

## Structured Board Review 1310-Answers

### Adults

31. The correct answer is A. Treatment of gastroesophageal reflux disease should begin with the least expensive proton-pump inhibitor, usually omeprazole 20 mg once daily.
32. The correct answer is C. Common musculoskeletal conditions in cerebral palsy include ankle and foot deformities, scoliosis, hip dislocation, and the thumb-in-palm deformity.
33. The correct answer is A. Intrathecal baclofen injection is an option for nonambulatory patients with severe spasticity who have not benefited from oral drugs.
34. The correct answer is E. Catheter leakage may be caused by chronic constipation and bladder spasms.
35. The correct answer is A. The presence of gross hematuria should prompt a bladder cancer assessment.
36. The correct answer is C. A meta-analysis reviewing the use of desmopressin, a synthetic analogue of vasopressin, in patients with multiple sclerosis revealed that the frequency of voiding was moderately reduced and volume of incontinence was significantly reduced 6 to 8 hours after administration.
37. The correct answer is B. In addition to promoting fluid intake and physical activity, supplemental fiber often is prescribed, although high-fiber diets should not be recommended routinely. The standard regimen for bowel dysfunction includes manual stimulation or evacuation and drugs.
38. The correct answer is A. A systematic review found that intracavernous injections of alprostadil (Caverject, Edex) are more efficacious than sildenafil (90% versus 79%).
39. The correct answer is C. Massage over bony surfaces should be avoided.
40. The correct answer is C. This patient has signs and symptoms consistent with autonomic dysreflexia. When managing autonomic dysreflexia, the blood pressure should be measured every 2 to 5 minutes. Pharmacologic blood pressure reduction should be considered early if the systolic blood pressure level is greater than 150 mm Hg after relieving any bladder pressure. There are no studies to recommend the best antihypertensive agent. However, nitrates and nifedipine are the most commonly used drugs.
41. The correct answer is A. Treatment of depression in multiple sclerosis includes the use of antidepressants, such as selective serotonin reuptake inhibitors, exercise, and psychotherapy.

### Cardio

16. The correct answer is C. World Health Organization Group 3 pulmonary hypertension includes patients with hypoxia and underlying pulmonary disease. The pathology of this subset of patients involves hypoxic vasoconstriction; therefore, treatment focuses on correcting hypoxemia and treating the underlying disorder.

17. The correct answer is A. Differentiating pulmonary hypertension due to diastolic dysfunction from pulmonary arterial hypertension can be difficult and might require hemodynamic evaluation through right and/or left heart catheterization.
18. The correct answer is B. Within this group of patients with chronic obstructive pulmonary disease is a much smaller subset with severe pulmonary hypertension (PH) that is out of proportion to the underlying pulmonary parenchymal disease. Referral of these patients to a PH center should be considered, because clinical trials are ongoing to determine if PH drugs are safe and effective.
19. The correct answer is A. Small, short-term trials of sildenafil, bosentan, and inhaled prostacyclin showed no detrimental effects of oxygenation in these patients, although the potential exists. Long-term trials of specific pulmonary hypertension treatments in this population are ongoing, but there currently is not enough evidence for treatment recommendations. Therefore, treatment should focus on the underlying disease and maintaining oxygenation.

## Children

16. The correct answer is B. A night light may be comforting to the child experiencing nightmares.
17. The correct answer is E. A time-out is a set time appropriate to the age of the child whereby the child is sent to a specific place or chair and withdrawn from activity. It is best if a warning is given before the time-out so the child has an opportunity to halt his or her misbehavior.
18. The correct answer is C. Individuals with learning disabilities qualify for assistance through the Individuals With Disabilities Education Act as well as Section 504 of the Rehabilitation Act of 1973.
19. The correct answer is D. Strategies to prevent and stop bullying behavior require approaches that involve the individual who is bullying and the one being bullied, peer groups, parents and siblings, teachers, coaches, and healthcare professionals, especially the family physician, school counselors, and school nurses.
20. The correct answer is E. In the middle school and teenage years, behavioral problems warranting a mental health consultation include self-injurious behaviors (eg, cutting, burning), significant rituals that interfere with activities of daily living (eg, restrictive eating, bingeing-purging), fire setting or other property damage, sexual misconduct, past or present suicidal gestures with or without psychiatric hospitalizations, and the abuse of alcohol or drugs.

## Skin

11. The correct answer is D. Stage II ulcers have eroded through the epithelium, but not beyond the dermis. These shallow, partial-thickness ulcers have red or pink wound beds without slough. They can also present as blisters with serous or serosanguineous fluid.
12. The correct answer is B. The Norton Scale has 5 factors (ie, physical condition, mental condition, activity, mobility, incontinence) that are evaluated on a scale from 1 to 4.
13. The correct answer is E. Because these risk assessment tools might not include all factors associated with pressure ulcer risk, a comprehensive review of potential risk factors such as hemodynamic instability, comorbidities (eg, diabetes, peripheral vascular disease, hypotension, sepsis, paralysis), prior pressure ulcer, body temperature, and use of drugs such as steroids should be included.
14. The correct answer is D. Patients with pressure ulcers should be clinically evaluated for nutritional needs and dietary intake.

