



IMCI

- The following are "danger signs" in the IMCI strategy, except:
 - Convulsions
 - Difficulty of breathing
 - Lethargy
 - Vomits everything
- The antibiotic of choice for bloody dysentery :
 - Chloramphenicol
 - Amoxicillin
 - Ciprofloxacin
 - Cotrimoxazole
- The dose of zinc for infants less than 6 months with diarrhea:
 - 20 mg / day for 14 days
 - 10 mg / day for 10 days
 - 10 mg/ kg / day for 10 days
 - 20 mg / kg / day for 14 days
- The low osmolarity ORS contains:
 - Na 90 mEq / L
 - Na 75 mEq / L
 - Na 75 mmol/ L
 - Na 90 mmol/ L
- IMCI recommended treatment of Chronic ear infection:
 - Oral Amoxicillin at 100 mg/ kg/dose for 10 days
 - Topical quinolone ear drops + ear wicking for 2 weeks
 - Topical quinolone ear drops + Cotrimoxazole for 7 days
 - Oral Ciprofloxacin at 15 mg / kg / day for 3 days
- At 6-8 months, complementary foods for infants should provide _____ calories / day:
 - 500
 - 300
 - 200
 - 400
- Based on IMCI guidelines, for severe pneumonia, where referral is difficult and IV medications are not available, oral Amoxicillin can be used with the following dose:
 - 50 mg / kg / day for 3 days
 - 90 mg / kg / day for 7 days
 - 45 mg / kg / dose twice day for 5 days
 - 25 mg / kg / dose 3 x a day for 3 days
- In IMCI, the following are the Main Symptoms, except for:
 - Seizures
 - Cough or difficulty of breathing
 - Diarrhea
 - Fever
- Fast breathing in an 8 month old infant except:
 - 60 bpm
 - 50 bpm
 - 40 bpm
 - 65 bpm
- The child is classified under severe pneumonia if any of the following is present, except:
 - Inability to feed
 - Stridor in a calm child
 - chest indrawing
 - high grade fever
- A child with diarrhea of more than 14 days, with signs of dehydration is classified as:
 - Chronic diarrhea
 - Chronic diarrhea with signs of dehydration
 - Severe persistent diarrhea
 - Persistent diarrhea
- IMCI Management of Acute Dysentery except:
 - Fluids
 - Fasting
 - Antibiotics
 - Follow-up
- For children 2-5 years the drug of choice for cholera is:
 - Amoxicillin
 - Gentamicin
 - Ciprofloxacin
 - Erythromycin
- Recommended maximum RUTF packets per day for a 10 kg child:
 - 2
 - 3
 - 4
 - 5

15. The following statements about Ready –to –Use –Therapeutic Food (RUTF) are TRUE except:
- Best given after breastfeeding
 - Given at 4-5 feeds per day
 - Half of the packet consumed is approximately equivalent to 250 kcal
 - Give only RUTF for at least 2 weeks

BACTERIAL INFECTIONS

- True of tetanus infection EXCEPT
 - Spores produce tetanospasmin which binds to gangliosides at the myoneural junction of skeletal muscle & neuronal membranes in the spinal cord
 - Neonatal tetanus typically manifests within 3-12 days of birth as progressive difficulty in feeding (sucking and swallowing) and crying
 - Tetanus toxin cannot be neutralized by TIG after it has begun its axonal ascent to the spinal cord.
 - The drug of choice is Metronidazole which is equally effective to Penicillin G
 - The following criteria suggests coagulase negative staphylococcus (CoNS) as true pathogens rather than contaminants EXCEPT
 - true bacteremia should be suspected if blood cultures grow rapidly (within 24 hr)
 - ≥2 blood cultures are positive with different CoNS strain
 - cultures from both line and peripheral sites are positive
 - signs and symptoms compatible with CoNS sepsis are present and subsequently resolve with appropriate therapy
 - Which of the following is NOT a major diagnostic criteria of staphylococcal toxic shock syndrome?
 - Fever
 - CNS abnormalities
 - Rash
 - Hypotension
 - Which of the following statements is TRUE about acute rheumatic fever?
 - The most common manifestation is carditis
 - Supporting evidence of a recent GAS infection is not an absolute requirement for the diagnosis of acute rheumatic fever
 - Treatment includes initial course of antibiotic therapy followed by longterm antibiotic prophylaxis
 - Diagnosis of acute rheumatic fever can be established when a patient fulfills 3 major OR 1 major and 2 minor criteria and has evidence of preceding GAS infection
- A previously well 3 year-old girl was brought to the emergency department due to 4 days' history of sore throat associated with occasional cough, hoarseness, poor appetite and vomiting. On PE, she was awake irritable, not in respiratory distress, afebrile, BP of 80/50, tachycardic at 130 bpm and with moderate signs of dehydration. She had erythematous and enlarged both tonsils with pseudomembrane that easily bleeds and an enlarged bilateral cervical lymphadenopathy with bull neck appearance. Her CBC showed WBC of 18,000 with segmenters predominance. Review of immunization revealed that she had received only BCG and birthdose of Hepatitis B.
- What is the most likely diagnosis?
 - Pertussis
 - Diphtheria
 - GAS pharyngitis
 - EBV pharyngitis
 - The following are true regarding the treatment of this case EXCEPT?
 - Specific antitoxin is the mainstay of therapy and should be administered on the basis of clinical diagnosis
 - The role of antibiotic is to halt toxin production, treat localized infection, and prevent transmission of the organism to contacts
 - Antibiotic therapy is a substitute for antitoxin therapy
 - Antitoxin is not recommended for asymptomatic carriers



J.K. is a 1 year old male child who was brought in due to fever and rash. He had history of watery nasal discharge 5 days PTA. 1 day PTA, he had onset of undocumented fever and was given paracetamol every 4 hours. Seven hours after the onset of fever, there was violaceous rash noted over the trunk and he was noted to be irritable hence brought PCMC. On PE, he was awake, irritable, tachypneic and febrile with BP of 80/50. There were purpuric violaceous rash on face, trunk and extremities. CBC revealed leukocytosis of 22,000 with predominance of segmenters at 91% and platelet of 107, 000. Blood cs revealed no growth. Gram stain of skin scraping revealed gram negative diplococci, however no organism was isolated on culture.

7. What is the most likely causative organism?

- a. *Pseudomonas aeruginosa*
- b. *Klebsiella pneumoniae*
- c. *Hemophilus influenzae*
- d. *Neisseria meningitidis*

8. The following are true regarding this case, EXCEPT

- a. The infection is spread via airborne transmission
- b. Colonization of the nasopharynx by the causative organism is the first step in either carriage or invasive disease
- c. Diagnosis is established by isolation of the causative organism from a normally sterile body fluid
- d. Empirical antimicrobial therapy using a third-generation cephalosporin should be initiated immediately

A 2 year old male child was brought in for consult due to 8 days history of cough and colds with no associated fever. The mother claimed that the patient was apparently well in between bouts of cough. Upon taking the history, you noticed a well-appearing, playful toddler with insignificant provocation suddenly expresses an anxious aura and begins a machine-gun burst of uninterrupted cough on a single exhalation, chin and chest held forward, tongue protruding maximally, eyes bulging and watering, face purple, until coughing ceases followed by a loud whoop and post tussive vomiting. Physical examination was unremarkable.

9. What is the most likely diagnosis?

- a. Croup
- b. Pertussis
- c. Bacterial Pneumonia
- d. Viral Pneumonia

10. The following are true regarding this case, EXCEPT

- a. Patients are most contagious during the first stage
- b. Infants younger than 3 mo of age do not display the classic stages
- c. Leukocytosis (15,000-100,000 cells/ μ L) caused by absolute lymphocytosis is characteristic in the first stage
- d. Penicillin is the preferred agent for treatment and prophylaxis

A 6 year old male child was brought to the ER due to fever. He had history of 5 days on and off undocumented fever associated with abdominal pain and calf pain. 1 day PTA, there was onset of tea colored urine associated with vomiting and decrease urine output and icteric sclerae. On day of admission, there was persistence of the above signs and symptoms associated with generalized yellowish discoloration of the skin and irritability prompting consult. On PE, he was awake, coherent, weak-looking with the following vital signs BP: 60/40 HR:128 RR: 34 and T: 38.3°C Pertinent PE include generalized jaundice, hepatomegaly and tender both calf muscles, faint pulses and prolonged CRT. Laboratory showed thrombocytopenia, elevated creatinine, bilirubin levels and liver enzymes.

11. What is the most likely diagnosis?

- a. Weil Syndrome
- b. Enteric Fever
- c. Hepatitis A Infection
- d. Malaria

12. What is the most likely etiologic agent?

- a. *Leptospira sp.*
- b. *Salmonella typhi*
- c. *Hepatitis A virus*
- d. *Plasmodium falcifarum*

13. What is the drug of choice?

- a. Ceftriaxone
- b. Clindamycin
- c. Doxycycline
- d. Penicillin G

14. True about nontyphoidal Salmonellosis EXCEPT

- a. The most common clinical presentation is acute enteritis
- b. Definitive diagnosis is based on clinical correlation of the presentation and culture from feces or other body fluids
- c. Antibiotics are generally recommended for the treatment of uncomplicated *Salmonella* gastroenteritis because it will hasten the eradication of the bacteria
- d. Antibiotics are recommended only in patient with increased risk of invasive disease (infants <3mos, patients w/ chronic GIT disease, malignancy, hemoglobinopathies, HIV)

15. Which of the following is the most appropriate treatment regimen for a neonate diagnosed with congenital syphilis with normal physical examination and serum quantitative nontreponemal titer ≤ 4 times the maternal titer and whose mother received treatment ≤ 4 wk before delivery

- a. Aqueous crystalline penicillin G 50,000 units IM single dose x 10 days
- b. Penicillin G procaine 50,000 units/kg IM single dose x 10 days
- c. Aqueous crystalline penicillin G, 50,000 units IV single dose x 10 days
- d. Penicillin G benzathine 50,000 units/kg IM once daily x 10 days

IMMUNIZATION

1. An 8 month old was recently diagnosed for Kawasaki disease. Patient was given IVIG and aspirin.

Mother is worried that she will be unable to complete her immunization on time. She particularly asks you at what age can the MMR be given.

2. A 5 month old female child was brought your clinic and mother hands over the baby book. Upon perusal you saw that she only received a BCG and Hepatitis B at birth.

Your plan of action.

List down all vaccines to be given.

3. An 8 month old F is brought to the clinic as mother is frantic having heard of a measles outbreak in her community. Her other child, a 2 year old received an MMR at 13 months of age.

On review of records, you see that child has received BCG, 3 doses of Hexavalent vaccine and 2 doses of PCV (latter given 2 months ago). Mother volunteers that baby is fully breastfed and she had measles when she was a teenager.

Your plan of action

4. A 10 month old is brought to your clinic as the mother recently read an article about a family history of seizures being a contraindication to immunization and that MMR causes autism. There is an outgoing measles outbreak and she is extremely worried.

Your plan of action.

5. A 3 year old M is about to undergo a splenectomy. Mother claims that patient has received all the recommended vaccines . Upon review, you see she has received the primary series of DPT, IPV, Hib Hep B plus a booster dose together with 3 doses of PCV, the last having been given at 7 months of age. He also has received a dose of Hepatitis A, MMR, Varicella and her annual influenza 6 months ago.

Your plan of action.



