti} = 0.45$ ,  $\text{Te} = 0.45$

$\text{ABG} \rightarrow \text{pH} = 7$ ,  $\text{pCO}_2 = 64 \text{ mmHg}$ ,  $\text{pO}_2 = 68 \text{ mm Hg}$ ,  $\text{HCO}_3^- = 20 \text{ mmol/l}$

What is your interpretation? What action will you take?

Q. 3 A term, 2700 gm baby, has a serum bilirubin of 20 mg/dl at 72 hrs of life. Describe your approach to diagnosis and management.

Q. 4 Baby of Rita, a 3 kg term neonate, born vaginally to a gravida 4 mother, was discharged very early at 10 hours of life. A pre-discharge general examination done by the duty resident was reported normal. The baby was brought to the emergency room at 26 hours of life with complaints of lethargy and appearing blue since the previous night (6 hours). On examination, the infant was drowsy, tachypneic, had cold extremities and was centrally cyanosed.

- a. What are the basic criteria to be satisfied before discharging a normal term neonate born through an uncomplicated pregnancy and delivery?
- b. What are the essential components of a pre-discharge exam?
- c. Enumerate the diagnostic possibilities with reasoning.
- d. What will be your immediate management and further plan of action?

Q. 5 A 3 day old male neonate was found to have a vesicular rash around the genitalia and the groin area. The baby was born vaginally and no such lesion could be identified in the mother. He was irritable and was not accepting feeds well for the past 24 hours.

- a. What will be the diagnostic possibilities for such a rash?
- b. What are the first and second line investigations you will plan?
- c. Outline the management plan.

Q. 6 A 20 year old gravida 3 mother presented at 26 weeks of gestation to the emergency room with bleeding per vaginum for the past 12 hours. She complained of fever for 24 hours 2 days earlier and was found to be in active labor. Previous two pregnancies were preterm neonates who died within hours after delivery at home. Betamethasone 12mg was administered at admission. Over the next 2 hours she delivered a male neonate weighing 860 grams with Apgar scores at 1, 5, and 10 minutes of 3, 5, and 6 respectively. He was transferred to the NICU soon after stabilization and was noticed to have respiratory distress by 1 hour of age.

- a. What are the problems you anticipate in this infant?
- b. What could be the cause(s) of the respiratory distress?
- c. Discuss the role of antenatal steroids and tocolysis in this case.
- d. Discuss initial respiratory management in this neonate.

Q. 7 A male preterm male neonate being treated for severe RDS, while on ventilator on day 4 shows gradual deterioration in ventilation parameters. How would you approach such a case?