15. The correct answer is C. In addition to antibiotic therapy, infected pressure ulcers might require sharp excisional debridement of necrotic tissue. Sharp debridement also allows the physician to obtain a deep culture sample. For suspected infection, biopsy should be obtained from the center of the wound rather than the edge, which is typically used for histologic specimens to rule out malignancy or determine wound etiology.

## Infectious Disease

1. The correct answer is D. In areas with significant prevalence of intermediate *Streptococcus pneumoniae* resistance, amoxicillin dosed at 90 mg/kg per day in two divided doses may be preferable to the dose of 45 mg/kg per day usually effective for sinusitis in children at low risk of the infection.
2. The correct answer is B. The joint American Academy of Pediatrics-American Academy of Family Physicians guideline on otitis media recommends the *observation option* to defer antibiotic treatment for 48 to 72 hours. In another study of greater than 200 children, those treated with antibiotics experienced 16% fewer treatment failures and used less analgesia but experienced more adverse effects and had higher rates of subsequent carriage of resistant organisms than children managed by watchful waiting.
3. The correct answer is E. This child has otitis media with effusion (OME). Because approximately 75% to 90% of OME resolves spontaneously within 3 months, watchful waiting is recommended in the otherwise healthy child.
4. The correct answer is C. This infant probably has *Chlamydia trachomatis* infection. Infants with *Chlamydia pneumoniae* rarely require hospitalization but should be treated for 2 weeks with oral erythromycin estolate.
5. The correct answer is C. Treatment of atypical pneumonias (the most common of which are caused by *Chlamydia pneumoniae* and *Mycoplasma pneumoniae*) is with macrolides or tetracyclines.
6. The correct answer is C. Within 2 to 5 days of ingestion of enterohemorrhagic *Escherichia coli*, children can develop painful or painless hemorrhagic colitis with frank blood in the stool. Although the gastrointestinal symptoms subside spontaneously, children who develop hemolytic-uremic syndrome progress to microangiopathic hemolytic anemia, thrombocytopenia, and central nervous system changes as well as renal failure.
7. The correct answer is A. Common examples of foods contaminated with bacteria include fried rice contaminated with *Bacillus cereus* and cream-filled pastries and potato or egg salad contaminated with *Staphylococcus aureus*. These food poisonings can cause a gastroenteritis-like picture, with symptoms often being self-limited and experienced by other individuals who ate the contaminated food.
8. The correct answer is A. Infants who are breast-fed should continue breast-feeding and infants who are bottle-fed need to resume formula feeding as soon as rehydration is accomplished.
9. The correct answer is A. In infants older than 3 months and children, ceftriaxone (50 to 75 mg/kg per day intravenously or intramuscularly in divided doses every 12 hours) or cefotaxime with vancomycin empiric therapy (for possible penicillin-resistant *Streptococcus pneumoniae*) is used until the susceptibility of the pathogen is known.
10. The correct answer is C. Adolescents and young adults, especially college freshmen living in dorms and military recruits, should be immunized preferably with meningococcal conjugate vaccine because it may provide longer immunity than the older meningococcal polysaccharide vaccine immunization.

## Endo

11. The correct answer is C. Plasma glucose level measurement is the test of choice to diagnose prediabetes or type 2 diabetes. Capillary blood samples (point-of-care fingerstick glucose tests) should not be substituted for plasma glucose level measurements in diagnosing prediabetes or type 2 diabetes.

12. The correct answer is A. Although insulin traditionally has been the treatment of choice to manage gestational diabetes, metformin or glyburide increasingly is used because of effectiveness and patient preference.
  
13. The correct answer is A. Traditionally, standard therapy for type 2 diabetes involved a trial of lifestyle modification in individuals with hemoglobin A1c levels between 7% and 8%. More recently, the American Diabetes Association has recommended starting metformin, if there are no contraindications, when type 2 diabetes initially is diagnosed.
  
14. The correct answer is C. When the hemoglobin A1c level goal is not achieved using dual therapy, adding basal insulin is an option. One of the simpler regimens for initiating insulin is prescribing a single dose of basal analogue insulin such as glargine (Lantus) or detemir (Levemir). The starting dose for glargine and detemir typically is 10 units.
  
15. The correct answer is D. Effects of exenatide include delayed gastric emptying, stimulation of insulin secretion, inhibition of glucagon, decreased postprandial hyperglycemia, and weight loss.