6. A 14 month old male was recently diagnosed for ALL. Mother claims that patient had BCG, two doses of DPT,IPV, Hib, Hep B only. You want to catch up on his immunization as chemotherapy is to start in two weeks. Your plan of action.

- A. Administer DPT,IPV,Hib and Hep B,Hep A, Influenza
- B. Administer DPT , Hib Hep B and OPV, Hep A and Influenza
- C. Administer MMR and Varicella
- D. Administer Pneumococcal polysaccharide vaccine

7. Mother comes back the next day and tells you she forgot that her other child who is a two month old was given OPV at the center that same morning. Should this be a concern?

- A. Yes
- B. No

8. Mother is concerned about the other members of the household and asks you what vaccines may be given to the other members. Can they be given live or inactivated vaccines ?

- A. Yes
- B. No

9. A healthy 4 month old infant is brought to your clinic. Mother claims there was no BCG given at the health centre at the time of birth. She recently learned that the baby father tested positive on sputum smear. Your best plan of action.

10. A mother comes to you as she is set to deliver in 7 weeks. She found out that she was HBs Ag positive and negative for all STI's including HIV.

The child was born prematurely and weighed 1.8 grams

Your plan of action .

How many doses will constitute the primary series.

ALLERGY

1. Most common cause of anaphylaxis in children.

- A. House dust mite
- B. Food
- C. Exercise
- D. Idiopathic

2. Mainstay in the treatment of mild intermittent allergic rhinitis.

- A. Inhaled steroid
- B. Oral steroid
- C. Antihistamine
- D. Decongestant

3. Most common manifestation of anaphylaxis.

- A. Cutaneous
- B. Gastrointestinal
- C. Respiratory
- D. Cardiovascular

4. An example of outdoor allergen

- A. Pollution
- B. Cigarette Smoke
- C. Pollen
- D. All of the above.

5. Common cause of chronic urticaria.

- A. Food allergy
- B. Drug allergy
- C. Idiopathic
- D. Autoimmune

6. Food allergy is more common in children than in adults.

- A. True
- B. False

7. An example of IgE mediated adverse food reaction

- A. Dermatitis Herpetiformis
- B. Oral Allergy Syndrome
- C. Proctocolitis
- D. Esophagitis

8. Test/tests specific for IgE

- A. Provocative test
- B. Skin Prick Test
- C. Patch Test
- D. A & B

9. Food is a common trigger for mild atopic dermatitis in adults

- A. True
- B. False

10. Drug of choice for anaphylaxis.

- A. Epinephrine 1:1000 0.01mg/kg
- B. Epinephrine 1:10,000 0.1 mg/kg
- C. Epinephrine 1:1000 0.1 mg/kg
- D. Epinephrine 1:10,000 0.01 mg/kg

ASTHMA

1. Which of the following pathophysiologic features is the most important in asthma?

- a. bronchoconstriction
- b. mucus hypersecretion
- c. inflammation
- d. airway remodeling

2. A possible diagnosis of asthma is made based on the presence of one or more of the following, EXCEPT:

- a. cough
- b. wheeze
- c. breathlessness
- d. stridor

3. The diagnosis of asthma becomes probable if the above symptoms are associated with the following factors EXCEPT:

- a. exercise – induced
- b. good response to mucolytics
- c. nocturnal
- d. family history of atopy

4. Definitive diagnosis of asthma is based on:

- a. improvement in FEV1 by 12% or more post bronchodilator
- b. improvement in PEF by 15% or more postbronchodilator
- c. improvement in symptoms post bronchodilator
- d. none of the above

5. A patient presenting with normal PEF, normal FEV1, monthly daytime symptoms and weekly nighttime symptoms is classified as:

- a. intermittent
- b. mild persistent
- c. moderate persistent
- d. severe persistent

6. The recommended long-term management of patients with intermittent asthma is:

- a. prn bronchodilators only
- b. ketotifen only
- c. maintenance leukotriene receptor antagonists
- d. maintenance ICS 200-400 ug/day

7. If a patient with persistent asthma already on maintenance ICS continues to have symptoms, which of the following measures should you do?

- a. review diagnosis/classification
- b. check compliance/inhaler technique
- c. investigate for concomitant medical problems like GERD
- d. all of the above

8. The following maneuvers can be done in poorly controlled asthmatics already on maintenance ICS EXCEPT:

- a. add long-acting beta2 agonist
- b. add ketotifen
- c. add theophylline
- d. increase ICS dose

9. The most common trigger of an asthmatic attack in children is:

- a. food allergy
- b. pollution
- c. change in weather
- d. viral URTI



10. The least common trigger of an asthmatic attack in children is:

- a. food allergy
- b. pollution
- c. change in weather
- d. viral URTI

11. Which of the following features classifies an attack to be severe?

- a. talks in phrases
- b. PEFR = 70%
- c. (+) use of accessory muscles
- d. wheeze audible w/o stethoscope

12. The recommended initial management for moderate exacerbation is:

- a. inhaled B2 agonist every 20 mins for 3 doses; no steroids yet
- b. inhaled B2 agonist + ipratropium bromide every 20 mins 3 doses
- c. inhaled B2 agonist + inhaled steroid every 20 mins for 3 doses
- d. inhaled B2 agonist every 20 mins for 3 doses + systemic steroids

13. The following patients are considered high risk EXCEPT:

- a. infants with moderate exacerbation
- b. currently using inhaled steroids as maintenance
- c. previous admission for severe asthma attack
- d. presence of psychiatric disease

14. Which of the following statements is true?

- a. Infantile asthma can be diagnosed definitively by spirometry
- b. Steroids should be withheld in asthmatics who are about to undergo surgery.
- c. Gastroesophageal reflux disease may mimic or trigger asthma.
- d. Mucolytics are beneficial in the management of acute asthma attacks.

LOWER RESPIRATORY TRACT

1. In the diagnosis of bronchiolitis, the gold standard is

- a. Chest xray
- b. CBC
- c. Nasopharyngeal swab for RSV
- d. Clinical

2. Which of the following may be a complication of chronic mechanical ventilation in neonates?

- a. Tracheomalacia
- b. Laryngomalacia
- c. Gastroesophageal reflux
- d. Bronchomalacia

3. What is the most common post-operative complication of Diaphragmatic hernia?

- a. Pulmonary hypoplasia
- b. Persistent pulmonary hypertension
- c. Pneumonia
- d. Intestinal obstruction

4. What chest x-ray finding is indicative of a bacterial pneumonia?

- a. Pleural effusion
- b. Atelectasis
- c. Consolidation
- d. Interstitial infiltrates

5. Which among the following statements is true regarding exudative effusion?

- a. Pleural fluid / serum protein ratio > 0.5
- b. Pleural fluid/serum LDH ratio > 0.5
- c. Pleural fluid LDG values <200 IU/L
- d. Ph>7.20

6. A two year old child is diagnosed to have PCAP C. On history taking, mother claims that the child was only given 3 doses of the DPT polio vaccine and 2 doses of the Hemophilus influenza vaccine. What antibiotic will you give the child?

- a. Penicillin G
- b. Ampicillin
- c. Clarithromycin
- d. Oxacillin

7. Which among the following is included in the criteria for ARDS?

- a. Impaired oxygenation with a PaO₂/FiO₂ ratio of less than 100
- b. Chest radiograph with bilateral or unilateral densities
- c. Pulmonary artery wedge occlusion pressure less than 18 mm Hg
- d. With or without clinical evidence of left atrial hypertension

8. What is the most common complaint of patients with bronchiectasis?

- a. Cough with purulent sputum
- b. Hemoptysis
- c. Dyspnea
- d. Cyanosis

9. Which among the following statements is true regarding pneumothoraces?

- a. All cases of pneumothorax need tube thoracostomy.
- b. Oxygen administered at 100% may hasten the resolution of the pneumothorax.
- c. Recurrent pneumothorax is treated by repeated chest tube thoracostomy.
- d. Small pneumothorax in an otherwise normal child should still undergo tube thoracostomy.

10. What test is diagnostic of gastroesophageal reflux disease?

- a. Barium esophagogram
- b. CT scan
- c. Chest xray
- d. Esophageal ph probe

NON-INFECTIOUS RESPIRATORY TRACT DISORDERS

1. This stage of foreign body aspiration is the most treacherous and accounts for large percentage of delayed diagnosis:

- a. Initial stage
- b. Asymptomatic interval
- c. Complicated stage
- d. None of the above

2. The main cause of pulmonary edema in sepsis is:

- a. Increased pulmonary capillary pressure
- b. Decreased oncotic pressure
- c. Increased negative interstitial pressure
- d. Increased capillary permeability

3. Secondary bacterial pneumonia from volume aspiration occurs because of:

- a. Impairment in pulmonary defenses
- b. Mucosal sloughing
- c. Parenchymal infiltration
- d. Alveolar flooding

4. Respiratory disease can be triggered by GER by the following except:

- a. Microaspiration
- b. Immunologically mediated inflammation
- c. Esophageal irritation
- d. Vagally mediated effects from stimulation of upper airway receptors

5. The initial injury in interstitial lung disease in children causes damage to:

- a. Interstitium
- b. Bronchioles
- c. Alveolar epithelium
- d. Parenchymal units

6. Treatment of ILD includes the following except:

- a. Supplemental oxygen
- b. Corticosteroids
- c. Adequate nutrition
- d. Antibiotics

7. Common etiologic agents associated with respiratory infections leading to ILD are:

- a. Adenoviruses
- b. Staphylococcus aureus
- c. Streptococcus pneumonia
- d. H. influenza type b



8. Diuretics are valuable in the treatment of pulmonary edema associated with:
- Mediastinal tumors
 - Sepsis
 - Transfusion reaction
 - Cardiogenic shock
9. A patient with hydrocarbon aspiration has a normal CXR and O₂ saturation. He remains asymptomatic. What is the next step?
- Admit patient for observation
 - Start antibiotics
 - Observe at home after observation period in the hospital or clinic
 - Admit to ICU
10. TRUE or FALSE: The most dangerous consequence of acute hydrocarbon ingestion is pneumonitis

TUBERCULOSIS

Case: Simon is a 6 year old boy who was brought to your clinic because of mild 2-week cough, associated with low-grade fever and chest pain. According to his mother, Simon has taken Amoxicillin (40mkg/day) for 1 week as prescribed by a private pediatrician..

