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MCQ

Instruction:

1. Please use pencil to shade the box for the best and correct answer (only one answer for each question).
2. Send back the answer sheet (see loose leaf page) to the Hong Kong College of Paediatricians. One point will be awarded to each article if ≥3 of the 5 answers are correct. The total score of the 4 articles will be 4 CME points.

(A) Association Between Vaginitis and Adverse Pregnancy Outcomes in Women with Gestational Diabetes Mellitus: A Retrospective Cohort Study

1. According to the study findings after propensity score matching, vaginitis in women with gestational diabetes mellitus was associated with which of the following?
   a. Increased risk of preterm birth
   b. Increased risk of low birth weight
   c. Increased risk of macrosomia
   d. Decreased risk of macrosomia
   e. No significant association with any adverse outcome

2. What was the adjusted odds ratio for macrosomia in the gestational diabetes mellitus (GDM) with vaginitis group compared with the GDM alone group?
   a. 0.422 (95% CI 0.231–0.772)
   b. 1.712 (95% CI 1.219–2.405)
   c. 2.150 (95% CI 1.500–3.000)
   d. 0.580 (95% CI 0.300–0.900)
   e. 1.250 (95% CI 0.900–1.700)

3. Which matching method and ratio were used in the propensity score matching analysis?
   a. Exact matching, 1:1
   b. Nearest neighbour matching, 1:2
   c. Kernel matching, 1:3
   d. Stratification matching, 1:1
   e. Radius matching, 1:2

4. In the discussion, which potential explanation is proposed for the observed lower risk of preterm birth in the GDM with vaginitis group?
   a. Higher rate of caesarean section
   b. Enhanced medical surveillance and intervention
   c. Lower maternal age
   d. Reduced vaginal glycogen accumulation
   e. Higher parity

5. Which of the following was identified as a limitation of the study?
   a. Use of propensity score matching
   b. Multi-centre sampling design
   c. Inability to account for differences in intensity of prenatal care (surveillance bias)
   d. Stratified analysis by pathogen type
   e. Prospective cohort design

(B) Evaluation of the Effect of Non-Invasive Ventilation on the Hearing Outcomes in Newborns

1. What is the primary purpose of noninvasive ventilation (NIV) in newborns?
   a. To provide respiratory support while avoiding endotracheal intubation
   b. To completely prevent pulmonary infections
   c. To eliminate the need for surfactant therapy
   d. To replace invasive mechanical ventilation in all newborns
   e. To discontinue oxygen therapy in all infants

2. Which newborns are considered to be at an increased risk of hearing impairment?
   a. A healthy term infant with an uncomplicated delivery
   b. An infant with history of bacterial or viral meningitis
   c. An infant delivered by cesarean section only
   d. A full-term infant weighing more than 3,000 g
   e. An exclusively breastfed infant

3. What test is commonly used for newborn hearing screening?
   a. Electroencephalography (EEG)
   b. Auditory Brainstem Response (ABR)
   c. Tympanometry
   d. Electrocardiography (ECG)
   e. Cranial ultrasonography

4. Which of the following drugs is most commonly associated with ototoxicity?
   a. Amoxicillin
   b. Ampicillin
   c. Gentamicin
   d. Cefotaxime
   e. Paracetamol (Acetaminophen)

5. Why is the early identification of hearing impairment important in newborns?
   a. It reduces the length of hospital stay.
   b. It reduces the risk of neonatal respiratory disease
   c. It prevents all forms of hearing loss.
   d. It eliminates the need for hearing rehabilitation.
   e. It supports normal speech, language, and cognitive development through early intervention.

(C) Efficacy and Safety of White Cotton Cover Around Phototherapy Unit in Term Jaundiced Neonate at a Tertiary Care Teaching Institute: An Open Label Randomised Controlled Trial

1. Which of the following is the most important determinant of phototherapy efficacy?
   a. Gestational age alone
   b. Serum bilirubin concentration alone
   c. Exposed body surface area and light intensity
   d. Haemoglobin concentration
   e. Duration and type of breast feeding

2. The therapeutic action of phototherapy in neonatal hyperbilirubinaemia primarily involve is...
   a. Increase hepatic conjugation of bilirubin
   b. Increased renal excretion of unconjugated bilirubin without structural alteration.
   c. Conversion of bilirubin into water -soluble photoisomer
   d. Suppression of bilirubin production by bone marrow
   e. Increases intestinal bacterial degradation of bilirubin.

3. Which wavelength range was described as the optimal blue-green spectrum for phototherapy?
   a. 300-350 nm
   b. 350-400 nm
   c. 430-490 nm
   d. 500-550 nm
   e. 600-650nm

4. Which adverse events was specifically observed in the experimental group neonates?
   a. Dehydration
   b. Necrotising enterocolitis
   c. Skin rash
   d. Transient hyperthermia
   e. Diarrhoea

5. Which of the following was an important limitation of the study?
   a. No randomisation was performed
   b. Irradiance was never standardised
   c. Direct measurement of lumirubin was not performed
   d. Only preterm neonates were included
   e. Phototherapy duration was not assessed.

(D) Incidence of Child Maltreatment in a cohort of children with prenatal substance exposure under Hong Kong East Comprehensive Child Development Service

1. Which of the following(s) is/are at higher risk in prenatal exposure to cannabis, amphetamine and cocaine in this study?
   a. Prematurity
   b. Low birth weight
   c. Congenital malformation
   d. a & b
   e. a, b & c

2. What are the two most common types of child maltreatment in prenatal substance exposed babies found in this study?
   a. Neglect and sexual abuse
   b. Neglect and emotional abuse
   c. Neglect and physical abuse
   d. Physical and multiple abuse
   e. Physical and emotional abuse

3. What the three most common drugs used by pregnant women according to the study findings?
   a. Opiate, amphetamine and cocaine
   b. Amphetamine, cocaine and ketamine
   c. Cocaine, ketamine and cannabis
   d. Amphetamine, ketamine and cannabis
   e. Cannabis, opiate and MDMA

4. Which of the following(s) is/are the risk factor(s) to child maltreatment in prenatal substance exposure babies in this study?
   a. Prematurity
   b. Low socio-economic status
   c. Maternal psychiatric co-morbidity
   d. Comprehensive child development service
   e. All of the above

5. According to the study, what is the incidence of babies with prenatal substance exposure?
   a. 0.15%
   b. 0.45%
   c. 0.54%
   d. 4.5%
   e. 5.4%

Answers of July issue 2026

(A) 1. b; 2: d ; 3: c; 4: b; 5: b

(B) 1. c; 2. a; 3. b; 4. e; 5. d

(C) 1. c; 2. e; 3. d; 4. c; 5. b

(D) 1: d; 2: c; 3: e; 4: a; 5: b