

MCQs

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) Relationship Between TSH Level and Cardiometabolic Risk Factors in Overweight and Obese Adolescents

1. Which of the following problems is not a cardiometabolic risk factor among overweight/obese children and adolescents?
 - a. Hypertension
 - b. Insulin resistance
 - c. Disordered eating attitudes
 - d. Dyslipidaemia
 - e. Hyperglycaemia
2. Which of the following is not one of the possible mechanisms for higher TSH levels among obese people than normal weight peers?
 - a. Thyroid hormone resistance
 - b. Lower free T3 levels
 - c. Mutations in TSH receptor gene
 - d. Increased leptin levels
 - e. Alterations in peripheral thyroid hormone deiodinase activity
3. Which of the following sentences is correct?
 - a. High serum TSH levels might be found normal after weight loss
 - b. It was ultrasonographically shown that thyroid structure was altered in overweight/obese children
 - c. High serum TSH and normal thyroid hormone concentrations have been referred as "isolated hyperthyrotropinaemia (IH)" when this hormone profile is not accompanied by circulating thyroid antibodies
 - d. Autoimmune thyroiditis might be a cause of increased TSH levels among obese children
 - e. All of the above

4. In this study, what is the rate of high TSH levels in overweight/obese adolescents?
 - a. 5%
 - b. 10%
 - c. 14%
 - d. 25%
 - e. 50%
5. According to this study, higher TSH levels among overweight/obese adolescents might be related to?
 - a. Hypertension
 - b. Dyslipidaemia
 - c. Insulin resistance
 - d. Degree of obesity
 - e. Abnormal fasting blood glucose

(B) Can Renal Resistive Index Be Used As An Early Predictor of Acute Kidney Injury at Paediatric Intensive Care Units?

1. Which is the most commonly used classification in renal failure?
 - a. K-DIGO
 - b. RIFLE
 - c. GFR
 - d. Renal anjina index
 - e. Creatinine clearance
2. What is the formula of the renal resistive index?
 - a. $(\text{Peak systolic velocity} - \text{end-diastolic velocity}) / \text{end-diastolic velocity}$
 - b. $(\text{Peak systolic velocity} - \text{end-diastolic velocity}) / \text{peak systolic velocity}$
 - c. $(\text{End-diastolic velocity} - \text{peak systolic velocity}) / \text{peak systolic velocity}$
 - d. $(\text{End-diastolic velocity} - \text{peak systolic velocity}) / \text{end-diastolic velocity}$
 - e. $\text{Peak systolic velocity} / \text{end-diastolic velocity}$

3. Which of the following is not a parameter indicating kidney failure?
 - a. Neutrophil gelatinase-associated lipocalin (NGAL)
 - b. Cystatin C
 - c. Kidney injury molecule-1 (KIM-1)
 - d. Nefstatin
 - e. Creatinine
4. Which of the following parameters is not used to evaluate tissue perfusion?
 - a. Capillary refill time
 - b. Urine output
 - c. The difference between the peripheral and core temperatures
 - d. Lactate
 - e. Bispectral Index
5. Which method is the renal resistive index measured by?
 - a. Doppler Ultrasonography
 - b. X-ray graphy
 - c. Computed tomography
 - d. Magnetic resonance
 - e. Urinary creatinine level

(C) The Efficacy and Safety of Rituximab in the Treatment of Steroid-dependent or Frequently Relapsing Nephrotic Syndrome in Children

1. The clinical manifestations of primary nephrotic syndrome in children are:
 - a. Massive proteinuria
 - b. Hyperlipidaemia
 - c. Oedema
 - d. Hypoalbuminaemia
 - e. All the above
2. Refractory nephrotic syndrome refers to:
 - a. Hormone-dependent nephrotic syndrome
 - b. Frequent recurrent nephrotic syndrome
 - c. Hormone-resistant nephrotic syndrome
 - d. Recurrent nephrotic syndrome
 - e. (a), (b), (c)
3. The following drugs belonging to biological agents are:
 - a. Cyclophosphamide
 - b. Tacrolimus
 - c. Glucocorticoid
 - d. Mycophenolate mofetil
 - e. Rituximab

4. Rituximab belongs to:
 - a. B lymphocyte stimulating factor antagonist
 - b. TNF- α antagonists
 - c. IL-6 receptor antagonist
 - d. CD20 antagonists
 - e. JAK pathway inhibitors
5. The most common pathological type of primary nephrotic syndrome in children is:
 - a. Mesangial hyperplasia
 - b. Membranous nephropathy
 - c. Focal segmental sclerosing nephropathy
 - d. Minimal change nephropathy
 - e. Membranous proliferative nephropathy

(D) Long-term Outcome for Chinese Adolescents with Acute Lymphoblastic Leukaemia Treated with Paediatric Regimen of CCLG-ALL 2008 Protocol

1. Which of the following is NOT a true statement?
 - a. Adolescent acute lymphoblastic leukaemia has distinct biological features.
 - b. Haematopoietic stem cell transplantation is the optimal treatment option for all adolescent patients with acute lymphoblastic leukaemia.
 - c. Paediatric-based therapy could improve the outcome of adolescent patients with acute lymphoblastic leukaemia.
 - d. The cytogenetic abnormalities including Ph-like, *IKZF* deletion and *iAMP21* are closely related with poor prognosis of acute lymphoblastic leukaemia.
 - e. Historically, the outcome of adolescent leukaemia patients has been inferior to childhood patients.
2. According to this study, which of the following factors is not part of risk stratification system of acute lymphoblastic leukaemia?
 - a. Immunophenotype
 - b. Minimal residual disease
 - c. Gender
 - d. Central nervous system status
 - e. Bone marrow morphology

3. How many percent of blast in bone marrow is used to define complete remission?
- 5%
 - 10%
 - 15%
 - 20%
 - 25%
4. Which of the following is related to superior prognosis of acute lymphoblastic leukaemia?
- BCR/ABL*
 - ETV6-RUNX1*
 - T-ALL*
 - TCF3/PBX1*
 - MLL* rearrangement
5. What is special about clinical characteristics in children and adolescent patients with acute lymphoblastic leukaemia according to this study?
- The incidence of T-immunophenotype, *BCR/ABL* and *MLL* rearrangement is higher in adolescent patients.
 - ETV6-RUNX1* is more frequent in adolescent patients.
 - The prevalence of Ph-like ALL increases in adolescent.
 - (a) and (b)
 - (a) and (c)

Answers of July issue 2022

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

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

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

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