You are thinking of Primary Tuberculosis as one of the differential diagnoses of this case, hence you requested/asked for the following data:

Exposure: Simon's mother was previously diagnosed with PTB, however, no medication was started. She is presently pregnant and is due to deliver in a few weeks

TST: 5mm induration

CXR: Shows presence of hilar adenopathy

DSSM: Negative

- What is your impression of the case?
 - PTB exposure
 - PTB infection
 - PTB Disease
 - Extrapulmonary TB
- You decided to request for Gene Xpert, which showed negative result. What is Simon's classification based on Bacteriological Status?
 - Bacteriologically confirmed
 - Clinically diagnosed
- You have started Simon on quadruple anti-tuberculosis drugs, however, he was brought back after 3 days due to nausea and vomiting. Which among the following is the likely reason for his symptoms?
 - Isoniazid
 - Rifampicin
 - Pyrazinamide
 - Ethambutol
- Simon's mom soon gave birth to a term, well baby girl. The nurse in the NICU inquired if she will still separate the mom from her newborn, since the nurse knew Simon's mom is already taking her medications for 1 and ½ week before the delivery. Your reply should be...
 - Separate the baby from the mother and start the baby with INH
 - Separate the baby from the mother and do TST on the baby
 - Do not separate the baby from the mother and may give BCG on the baby
 - Do not separate the baby from the mother but screen the baby for Congenital TB
- The time between entry of the tubercle bacilli into the body and the development of tissue hypersensitivity manifested as a reactive TST if the inoculum is not large will be
 - 2-3 days
 - 4-5 days
 - 1-2 weeks
 - 3-12 weeks
- Simon's mom has several concerns regarding breastfeeding and the anti-TB medications that she is taking. Which of the following statements is not true?
 - Mothers receiving treatment from TB can safely breastfeed but should be given Pyridoxine
 - Almost 10% of anti-TB drugs are excreted in breastmilk
 - Drug levels in breastmilk are not sufficient for treatment or prophylaxis of TB in infants
 - It would be better to advise moms to feed their babies before taking the daily dose of anti-TB meds
- The recommended dose of BCG vaccine given intradermally for newborns up to 1 month of age is
 - 0.01ml
 - 0.05ml
 - 0.1ml
 - 0.5ml
- Certain individuals may have a positive reaction to the TST even though they are not infected with M. tuberculosis. The cause of these false-positive reactions may be due to
 - Malnutrition
 - Previous BCG vaccination
 - Live attenuated virus vaccinations
 - Corticosteroids
- This drug is formerly a 1st-line TB drug but because of its increasing resistance has reduced its usefulness
 - Ethambutol
 - Streptomycin
 - Amikacin
 - Kanamycin
- The mechanism of action of this anti-TB drug is the inhibition of transferase enzymes involved in cell wall synthesis
 - Isoniazid
 - Rifampicin
 - Pyrazinamide
 - Ethambutol
- Most anti-TB drugs are safe for pregnant women, except for
 - Isoniazid
 - Rifampicin
 - Pyrazinamide
 - Ethambutol
 - Streptomycin
- Marie is presently diagnosed with GI TB. According to her physician, Marie's TB condition is a case of relapse. You expect that Marie will be given the following regimen
 - 2HRZE/4HR
 - 2HRZE/10HR
 - 2HRZES/1HRZE/5HRE
 - 2HRZES/1HRZE/9HRE
- Jude was recently clinically diagnosed with GI TB. What treatment regimen should you recommend?
 - 2HRZE/4HR
 - 2HRZE/10HR
 - 2HRZES/1HRZE/5HRE
 - 2HRZES/1HRZE/9HRE
- Your patient developed on orange/red colored urine upon starting his TB medications... how will you manage it?
 - Stop anti-TB medications, then re-introduce the medications one drug at a time to identify which one is causing the reaction
 - Advise the patient to increase oral fluid intake, because his urine might be very concentrated
 - Reassure the parents/patient
 - Request for urinalysis to rule out possible infection



15. Which anti-TB medication interacts with oral contraceptive medications causing a risk of decreased protective efficacy against pregnancy?
- Isoniazid
 - Rifampicin
 - Pyrazinamide
 - Ethambutol
 - Streptomycin
16. Aurora, who was diagnosed with PTB has interrupted her anti-TB medications for more than 1 month, but less than 2 months. What is the best thing to do?
- Repeat DSSM
 - Do Gene Xpert
 - Just continue the treatment and prolong to compensate for missed doses
 - Refer to TB Diagnostic Committee
17. Ruth is currently clinically diagnosed with TB. Upon your history you found out that she had been taken anti-TB medications last year, but since they transferred in Mindanao, she was not able to continue her medications for 3 months. Ruth belongs to what TB disease Registration Group?
- Relapse
 - Treatment after failure
 - Previous treatment outcome unknown
 - Treatment after lost to follow-up
18. Joseph's DSSM result showed positive during his 5th month of anti-TB medication. Joseph belongs to what registration group?
- New
 - Relapse
 - Previous treatment Outcome Unknown
 - Treatment after failure
19. Belle interrupted her treatment for less than 1 month, what is the best thing to do?
- Repeat DSSM
 - Do gene xpert
 - Just continue the treatment and prolong to compensate for missed doses
 - Refer to TB Diagnostic Committee
20. Peter, a 6 year old boy who was never treated for TB before is taking HRZE for three weeks now. Peter belongs to what TB Disease Registration Group?
- New
 - Relapse
 - Previous treatment Outcome Unknown
 - Cannot be classified

OTORHINOLARYNGOLOGY

1. The following are part of the classic triad of Infectious Mononucleosis, except:
- Fever
 - Exudative, almost necrotic tonsillitis
 - Impressive cervical lymphadenopathy
 - Splenic enlargement
2. The most common cause of congenital chronic stridor in children younger than 2 years
- Acute epiglottitis
 - Laryngotracheobronchitis
 - Laryngomalacia
 - GERD
3. Below are the clinical phases of foreign body aspiration, except for:
- Initial symptomatic phase
 - Symptom-free period
 - Third phase of complications
 - Final phase of obstruction

4. Classic radiographic finding of laryngotracheobronchitis
- Teardrop sign
 - Steeple sign
 - Thumb sign
 - Elephant sign
5. Common etiologic agent for croup
- Influenza A and B
 - Parainfluenza type 1 and 3
 - RSV
 - M. pneumoniae
6. There is preference for the classic tripod position in this condition
- Acute epiglottitis
 - Laryngotracheobronchitis
 - Laryngomalacia
 - Airway foreign body
7. The most commonly recovered organism in chronic otitis media
- S. pneumoniae
 - S. aureus
 - P. aeruginosa
 - K. pneumoniae
8. This measure is not recommended in AOM prevention.
- Breastfeeding for 1st 6 months
 - Feeding in a lateral decubitus position
 - Avoiding exposure to tobacco smoke or other air pollutants
 - Immunization with 13-valent pneumococcal conjugate vaccine
9. High-dose amoxicillin is recommended in the following patients with ABRs, except:
- Daycare attendants
 - Children less than 2 years
 - Patients with poorly controlled nasal allergies
 - Antibiotic use within the previous month
10. The benchmark for identifying GABHS tonsillitis
- Throat culture
 - ASO values
 - Quick antigenic test
 - Immunoassays

HYPERTENSION

1. Nicole 14/ F with Chronic kidney disease Stage IV secondary to Lupus Nephritis is hypertensive. Our goal of treatment for Nicole should be:
- Reduce BP to less than 50th percentile
 - Reduce BP to less than 90th percentile
 - Reduce BP to less than 95th percentile
 - Reduce BP to less than 99th percentile
2. Mark, 13 year old male, visited your clinic because of sorethroat. His baseline BP on his 1st visit was 120/80mmHg. You sent him home and instructed him to monitor his blood pressure. On follow up after a week feeling well and asymptomatic, he maintain his BP at 120/80mmhg. Mark has
- Normotensive
 - Elevated BP (Prehypertension)
 - Stage I hypertension
 - Stage 2 hypertension
3. The mainstay of treatment for children with asymptomatic mild hypertension without evidence of target organ damage is:
- Beta blocker
 - ACE inhibitor
 - ARBs
 - Lifestyle and dietary modification
4. Lito 8/M came in due to seizure. Your impression was Hypertensive encephalopathy sec to PSGN and immediately started Nicardipine drip with a goal to decrease his baseline BP to ____
- 25% in the 1st hour and 50% more in the next 3-12 hour
 - 30% in the 1st hour and normal in the next 3-12 hour
 - 10% in the 1st hour and 15% more in the next 3 -12 hour
 - 20% in the 1st hour and 30% more in the next 3 – 12 hour



5. The most common cause of hypertension in children is/are:

- a. Cardiac
- b. Obesity
- c. Renal
- d. Endocrinopathies

6. The goal of therapy for hypertension includes:

- a. Reduce blood pressure below the 95th percentile
- b. Reduce blood pressure below to 99th percentile
- c. Reduce blood pressure to the 90th percentile the first 2 hours of therapy
- d. None of the above

7. Proper BP cuff should be:

- a. Inflatable bladder should cover at least 2/3 of the upper arm length only
- b. Inflatable bladder should cover at least 2/3 of the upper arm length with 80-100% of its circumference
- c. Inflatable bladder should cover at least 1/3 of the upper arm length with 50-70% of its circumference
- d. Inflatable bladder should cover at least 1/3 of the upper arm length with 80-100% of its circumference

8. True about Stage 2 hypertension in children 13 years old and below except

- a. defined as BP > or equal to 95th percentile to <95th percentile +12 mmHg or 130/80
- b. should be treated with pharmacologic therapy
- c. mandates prompt evaluation
- d. usually secondary

9. Recommended age for routine BP screening

- a. 2
- b. 3
- c. 4
- d. 5

10. Following is true except:

- a. Hypertensive children usually manifest with target organ damage at presentation
- b. Most children have secondary hypertension
- c. Hypertension in children usually does not translate into hypertension as adults
- d. Hypertension in children is defined statistically rather than functionally

11. Most common causes of hypertension in early childhood except:

- a. renal disease
- b. endocrine disease
- c. obesity
- d. drugs

PROTEINURIA

1. A 4 year old boy consulted due to progressive edema of 1 week. Urinalysis done showed 3+ protein. Serum albumin done showed 20 mg/dl. What is the next step to do?

- a. Review the history
- b. Request for Renal Ultrasound
- c. Request for a urine protein/creatinine ratio
- d. Request for 24 hour urine protein
- e. c or d

2. What is the most likely cause of proteinuria:

- a. Transient Proteinuria
- b. Orthostatic Proteinuria
- c. Membranous Nephropathy
- d. Minimal Change Disease

3. A patient has edema and 24 hours urine protein showed 3 gm/day. What is the likely cause of proteinuria?

- a. Orthostatic Proteinuria
- b. Transient Proteinuria
- c. Glomerular Proteinuria
- d. Tubular Proteinuria

4. A 10 year old was seen at the clinic due to 2+ protein in the urine. He was advised to have a first morning midstream urinalysis done. This time the repeat urine protein showed trace. What is the likely cause of proteinuria?

- a. Orthostatic Proteinuria
- b. Glomerular Proteinuria
- c. Tubular Proteinuria
- d. Focal Segmental Glomerulosclerosis

5. A 10 months old infant came in due to vomiting and diarrhea of 2 days duration. Patient was not in distress, no edema but with sunken eyeballs. CBC showed hemoglobin o 15, hematocrit of 45, WBC 4.0, Seg-32, Lymph 68. Urinalysis done showed dark yellow urine, sp. gr. 1.025, protein 1+, WBC 0-1 RBC 0-1. What is the likely cause of proteinuria?

- a. Transient Proteinuria
- b. Orthostatic Proteinuria
- c. Glomerular Proteinuria
- d. Tubular Proteinuria

6. A 7 year old patient was brought to you due to periorbital edema. Urinalysis done showed yellow urine, 1.015, protein –trace, RBC 0-1. How would you go about this case?

- a. Review the history
- b. Request for 24 hour urine protein
- c. Request for a renal ultrasound
- d. Request for C3 level

7. The urinalysis of the patient showed clear urine, specific gravity of 1.005, protein 1+, RBC 0-2. What would you advise the mother:

- a. The result is normal
- b. Request for 24 hour urine protein
- c. Observe and get a first morning midstream urine
- d. Advise to watch out for edema

8. A patient with nephrotic syndrome came in for fever and abdominal pain. P.E. showed an edematous patient, with slight tenderness over the periumbilical area. What do you think does the patient has?

- a. Acute Gastroenteritis
- b. Spontaneous Bacterial Peritonitis
- c. Fungal Peritonitis
- d. Acute Appendicitis

9. What is the most common etiologic agent?

- a. Escherichia coli
- b. Hemophilus Influenzae
- c. Streptococcus pneumonia
- d. Salmonella Typhi

10. Renal Failure in Nephrotic Syndrome particularly in Minimal Change Disease is usually due to :

- a. Pre-renal
- b. Intrinsic or Renal
- c. Postrenal

11. Treatment of Renal Failure in Nephrotic Syndrome:

- a. Dialysis
- b. Fluid Challenge with NSS
- c. Diuretic and/or Albumin

12. The most common cause of nephrotic syndrome in childhood:

- a. Minimal Change Disease
- b. Focal Segmental Glomerulosclerosis
- c. Membranous Nephropathy
- d. Membranoproliferative Glomerulonephritis

13. Which is not commonly seen in Minimal Change Disease?

- a. Edema
- b. Hypocomplementemia
- c. Proteinuria
- d. Hypoalbuminemia
- e. Hypercholesterolemia

14. The mainstay of management of Nephrotic Syndrome:

- a. Diuretic
- b. Steroid
- c. Albumin
- d. Low salt diet



15. The most common complication of Nephrotic Syndrome:

- a. Hypercoagulability
- b. Infection
- c. Growth Retardation
- d. Hypertension
- e. Hyperlipidemia

FLUIDS AND ELECTROLYTES

1. Total body water [TBW] as a percentage of body weight varies with age. Which of the following has the lowest percentage of TBW?

- A. 30-week old neonate
- B. 1 year old infant
- C. 15-year old male
- D. 14-year old female

2. Franco 4-year old boy with periorbital edema, pleural effusion, ascites and bipedal edema has increased

- A. intracellular fluid volume
- B. plasma volume
- C. interstitial fluid volume
- D. intravascular fluid volume

3. Ato a 17-year old adolescent presented at the ER conscious, cooperative conversant. Noted to be jaundiced, severe muscle and calf pain. Oliguric since 4 days prior to consult. Serum Na=128 mmol/L K=2.3 meq/L creatinine=899 mg/dL BUN=50 mg/dL hgt 102 mg/dL. He underwent HD and experienced nausea, headache, vomiting, restlessness and seizures attributable to

- A. hypoglycemia
- B. uremic syndrome
- C. disequilibrium syndrome
- D. hypokalemia

4. Katie a 2-year old girl had 3-4 episodes of diarrhea for 3 days. Her mother gave her prepared ORS with 2 sachets in a glass of water. She gave it alternately with milk and cup noodle soup. Since there was no improvement and she was noted to be lethargic and febrile she was brought to the ER. Hgt 120 mg/dL Na=165 mmol/L K=4 mmol/L creatinine=70mg/L. What is the estimated serum osmolality[mmol/L]?

- A. 300
- B. 310
- C. 320
- D. 330

5. In patients with syndrome of inappropriate antidiuretic hormone secretion there is

- A. high urine osmolality
- B. high plasma osmolality
- C. no renal insufficiency
- D. no dehydration

6. Pablo a 14-year old male was brought to the ER because of lower extremity weakness. This is his 2nd episode since 4 years ago. A sibling is similarly affected. He had signs of moderate dehydration. Urine output at the ER was 150-200cc per bout. Serum K=1.5 mmol/L Na=128 mmol/L Cl=100 ABG pH=7.4 Serum HCO₃=24. Urine calcium was low. Your diagnosis will be

- A. Hypokalemic Periodic Paralysis
- B. Renal Tubular Acidosis Type IV
- C. Bartter Syndrome
- D. Gitelman Syndrome

7. The maintenance fluid volume in 24 hours of a 30kg child using the Holliday Segar Method [Body Weight Method] will be

- A. 1000 ml
- B. 1500 ml
- C. 1700 ml
- D. 1900 ml

8. In surgical patients typically receive isotonic fluids in the recovery room for 6-8 hours. The ideal _____ rate would be

- A. one and a half maintenance
- B. full maintenance
- C. half maintenance
- D. two-third maintenance

9. Adjustments in maintenance water is an important consideration in fluid management. In which condition will you decrease fluids

- A. fever
- B. hypothyroidism
- C. renal tubular acidosis
- D. burns

10. Teddy a 12-year old boy went to a fiesta with his older brother and feasted with friends. 6 hours prior to admission he started to have many bouts of vomiting and diarrhea. He was brought to the ER. Last urine output was 5 hours ago. CR 110/min BP 90/70 sunken eyeballs, dry mucous membranes, poor skin turgor, CRT>2 secs, cool skin and pale. You will give an isotonic fluids bolus 20mg/kg in

- A. 20 mins
- B. 30 mins
- C. 1 hour
- D. 2 hours

11. Which of the following is the predominant intracellular cation?

- A. sodium
- B. potassium
- C. phosphorous
- D. calcium

12. DKA patients has the following except

- A. hyperosmolality
- B. hyponatremia
- C. hypokalemia
- D. acidosis

13. One of the following conditions will need lowering of fluid requirements

- A. burns
- B. salicylate intoxication
- C. paralyzed patient
- D. phototherapy

14. In patients with prerenal acute kidney injury

- A. BUN/Crea < 20
- B. no response to fluid challenge
- C. urinary Na >40 meq/L
- D. fractional excretion of Na <1%

15. ECG findings in hyperkalemia includes

- A. flattened T wave
- B. depressed ST segment
- C. wide QRS complex
- D. appearance of U wave & P wave

16. On physical exam the skin of patient with hypertonic dehydration will be

- A. cold
- B. dry
- C. clammy
- D. doughy

17. In the treatment of hypernatremia, one should

- A. replace ongoing losses in the next time shift
- B. restore volume first if the patient is in shock
- C. determine serum Na levels strictly after 48 hrs
- D. increase IVF rate if serum Na decreases too rapidly

18. One of the following will NOT have an increased anion gap metabolic acidosis:

- A. Methanol intoxication
- B. Uremia
- C. Diarrhea
- D. DKA

19. In increased extracellular volume there is

- A. secretion of renin
- B. activation of the sympathetic nervous system
- C. RAAS activation
- D. release of the atrial natriuretic factor



20. At which tubular segment does mannitol act?

- A. proximal convoluted tubule
- B. thin ascending loop of Henle
- C. distal convoluted tubule
- D. collecting duct

UTI

1. P.J., four-month old male, presents with high-grade fever associated with vomiting. On p.e., he is irritable, febrile, and with some signs of dehydration. Urinalysis reveals pyuria. Primary consideration is:

- a) Pyelonephritis
- b) Pyelitis
- c) Cystitis
- d) Asymptomatic bacteriuria

2. Which finding is suggestive of acute cystitis rather than acute pyelonephritis?

- a) Pyuria with WBC casts
- b) Normal ESR
- c) Positive leukocyte esterase test
- d) Photopenic area on radionuclide renal scan

3. Children with P blood group can develop recurrent pyelonephritis in the absence of vesicoureteral reflux because:

- a) Immunoglobulin A is deficient.
- b) the attached type I fimbriae of the E. coli strain are mannose-sensitive.
- c) obstruction is present.
- d) the receptor for type II fimbriae is present on both the uroepithelial cell membrane and the P blood group erythrocytes.

4. Which feature is NOT considered a risk factor for urinary tract infection?

- a) Pinworm infestation
- b) Wiping from front to back
- c) Labial adhesion
- d) Constipation

5. P.J., four-month old male, presents with high-grade fever associated with vomiting. On p.e. he is irritable, febrile, and with some signs of dehydration. Urinalysis reveals pyuria. Pending urine culture & sensitivity results, the most appropriate antimicrobial to give is:

- a) Ceftriaxone
- b) Nitrofurantoin
- c) Amoxicillin
- d) Ofloxacin

6. AB, 2-year old female, is brought to the OPD for foul-smelling urine. She would strain on urination. Neither vomiting nor fever was noted. Urinalysis reveals pyuria. What is the most appropriate to give pending culture results?

- a) Ampicillin
- b) Ceftriaxone
- c) Coamoxiclav
- d) Ofloxacin

7. A urine colony count of 10,000 col/ml is considered significant if the:

- a) child is symptomatic
- b) specimen yields two uropathogens
- c) patient is circumcised
- d) specimen is obtained by sterile collection bag

8. Chemoprophylaxis in urinary tract infection is indicated in:

- a) acute hemorrhagic cystitis
- b) sexually active adolescents
- c) covert bacteriuria
- d) calculi

9. An appropriate chemoprophylactic agent to give a one-year old infant with neuropathic bladder is:

- a) Cloxacillin
- b) Cefuroxime
- c) Cotrimoxazole
- d) Ciprofloxacin

10. Which is the most common abnormality detected in imaging studies for urinary tract infection in children?

- a) Hydronephrosis
- b) Neuropathic bladder
- c) Vesicoureteral reflux
- d) Posterior urethral valves

11. Urinary tract ultrasonography can:

- a) estimate kidney function
- b) detect vesicoureteral reflux Grades I & II
- c) identify hydronephrosis
- d) detect pyelonephritic scarring

12. Voiding cystourethrography can:

- a) detect pyelonephritic scarring
- b) identify ureteropelvic junction obstruction
- c) estimate kidney function
- d) detect bladder outlet obstruction

13. The advantage of radioisotopic voiding cystourethrogram (vcug) over contrast vcug is that it provides:

- a) precise grading of reflux
- b) less radiation exposure of the gonads
- c) clearer anatomic definition of the bladder
- d) evidence of a paraureteral diverticulum.

14. In Grades I and II vesicoureteral reflux:

- a) the likelihood of spontaneous resolution is high.
- b) ultrasound of the kidneys & bladder establishes the diagnosis.
- c) chemoprophylaxis is given for three months.
- d) more than 50% of children will ultimately require surgery.

15. What is the most common cause of lower urinary tract obstruction in male infants?

- a) phimosis
- b) posterior urethral valves
- c) urethral stricture
- d) cystolithiasis

16. B.K., 5-year old female, presents with recurrent urinary tract infection. What imaging study will best demonstrate the presence of pyelonephritic scarring?

- a) DMSA radionuclide renal scan
- b) Intravenous pyelography
- c) Ultrasonography
- d) Voiding cystourethrography

17. Jaime, 2-month old male, presented with high-grade fever and irritability. CBC revealed leukocytosis with predominance of segmenters; urinalysis pyuria. He was admitted, urine culture requested, and I.V. Ampicillin started. Today is his 3rd hospital day. Urine culture grew E. coli 100,000 col/ml intermediate to Ampicillin. Jaime is less irritable but still febrile (T 38.5°C). Which is most appropriate at this time?

- a) Continue Ampicillin while waiting for results of repeat culture and request for KUB ultrasound.
- b) Request for KUB ultrasound first then immediately change Ampicillin if ultrasound is abnormal.
- c) Request for repeat urine culture, change Ampicillin based on initial sensitivity studies, and request for KUB ultrasound.
- d) Repeat urine culture, change Ampicillin based on initial sensitivity studies, and request for STAT vcug.

ADOLESCENT MEDICINE

1. The correct sequence of pubertal development among females is:

- a. Thelarche, adrenarche, menarche, peak height velocity
- b. Thelarche, adrenarche, peak height velocity, menarche
- c. Adrenarche, thelarche, peak height velocity, menarche
- d. Adrenarche, thelarche, menarche, peak height velocity



2. The correct sequence of pubertal development among males is:

- adrenarche, testicular enlargement, peak height velocity
- adrenarche, peak height velocity, testicular enlargement
- testicular enlargement, adrenarche, peak height velocity
- testicular enlargement, , peak height velocity. adrenarche

3. Delayed puberty among females is observed as follows, EXCEPT

- prepubertal breast stage 1 beyond 13 years old
- pubic hair stage 1 persists beyond 14 years old
- failure to menstruate beyond 16 years of age
- menstruation occurs 3 months after menarche beyond 12 years of age

4. The hallmark of this stage of adolescence is the need for autonomy

- Pre-adolescence
- Early adolescence
- Middle adolescence
- Late adolescence

5. Vision screening among adolescents must be done

- once a year
- once every 2 years
- once every adolescent stage
- once during adolescence

6. Carla, 17 years old, comes in to your clinic for immunization certification prior to entering college to take up nursing. Her mother confidently claims that she has completed her immunization from the local health center by 9 months. As her doctor, you decided to recommend full catch-up immunizations. Will Japanese encephalitis vaccine be part of your recommendation?

- Yes, she is recommended to be given 1 dose before she turns 18
- Yes. she is recommended to be given 2 doses 1 year apart
- No, it is no longer indicated for her age group
- No, it is only indicated for special groups

7. The CRAFFT mnemonic tool is specifically designed to screen for adolescents'

- tobacco use
- tobacco and alcohol use
- alcohol and drug use
- drug use

8. Psychosocial assessment for teens is recommended to be done

- Every visit
- Annually
- Every stage of adolescence
- Only when they have psychosocial concern

9. Which statement regarding adolescent development is not true?

- In girls, the first sign of puberty is breast bud development
- Adolescents experience asymmetric growth beginning with enlargement of the hands and feet, followed by the rames and legs, finally, the trunk and chest
- Some degree of breast hypertrophy, typically bilateral, occurs in ~50% of boys during Tanner stages 2-3
- It is abnormal for early adolescents to be preoccupied with their body changes and feel that everyone is staring at them

10. A 17 year old girl has abdominal pain, A palin film shows a calcification in the right lower quadrant. Unltrasound shows an ovarian mass. The most likely diagnosis is

- Mature cystic teratoma
- Malignant teratoma
- Choriocarcinoma
- Embryonal carcinoma

11. Stereotypical adolescence refers to:

- Pre-adolescence
- Early adolescence
- Middle adolescence
- Late adolescence

HEMORRHAGIC DISORDERS

1. A 7 year old girl requiring a tonsillectomy and adenoidectomy undergoes pre-operative laboratory testing by her surgeon revealing a prolonged activated partial thromboplastin time (PTT) of 150 seconds (normal range 22-36 seconds). Her prothrombin time (PT) is normal. She had previously had 2 dental extractions that were uneventful. She otherwise has no personal or family history of bleeding. Which of the following is most likely:

- Factor VIII activity of 2%
- Factor IX activity of 2%
- Factor VII activity of 2%
- Factor XI activity of 2%
- Factor XII activity of 2%

2. You were asked to consult on a newborn on day of life 2 due to excessive bleeding after circumcision. The PTT is prolonged and the PT is normal.

- Factor VIII deficiency
- Factor IX deficiency
- Factor XI deficiency
- Factor XII deficiency
- All the factor levels are normal for age

3. You are asked to consult on a newborn female with purpura fulminans. Upon taking the medical history, you learn that this child had a male sibling who died in the neonatal period after presenting with purpura fulminans. She has 3 other siblings who are healthy and did not have purpura fulminans. This child's underlying condition leads to which physiologic consequence:

- Excess von Willebrand factor high molecular weight multimers
- Decreased fibrinogen
- Inability to inactivate factor VIII
- Decreased production of plasminogen
- Thrombocytopenia

4. A 1 year old male presents to the emergency room with irritability and vomiting, and a CT scan demonstrates a large intracranial parenchymal hemorrhage. The mother reports that his only other bleeding symptom was prolonged bleeding from the umbilical stump. The patient comes from a large pedigree with numerous male and female first and second degree relatives, however there is no history of excessive bleeding in any of them. Which of the laboratory test patterns are most consistent with this history?

- Normal PT and PTT.
- Prolonged PT, normal PTT.
- Normal PT, prolonged PTT.
- Prolonged PT, prolonged PTT.

5. A 10 day old male is being seen in the emergency room due lethargy and poor feeding. Her anterior fontanel is full. A CT scan demonstrates an intraparenchymal hemorrhage. Coagulation tests are ordered with the following results: PT—37 seconds (normal 9.7-11.2 seconds) and a PTT of 66 seconds (normal 22-36 seconds). This child may have which of the following factor deficiencies:

- Factor VII.
- Factor VIII.
- Factor IX.
- Factor X.
- Factor XI.

6. A 14 year old female with osteomyelitis is receiving antibiotics at home via a percutaneously inserted central catheter (PICC line). She has developed an abscess despite antibiotic therapy and requires incision and drainage. The orthopedic surgeon orders a PT and PTT. The patient has never had any bleeding symptoms. She had 2 teeth extracted when she was 3 years old and a tonsillectomy and adenoidectomy at the age of 7 years neither of which resulted in excessive bleeding. The PT is 16.2 seconds (normal 9.7-11.2 seconds) and a PTT of 61.3 seconds (normal 22-36 seconds). The most appropriate next step is:

- Order a fibrinogen level.
- Order levels of factors II, V and X.
- Repeat the PT and PTT.
- Determine the details regarding sample procurement.
- Proceed with the procedure without further testing.



7. A 4 year old male is in the intensive care unit intubated and sedated. You are asked to consult due to the presence of numerous generalized petechiae and some large ecchymosis on the abdomen and trunk. Laboratory evaluation demonstrates a platelet count of $45 \times 10^9/L$, a PT 15.4 seconds (normal 9.7-11.2 seconds), a PTT of 48 seconds (normal 22-36 seconds), and a fibrinogen level of 0.87 g/L (normal 2-4 g/L). Which of the following most likely led to these clinical findings:

- A. Immune thrombocytopenic purpura (ITP).
- B. Systemic lupus erythematosus (SLE).
- C. Congenital hypofibrinogenemia.
- D. Disseminated Intravascular Coagulation
- E. Vitamin K deficiency

8. For the child in the above scenario, the most effective therapy to control his DIC is which of the following:

- A. Treatment of underlying disease
- B. Fresh frozen plasma.
- C. Cryoprecipitate.
- D. Platelet transfusion.
- E. Exchange transfusion.

9. A 3 day old infant is brought to the ER due to a seizure. A CT scan demonstrates massive intracranial hemorrhage. On your examination, the child has numerous bruises on the abdomen and trunk. Which of the below scenarios is most likely:

- A. The baby was born to an infant of a diabetic mother.
- B. The baby was born at home.
- C. The baby is exclusively breastfed.
- D. The baby has craniosynostosis.
- E. The baby had no prenatal care.

10. An 12 year old female with recurrent tonsillitis is referred for a tonsillectomy. Her surgeon orders pre-operative laboratory tests and the results demonstrate a PT of 10.2 seconds (normal 9.7-11.2 seconds) and a PTT of 58 seconds (normal 22-36 seconds). The most appropriate next test to order is:

- A. Factor VIII activity.
- B. Factor IX activity.
- C. Factor XI activity.
- D. Factor XII activity.
- E. A mixing study.

LEUKEMIA

1. What is the single most prognostic factor in Acute Lymphoblastic Leukemia?

- A. Age at diagnosis
- B. Initial white blood cell count
- C. Absence of poor risk chromosomal abnormalities
- D. Effective treatment

2. The risk of developing Acute Lymphoblastic Leukemia is increased in:

- A. the second twin with a twin diagnosed with ALL during the first year of life
- B. children with Down Syndrome, Bloom Syndrome and Fanconi anemia
- C. exposure to medical diagnostic radiation in both utero and in childhood
- D. All of the above

3. This alone is adequate to establish a diagnosis of acute leukemia:

- A. Complete history and physical examination showing signs and symptoms compatible with leukemia
- B. Complete blood count and peripheral blood smear showing anemia, thrombocytopenia and peripheral blasts
- C. Bone marrow morphology showing >25% of the bone marrow cells as a homogenous population of lymphoblasts
- D. Chromosomal analysis showing characteristic abnormalities in acute leukemia

4. Which of the following adversely affect the outcome in patients with ALL?

- A. Age at diagnosis between 1 to 10 years old
- B. Hyperdiploidy and Trisomy 4, 10 and 17 on chromosomal analysis
- C. Presence of Philadelphia chromosome
- D. WBC count of $< 50,000/uL$

5. The aim of the induction phase of chemotherapy in the treatment of acute leukemia is:

- A. to bring the haemoglobin, neutrophil and platelet counts to near-normal levels.
- B. to eradicate the leukemic cells from the bone marrow to $<5\%$ blast population
- C. to relieve the patient from the signs and symptoms of bone marrow and organ infiltration of the leukemic cells
- D. to prevent CNS and bone marrow relapses

6. What is/are the most important prognostic indicators among ALL patients who had relapse?

- A. site of relapse (CNS relapse worse than bone marrow relapse)
- B. Immunophenotype (B-cell worse than T-cell)
- C. Time of relapse from diagnosis (occurring during or shortly after treatment worse than occurring years after treatment)
- D. Age at diagnosis (being diagnosed at 8 years old worse than being diagnosed at 15 years old)

7. An 11-year-old male presented with one month history of intermittent low-grade fever associated with malaise, fatigue and an enlarging abdomen. On physical examination, the abdomen was distended, with the spleen palpated 8cm below the left costal margin. CBC showed Hgb 110, Hct 37, WBC 230, segmenters 0.45, bands 0.10, myelocytes 0.12, metamyelocytes 0.06, promyelocyte 0.02, lymphocytes 0.15, eosinophils 0.07, basophils 0.03, platelet count 655. What is the characteristic chromosomal finding found in the patient's clinical condition?

- A. Trisomy 21 mosaicism
- B. t (12;21) *ETV6-RUNX1*
- C. t (9;22) *BCR-ABL*
- D. hyperdiploidy

8. Which of the following statements best describe the association between leukemia and patients with Down Syndrome?

- A. In acute myelogenous leukemia, patients with Down Syndrome have much better outcome than non-Down children.
- B. Acute lymphoblastic leukemia (ALL) is more common than acute myelogenous leukemia (AML) in patients with Down Syndrome during the first three years of life.
- C. Patients with Down syndrome demonstrate decreased sensitivity to methotrexate and other antimetabolites, resulting in decreased drug toxicity.
- D. Acute leukemia is more frequent in the general population than in children with Down Syndrome.

9. Which of the following chromosomal abnormalities and genetic alterations in pediatric acute myelogenous leukemia signify a favorable prognosis, such that hematopoietic stem cell transplantation is only recommended after relapse?

- A. t(15;17) *PML-RARA*
- B. *FLT3* mutation
- C. 11q23 abnormalities or *MLL* rearrangements
- D. monosomy 7 (-7)

10. An infant with Down Syndrome was noted to have elevated white blood cell count, with peripheral blasts, anemia and thrombocytopenia, and associated with hepatosplenomegaly. Which of the following best describes his condition?

- A. It can occur in as high as 50% of infants with Down Syndrome.
- B. Most would require chemotherapy and regular blood transfusion at the onset.
- C. It usually resolves within three months of life.
- D. It can lead to acute leukemia because of the presence of the *MLL* gene rearrangements.



ANEMIA

1. A child with acute hemorrhage and anemia will present with:
 - a. Nausea
 - b. Hypotension
 - c. Jaundice
 - d. Tachycardia
 - e. All of the above
2. A 5-year old boy presenting with Hgb of 8g/dl & HCT of 24%. What is your next step:
 - a. Give vitamin B12
 - b. Give Ferrous Sulfate
 - c. Request CBC with RBC indices, retic count, PBS
 - d. Request for type specific & prop cross-matched PRBC
3. A 6-year old girl was brought to your clinic for pallor. CBC showed: Hgb | 9g/dl RDW | minimally elevated MCV | 60 Retic count | normal
The most likely diagnosis is:
 - a. Iron deficiency anemia
 - b. Megaloblastic anemia
 - c. Thalassemia trait
 - d. Hemolytic anemia
4. In giving Ferrous Sulfate in Iron Deficiency Anemia, how many hours after iron administration do you expect retic count to increase?
 - a. 12 – 24 hours
 - b. 24 – 36 hours
 - c. 48 – 72 hours (48-90 hours)
 - d. None of the above
5. The following are physiologic adjustment to Anemia. Except:
 - a. Increased cardiac output
 - b. Augmented O₂ Extraction
 - c. Higher levels of EPO production
 - d. Decreased 2,3 DPG
 - e. None of the above
6. Thalassemia is an inherited disorder of:
 - a. Synthesis of HEME
 - b. Synthesis of globin protein chain
 - c. Both
 - d. Neither
7. The 2 Major types of globin chains making up the adult HGB (Hgb A) are the following:
 - a. $\alpha + \beta$ (beta)
 - b. $\alpha + \delta$ (delta)
 - c. $\alpha + \gamma$ (gamma)
 - d. None of the above
8. In hereditary spherocytosis, an abnormality of this protein (component of the cytoskeleton responsible for RBC shape) will clinically manifest as severe hereditary spherocytosis:
 - a. Ankyrin – 1
 - b. Band 3
 - c. Protein 4.2
 - d. β spectrin
 - e. α spectrin
9. The following features that will distinguish between Diamond Blackfan Anemia & Transient Erythroblastopenia of childhood is/are:
 - a. Age at onset
 - b. HbF
 - c. ADA
 - d. i antigen
 - e. all of the above
10. All of the following statements are true for G6PD except:
 - a. Most frequent enzyme defect
 - b. X-Linked
 - c. More frequent in females than males
 - d. Most common manifestations are neonatal jaundice and episodic acute hemolytic anemia
 - e. None of the above

SHORT STATURE, THYROID, PARATHYROID

1. Which of the following statements is/are true regarding short stature?
 - a. It is defined as height 3 standard deviations below the mean for age and sex
 - b. The most common cause is familial short stature
 - c. The most important clinical parameter to support a pathologic cause is delayed bone age
 - d. Bone age equivalent to chronological age is consistent with familial short stature
 - e. Causes of proportionate short stature includes untreated hypothyroidism, neglected Vit D abnormalities and achondroplasia
2. A 5 year child with short stature due constitutional delay in growth and puberty has the following characteristics:
 - a. projected height is 10 cm below midparental height
 - b. target height is synonymous to projected height
 - c. growth velocity is 3 cm/year
 - d. bone age is equal to height age
 - e. adult height is within midparental height
3. A 14 year old adolescent in your clinic is being evaluated for short stature. Pertinent findings include delayed bone age, delayed onset of puberty, and a stature that is normal for the child's bone age. In addition, the mother states that the child's father grew taller in college and wonders if this will happen with their son. The most likely cause of these findings is:
 - a. Familial short stature
 - b. Chromosomal abnormality
 - c. Constitutional delay of growth and puberty
 - d. Growth hormone deficiency
 - e. Kallman's syndrome
4. Which chromosomal abnormality is associated with short stature in girls?
 - a. Down syndrome
 - b. Turner syndrome
 - c. Klinefelter's syndrome
 - d. Prader-Willi syndrome
 - e. Noonan's syndrome
5. An 8 year old boy was brought for concerns about his growth. History and PE were unremarkable. Review of height records show that on April 1, 2017 he was 110 cm. Today, Feb 1, 2018 his height is 118 cm. His annualized growth velocity is:
 - a. 6 cm
 - b. 5 cm
 - c. 8 cm
 - d. 4cm
6. Which of the following statements on Congenital Hypothyroidism is correct?
 - a. It is easy to make a diagnosis based on physical examination at birth
 - b. It is a reversible cause of mental retardation
 - c. Normal growth and development is expected if treatment is started early
 - d. The most common cause is thyroid dysgenesis
7. You receive the results of newborn screening and find that the TSH, done at day 2, is 82. The baby is now 7days old. What is your best option?
 - a. Have the child come to the clinic next week for a reevaluation.
 - b. Get blood sample for fT4 and TSH for confirmation
 - c. Begin thyroid supplementation immediately.
 - d. Reassure the family that these are normal results.
8. You are evaluating a 13-year-old girl for Graves' disease. Which of the following signs would not support this diagnosis?
 - a. An enlarged thyroid
 - b. Exophthalmos
 - c. Precordial thrill
 - d. Blood pressure of 110/80



9. The routine screening of a newborn in your practice indicates that the baby has congenital hypothyroidism and is in need of a referral to a pediatric endocrinologist. The baby is now one month old. The best approach is:

- Start levo thyroxine
- Start iodine salts
- Start Potassium iodide
- Have thyroid UTZ done

10. An 11-month-old boy has just started walking and is found to have severely bowed legs. In the history, you learn that he is exclusively breastfed with very little other food intake. You must consider:

- Trauma
- Developmental variation
- Chromosomal abnormality
- Rickets

11. A two – month- old female was brought to the ER for seizures. She has no history of birth trauma, fall and is afebrile. Serum ionized CA is low, Phosphorous is normal to low, serum Mg is low, PTH is low Possible etiology/etiologies is/are:

- hypoparathyroidism
- Magnesium deficiency
- Vit D deficiency
- Vit D resistance

12. Secondary hyperparathyroidism leading to rickets may be due to the following cause/s:

- renal tubular acidosis
- chronic liver disease
- nutritional deficiency
- Paget's disease

13. A two day old infant experiences a prolonged seizure with respiratory arrest requiring intubation. BMP reveals hypocalcemia, and CXR demonstrates absent thymic shadow. Genetic testing is likely to reveal:

- Trisomy 21
- Trisomy 18
- Deletion of 22q11.2
- Deletion of 15q13

RHEUMATOLOGY

- TRUE statement regarding GROWING PAINS:
 - presents as nocturnal pain with no morning stiffness
 - commonly affects children more than 10 years of age
 - (+) warmth, erythema and tenderness with no swelling on the joints
 - expected lab findings of normal CBC with high ESR and CRP
- A differential diagnosis in a patient presenting with persistent chronic monoarthritis is:
 - Viral arthritis
 - Reactive arthritis
 - Septic arthritis
 - TB arthritis
- A 3 year old patient with Henoch Schonlein Purpura presenting with severe abdominal pain with vomiting. Aside from the purpura, he has diffuse tenderness on the abdomen with guarding and hypoactive bowel sounds and a palpable mass.
 - Malrotation
 - Intussusception
 - Intestinal Perforation
 - Volvulus
- In a patient with presenting with arthritis, what clues in the History/PE/lab data should make you suspect hematologic malignancy?
 - Additive type of pain that is relieved with massage.
 - Pain is disproportionate to the objective findings
 - Nocturnal pain with normal CBC/ESR/CRP
- Rheumatoid factor positivity is seen in this type of Juvenile Rheumatoid Arthritis:
 - Systemic
 - Pauci/Oligoarticular
 - Polyarticular

- Baby girl KC was delivered to a mother with SLE (positive for anti Ssa and anti-Ssb). She has facial rash with heart rate of 60/min. What important test should be checked on the baby?
 - Chest xray
 - 2D echo
 - 15-L ECG
 - Complete blood count
- A 15 yo F with lupus presents with deep venous thrombosis, the next test that should be requested is:
 - Antiphospholipid antibody
 - Anti-Sm
 - Anti-dsDNA
 - Anti SSa and SSB
- One of the following is a criterion for the diagnosis of Kawasaki disease:
 - Lymphadenopathy >1.5 mm
 - Erythematous vesiculo-bullous rash on the trunk and extremities
 - Swelling of the hands and feet with erythema of the palms/soles
 - Bilateral exudative conjunctival injection
- A 17 yo M was brought to the ER due to seizures which was preceded by headache and vomiting. BP R arm 160/120 L arm 140/100, diminished dorsalis pedis on the R. The most likely diagnosis is:
 - Kawasaki disease
 - Granulomatosis with polyangiitis
 - Polyarteritis Nodosa
 - Takayasu arteritis
- A 4 year old F was diagnosed to have Polyarticular Juvenile Idiopathic Arthritis and was started on Ibuprofen but with no clinical improvement. The next treatment option is:
 - Change to another NSAID (e.g Naproxen)
 - Prednisone
 - Methotrexate
 - TNF blocker

GENETICS

- A newborn was referred for genetic evaluation. He is small for gestational age, with clenched hands described as index finger overlapping the 3rd digit and the 5th digit overlapping the 4th, microcephaly, prominent occiput, ventricular septal defect, short sternum, and rocker-bottom feet. The newborn most probably has this karyotype:
 - 47, XY +21
 - 47, XY +18
 - 47, XY +13
 - 45 XO
 - None of the above
- This type of disorder is the most common chromosome disorder and the single most common genetic cause of moderate mental retardation.
 - Fragile X Syndrome
 - Edwards Syndrome
 - Down Syndrome
 - Klinefelter Syndrome
 - None of the above
- A baby referred to you from the NICU presented with the following features: microphthalmia, microcephaly, scalp defects, midline cleft lip and palate, polydactyly and a heart murmur. The newborn probably has:
 - Down Syndrome
 - Edwards Syndrome
 - Marfan Syndrome
 - Patau Syndrome
 - None of the above
- An 18 year old female is referred for short stature. History and physical examination reveal primary amenorrhea, lack of secondary sexual characteristics, shield chest and widely-spaced nipples. The patient most probably has:
 - Turner Syndrome
 - Williams Syndrome
 - Prader Willi Syndrome
 - Di George Syndrome
 - None of the above



5. A 20 year old male was referred from the outpatient clinic. He presented with developmental delay, long limbs, small genitalia, gynecomastia and reduced facial and body hair. The following result is expected when you do a chromosomal analysis.

- A. 47, XXY
- B. 47, XYY
- C. 47, XXX
- D. 45, XO
- E. None of the above

6. A 2 year old girl was brought to your clinic for speech delay. On physical examination, you noted microcephaly, hypertelorism, epicanthus and retrognathia. The mother describes the girl's cry as high-pitched and sounded like that of a cat. The patient most probably has:

- A. Prader Willi Syndrome
- B. Cri Du Chat Syndrome
- C. Edwards Syndrome
- D. Cornelia De Lange Syndrome
- E. Beckwith Wiedemann Syndrome

7. This condition is present in an individual who has 2 or more different cell lines derived from a single zygote and is usually the result of mitotic nondisjunction.

- A. Uniparental disomy
- B. Genomic imprinting
- C. Translocation
- D. Mosaicism
- E. None of the above

8. This autosomal dominant disorder arises from a mutation in the FBN1 gene and is characterized by presence of malar hypoplasia, retrognathia, increased arm span to height ratio, aortic root aneurysm, and dislocated lenses.

- A. Ehler Danlos Syndrome
- B. Marfan Syndrome
- C. Klinefelter Syndrome
- D. Marfanoid Hypermobility Syndrome
- E. Loays-Dietz Syndrome

9. A severely obese 7 year old male came to the outpatient department for developmental delay and food-seeking behavior. On physical examination, he was found to have almond-shaped eyes, thin upper lip, a downturned mouth and small hands relative to body size. The patient most probably has:

- A. Williams Syndrome
- B. Angelman Syndrome
- C. Prader-Willi Syndrome
- D. Marfan Syndrome
- E. None of the above

10. This policy of the State ensures that every baby born in the Philippines is offered the opportunity to undergo newborn screening, and thus be spared from heritable conditions that can lead to mental retardation and death if undetected and untreated.

- A. Rare Disorder Act of the Philippines
- B. Newborn Screening Act of 2004
- C. Reproductive Health Act of 2004
- D. National Health Insurance Act
- E. None of the above

11. The heritable conditions currently being tested by the Philippine Newborn Screening Program includes the following, except :

- A. Phenylketonuria
- B. Maple syrup urine disease
- C. Galactosemia
- D. Gaucher disease
- E. Glucose-6-phosphate dehydrogenase deficiency

12. A 1 week old baby was referred for a 4 day history of vomiting and poor feeding associated with decrease in sensorium which gradually progressed to coma. A sweet odor in urine, sweat and cerumen was noted. The most likely diagnosis for the patient is:

- A. Maple syrup urine disease
- B. Galactosemia
- C. Phenylketonuria
- D. G6PD deficiency
- E. Pompe Disease

13. The treatment for the above disorder include the following except:

- A. Intravenous hydration using fluids of high dextrosity and intralipids
- B. Quick removal of branched-chain amino acids from tissues and body fluids
- C. Branched-chain amino acid-free milk formula
- D. Peritoneal dialysis or hemodialysis
- E. Diet high in branched-chain amino acids

14. A 4 month old baby is referred for seizures, hypertonicity, seborrheic rash and a mousy odor. This patient most probably has:

- A. Phenylketonuria
- B. Maple syrup urine disease
- C. Galactosemia
- D. G6PD deficiency
- E. None of the above

15. Which is true regarding treatment of the above disorder?

- A. Diet low in branched-chain amino acids should be started
- B. Therapy can be discontinued in adulthood
- C. A phenylalanine-restricted diet should be started
- D. No diet restriction is recommended
- E. None of the above

16. This particular amino acid disorder is the most common inborn error of metabolism in the Philippines.

- A. Phenylketonuria
- B. Galactosemia
- C. Methylmalonic aciduria
- D. Maple syrup urine disease
- E. None of the above

17. In this type of inborn error of metabolism, accumulation of excessive galactose in the body can cause many problems, including liver damage, brain damage and cataracts.

- A. Galactosemia
- B. Citrullinemia
- C. Phenylketonuria
- D. Homocystinuria
- E. None of the above

IMMUNOLOGY

1. Which of the following cases would warrant a workup for possible primary immunodeficiency?

- a. a newborn with bilateral corneal opacities and congenital heart disease
- b. a newborn with cleft palate, coarctation of the aorta and seizures
- c. a 1 year old with Z score of -2 with history of chronic diarrhea being fed alternately with rice water or dilute milk formula
- d. a 2 year old with acute leukemia presenting with fever and low WBC count

2. A 3-month old baby girl was noted to have a non-healing wound in her left thigh. Her umbilical cord stump fell at 10 weeks of age. Which parameter in her CBC will be MOST helpful in determining the type of immunodeficiency she has?

- a. hemoglobin level
- b. absolute lymphocytic count
- c. platelet count
- d. absolute neutrophil count



3. A 2 year-old boy presents with recurrent bacterial pneumonia and sinusitis for one year. Symptoms began at 8 months of age. Which immunologic cell marker will most probably be low?
- CD 4
 - CD 8
 - CD 19
 - CD 56
4. Which test is the most cost-effective test for T cell function?
- the pre and post pneumococcal vaccine antibody vaccine titers.
 - PPD
 - the CH50
 - CD4/CD8 ratio
5. In a child with a T cell defect, which type of vaccine may be potentially dangerous to give?
- Hepatitis B
 - Pneumococcal conjugate
 - Tetanus
 - Varicella
6. Which of the following are features of an immunodeficiency that involves cell mediated immunity?
- infections become apparent after the 6 months of age
 - infections with encapsulated organisms
 - infections are more likely with intracellular organisms
 - infections are more likely with extracellular organisms
7. The lower limit for normal value for an absolute lymphocyte count is:
- 500 u/L
 - 1500 u/L
 - 1800 u/L
 - 2000 u/L
8. Majority of the primary immunodeficiency disorders involve which component of the immune system?
- B cell
 - T cell
 - Phagocytes
 - Complement system
9. Which child will benefit the most from Intravenous Immunoglobulin Infusions?
- a 2 year old boy with recurrent streptococcal pneumonia and absent tonsils
 - a 9 month old child with recurrent gastroenteritis and low serum IgA level
 - a 5 year old boy with an absolute neutrophil count of <1500
 - an 8 year old girl with recurrent neisserial meningitis
10. A 4 month old male infant was brought to the emergency room for high grade fever, cough and difficulty of breathing. This was the patient's 3rd ER visit for the same problems since birth. Each time, he was confined and needed IV antibiotics to cure his infections. He has also had 2 bouts of diarrhea in the past 2 months. Family history revealed the presence of atopic diseases.
- On physical examination, the child was noted to be in moderate respiratory distress. HEENT was essentially normal except for an erythematous pharynx with unappreciable tonsils. There was note of intercostal retractions, crepitant rales and occasional wheezing. Initial labs showed CBC: Hgb-90, WBC-4 Seg 80 L20 platelet adequate. CXR: pneumonia and absence of thymic shadow. Stool exam and urinalysis were normal.
- What primary immunodeficiency disorder would this patient most likely have?
- disorder of T cells
 - disorder of B cells
 - phagocytic disorder
 - complement disorder
 - combined T and B cell

TOXICOLOGY

1. What is the first thing to check in poisoned patients?
- Symptoms of toxicity
 - Vital signs
 - Toxicant identity
 - Route of exposure
2. In patients without a witnessed exposure the following suggests a diagnosis of poisoning:
- school age of the child who fell after running around
 - a toddler having seizures after fever of 4 days
 - a toddler gagging after playing in the kitchen floor
 - a teen taking a tablet of paracetamol for her menstrual cramps
3. Which of the following *would increase the suspicion of child abuse* in the setting of a childhood ingestion?
- An 18 – month old child was observed to ingest two paracetamol tablets from his mother's bedside table.
 - A 30 – month old child is found comatose on the living room floor the night after the parent's 10th anniversary party.
 - A 12 – month old child swallows a small button battery that he finds on the floor of the living room.
 - A 6 – month old child ingests five aspirin tablets that she finds in the mother's purse.
4. A comatose teen believed to have attempted suicide has received initial stabilization of her airway, breathing and circulation. The next step that should be considered is...
- CT of brain and toxicology screen
 - GI decontamination with activated charcoal lavage
 - Administration of hypertonic dextrose, thiamine and naloxone
 - Determination of serum electrolytes and anion gap
5. Which is the most compatible with sympathomimetic (e.g. methamphetamine) overdose?
- Dilated pupils, diarrhea, sweating
 - Dilated pupils, hypertension, flushing
 - Dilated pupils, flushing, hyperthermia
 - Dilated pupils, bradycardia, flushing
6. The toxidrome of coma, hypoventilation and pinpoint pupils is indicative of poisoning due to
- Opiates
 - Methamphetamine
 - Isoniazid
 - Salicylates
7. A 16 year old was seen in the bathroom floor holding a bottle of pesticide. She recently had a fight with her mother, since she did not want to help out in their vegetable garden. What signs would you look for to *rule in organophosphate poisoning*?
- Pinpoint pupils, dry mouth, bradycardia, hypertension
 - Pinpoint pupils, salivation, tachycardia, hypotension
 - Pinpoint pupils, salivation, bradycardia, vomiting
 - Pinpoint pupils, salivation, constipation, hypertension
8. In decontaminating the patient in No. 7, what precautions should you take?
- Health care personnel should wear protective gear at all times
 - Decontaminate prior to doing resuscitation measures
 - Administer activated charcoal via nasogastric tube
 - Only A and C
 - all of the above are correct
9. Multiple dose activated charcoal is effective in enhancing elimination in drugs with this pharmacokinetic characteristic...
- rapid gastrointestinal absorption
 - undergoes enterohepatic recirculation
 - wide volume of distribution
 - enhanced renal clearance
10. Dialysis is indicated in:
- Phenytoin toxicity
 - Rifampicin overdose
 - Unremitting metabolic acidosis from metformin
 - Nickel poisoning



11. Activated charcoal lavage should be done in the following situations:

- a. Adult female who drank a whole bottle of ferrous sulfate
- b. A child ingested kerosene
- c. Teen who ingested toilet bowl cleaner
- d. Epileptic patient who took a month's worth of Phenobarbital

12. Which of the following should be routinely done in all children who ingested kerosene?

- a. gastric lavage with activated charcoal
- b. initiation of Penicillin G IV
- c. give oral sodium sulfate or any cathartic
- d. referral to gastro-intestinal service for emergency EGD

13. Gastric emptying may be indicated if:

- a. The patient has ingested a glass of ethanol
- b. The patient is asymptomatic but there is no effective specific antidote for the poisoning
- c. The patient is seen within 30 mins of ingesting a poisonous xenobiotic
- d. The patient inhaled a toxic gas

14. A 15 year old male is rushed to the emergency room for drowsiness, diarrhea and vomiting. On examination, his bp was 100/60, heart rate was 60/min. His respiration rate was 24/min. His pupils were pinpoint and coarse rales were noted in all lung fields. He reeked of a pesticide smell. His findings are compatible with which toxidrome:

- a. Opiate toxidrome
- b. Serotonergic syndrome
- c. Cholinergic excess syndrome
- d. Sympathomimetic syndrome

15. TRUE of urine alkalinization:

- a. used in methamphetamine poisoning
- b. should be done prior to chelation
- c. should always be followed by dialysis
- d. effective method of eliminating salicylates

16. Urinary acidification will enhance the elimination of:

- a. Marijuana
- b. Ecstasy
- c. Salicylates
- d. Paracetamol

17. TRUE in the interpretation and use of serum paracetamol levels

- a. Blood should be extracted immediately post-ingestion.
- b. Levels greater than 10 ug/ml taken 4 hours post-ingestion is toxic.
- c. Plot levels in the Rumack-Matthew nomogram to assess severity of toxicity
- d. Levels plotted below the line of the nomogram needs administration of antidote.

18. TRUE of N-acetylcysteine antidotal therapy in paracetamol ingestion:

- a. Can only be given after serum paracetamol levels are known
- b. Is no longer effective if given after 4 hours
- c. a total dose of 300mg/kg is needed regardless of patient's age
- d. use in repeated supratherapeutic ingestion is questionable

19. N- acetylcysteine is also an effective antidote for the following poisons:

- a. zinc phosphide
- b. phosphorus containing fireworks
- c. oxalic acid
- d. A and B only
- e. All of the Above

20. Managing a poisoned child ...

- a. laboratory examinations should be prioritized to document the exposure
- b. a pregnancy test is mandatory for all females who have menarche
- c. a blood serum paracetamol level is needed prior to giving NAC
- d. patients with a positive qualitative drug screen is an addict

NEONATAL CHOLESTASIS

1. Jaundice is clinically visible when total serum bilirubin level is:

- a. 0.5-1 mg/dl
- b. 2-3 mg/dl
- c. 5-6 mg/dl
- d. 8-10 mg/dl

2. Which of the following tests, evaluate the synthetic functions of the liver?

- a. AST, ALT, serum albumin
- b. PT and serum albumin
- c. alkaline phosphatase, ALT, AST
- d. PT, PTT

3. Baby Anton was delivered term, via NSD with good APGAR score. He was breastfed exclusively since birth with good suck. On his 4th day of life, he was noted to develop jaundice initially from the face which progressed down to the lower extremities. At 10th day of life, there was increase in the intensity of jaundice, with stools noted to be pale white and urine was dark yellow. However, he remained to have good suck, with good weight gain. Due to progression of jaundice consult was made. How should Baby Anton be managed ?

- a. Advise close observation of jaundice and exposure to sunlight daily.
- b. Discontinue breastfeeding then monitor jaundice.
- c. Continue breastfeeding and note for progression of jaundice.
- d. Request for bilirubin levels.

4. Cholestatic jaundice is defined as B2/TB :

- a. >20 %
- b. >30%
- c. 40%
- d. >50%

5. What is the most useful marker for malignant hepatic tumors?

- a. CEA
- b. AFP
- c. LDH
- d. ALT

6. Ultrasound finding suggestive of biliary atresia:

- a. dilated common bile duct
- b. enlarged gallbladder
- c. triangular cord sign
- d. dilated intrahepatic ducts

7. The portal triad contains the following:

- a. Lymphatic duct, hepatic artery, portal vein
- b. Bile duct, portal vein, hepatic artery
- c. Bile duct, hepatic vein, portal vein
- d. Bile duct, hepatic vein, hepatic artery

8. The best test for establishing diagnosis of Biliary Atresia is:

- a. HBT ultrasonography
- b. Liver biopsy
- c. Intraoperative cholangiogram
- d. ERCP

9. A 7-week old infant is brought for consult due to jaundice. Her blood test demonstrated a total bilirubin of 14 mg/dl with a direct fraction of 5.5 mg/dL. Which of the following disorders is the most likely diagnosis?

- a. ABO incompatibility
- b. Rh incompatibility
- c. Choledochal cyst
- d. Gilbert Disease

10. Late complication of choledochal cysts

- a. Cholangitis
- b. Gallstones
- c. Pancreatitis
- d. Cholangiocarcinoma



11. Neonatal cholestasis with hepatic synthetic dysfunction may lead to
 - a. Hypoprothrombinemia
 - b. acholic stools
 - c. dark-colored urine
 - d. jaundice
12. 2-month old infant who has undergone portoenterostomy suddenly become irritable with poor feeding. The patient has febrile episodes with progression of jaundice and sudden onset of acholic stools. Which of the following statements is incorrect?
 - a. One strategy to prevent this is the administration of TMP-SMX .
 - b. Prompt administration of steroids would reverse the course of the condition instantly.
 - c. Blood culture should be obtained and choice of antibiotics should be adjusted based on antimicrobial sensitivity.
 - d. If stools remain acholic and conjugated hyperbilirubinemia persists, a short-course of high-dose corticosteroids may be helpful.
13. A type II choledochal cyst is characterized by:
 - a. A large sacular dilatation of the common bile duct
 - b. A small segmental dilatation of the extrahepatic duct
 - c. A diverticulum of the gallbladder
 - d. A fusiform dilatation of the intrahepatic duct
14. A Primary hepatocellular damage is reflected by abnormalities in:
 - b. aminotransferase concentrations
 - c. alkaline phosphatase
 - d. gamma-glutamyl transpeptidase
 - e. all of the above
15. A six-week old apparently well male infant weighing 4.0 kg developed jaundice, with passage of pale yellow stools. Physical exam showed generalized moderate jaundice with hepatomegaly, no splenomegaly. Baby's blood type is type O+ while mother's blood type is type O+. Total bilirubin was 23mg/dl with direct bilirubin of 10mg/dl. Peripheral smear and hepatobiliary ultrasound were unremarkable. HIDA scan revealed transit of bile to the intestines. TORCH assay was normal. Coomb's test was also negative. What is his condition?
 - a. Biliary atresia
 - b. Idiopathic neonatal hepatitis
 - c. Rh incompatibility
 - d. Sepsis

DERMATOLOGY

Case No. 1: A 10 month old female presents with a recurrent pruritic eruption that started at three months of age. Lesions consist of erythematous excoriated papules and plaques on the face and extensor aspects of the thighs and lower legs. Her mother had bronchial asthma as a child.

1. The most likely diagnosis is:
 - a. Atopic dermatitis
 - b. Allergic contact dermatitis
 - c. Fungal infection (Tinea faciale and corporis)
 - d. Seborrheic dermatitis
2. The diagnosis of Atopic dermatitis is based on:
 - a. characteristic findings on skin biopsy
 - b. increased serum IgE levels
 - c. the presence of recurrent pruritic papules and plaques in areas of predilection in a child with a history of atopy
 - d. serum eosinophilia
3. The majority of children with Atopic dermatitis can be managed by using the following:
 - a. strict enforcement of dietary restrictions
 - b. liberal use of emollients and the judicious use of topical steroids
 - c. topical anti-fungal and anti-bacterial creams
 - d. oral Prednisone and Cyclosporine

Case No. 2: A five month old baby boy presents with a history of diffuse but well marginated erythema over the genitalia and inner thighs. With time, the erythema spread to the inguinal folds and papules/pustules were noted at the periphery. The patient had a history of diarrhea for five days prior to the appearance of the rash.

4. The most likely diagnosis is:
 - a. Diaper candidiasis
 - b. Intertrigo
 - c. Irritant contact diaper dermatitis
 - d. Seborrheic dermatitis
5. The diagnosis of case no. 2 is based on the following:
 - a. presence of a sharply demarcated erythema with scaling at the periphery
 - b. presence of satellite papules and pustules
 - c. demonstration of pseudohyphae on KOH smear
 - d. all of the above
6. Predisposing factors in the development of a diaper rash are:
 - a. direct irritant effect of urine on the skin
 - b. occlusive and moist nature of the diaper area
 - c. use of disposable diapers rather than cloth diapers
 - d. frequent changing of the infant's diaper when it is wet (6-8x/day)

Case No. 3: A three month old baby boy presents with a two week history of weeping erythematous eczematous plaques in the diaper area. Similar lesions were later noted around the mouth and on the cheeks, hands and feet. The lesions are non-pruritic. There was also note of thinning of the scalp hair, nail dystrophy and diarrhea. His mother had stopped breastfeeding six weeks ago and he had been shifted to a hypoallergenic milk formula.

7. The most likely diagnosis is:
 - a. Acrodermatitis enteropathica
 - b. Atopic dermatitis
 - c. Seborrheic dermatitis
 - d. Staphylococcal scalded skin syndrome
8. The clinical diagnosis of case no. 3 can be confirmed by the following laboratory finding:
 - a. low plasma zinc levels
 - b. characteristic skin biopsy findings
 - c. KOH smear positive for short spores and septate hyphae
 - d. blood cultures positive for Staph aureus
9. The management of case no. 3 involves the following:
 - a. oral zinc therapy with monitoring of plasma zinc levels
 - b. topical steroids, emollients and sedating anti-histamines
 - c. topical anti-fungal creams
 - d. intravenous Oxacillin for 10 days

Case No. 4: A three year old boy presents with a five day history of erythematous vesicles and pustules that rapidly developed into honey colored crusted plaques. The lesions are non-pruritic and are located on the face and upper extremities. On PE, he has a temperature of 38.2 C.

10. The most likely diagnosis is:
 - a. Candidiasis
 - b. Impetigo contagiosa
 - c. Scabies
 - d. Varicella
11. The drug of choice for case no. 4 is:
 - a. oral Acyclovir
 - b. oral Cloxacillin
 - c. Mupirocin cream
 - d. Permethrin 5% cream



12. Staphylococcal scalded skin syndrome is predominantly seen in young infants less than five years old. This age group predilection is explained by:
- an immature epidermal barrier allowing easy entry of Staph aureus from the environment
 - lack of circulating antibodies against the toxins of Staph aureus
 - decreased renal clearance of the toxins of Staph aureus
 - all of the above

Case no. 5: A one year old male presents with an itchy skin rash of one month duration. He first developed erythematous pruritic papules and vesicles on the lower abdomen, palms and soles. He was subsequently noted to have hyperpigmented nodules on the axillae and lateral trunk. With repeated scratching, the lesions on the hands and feet became crusted and eroded and he was prescribed Cotrimoxazole by his pediatrician a week ago. He was brought to your clinic because his mother felt that the pruritus was increasing in severity and new skin lesions have continued to appear. You chose to examine his mother as well and noted excoriated flesh colored papules on her areolae and umbilicus.

13. The most likely diagnosis is:
- Drug hypersensitivity reaction to Cotrimoxazole
 - Folliculitis and Furunculosis
 - Scabies
 - Varicella
14. The treatment of choice for the above condition is:
- A two week course of oral Prednisone and Cetirizine
 - A one week course of topical Mometasone ointment
 - Topical Permethrin 5% lotion
 - A five day course of oral Acyclovir

CHILDREN WITH SPECIAL NEEDS

- 1) What is the most common manifestation of physical abuse?
- bruises
 - burns
 - scars
 - bites
 - fractures
- 2) Fractures that strongly suggest abuse include the following EXCEPT:
- classic metaphyseal lesions
 - posterior rib fractures
 - fractures of the scapula
 - distal extremity fractures
 - none of the above
- 3) For sexual abuse cases, forensic evidence collection is important within this period because if the last incident occurred more than this golden period, the likelihood of recovering forensic evidence is extremely low
- ≤ 8 hours
 - ≤ 24 hours
 - ≤ 72 hours
 - ≤ 120 hours
 - ≤ 1week
- 4) How many percent of sexually abused children who undergo medical evaluation will have normal findings?
- 5%
 - 10%
 - 50%
 - 75%
 - 95%
- 5-10) For the following STIs, choose whether it is Diagnostic, suspicious or inconclusive for sexual abuse
- _____ 5) Gonorrhea
 - _____ 6) HIV
 - _____ 7) Condyloma acuminata (anogenital warts)
 - _____ 8) Genital herpes
 - _____ 9) Chlamydia trachomatis
 - _____ 10) Bacterial vaginosis

- 11) What type of injury in physically abuse children results in the most significant morbidity and mortality?
- burns
 - abusive head trauma
 - abdominal trauma
 - bites
 - bruises

- 12) The following are possible causes for retinal hemorrhages EXCEPT:
- abusive head trauma
 - coagulopathies
 - carbon monoxide poisoning
 - cardiopulmonary resuscitation
 - none of the above

- 13) What is "An act providing for stronger deterrence & special protection against child abuse, exploitation and discrimination providing penalties for its violation, & for other purposes"?
- Republic Act No. 7600
 - Republic Act No. 7610
 - Republic Act No. 9262
 - Republic Act No. 8552
 - Anti-Bullying Act of 2013

- 14) Which of the following statements regarding failure to thrive is INCORRECT:
- It is the result of inadequate usable calories necessary for a child's metabolic and growth demands
 - In developing countries, the primary risks are infectious disease and inadequate nutrition
 - The most common clinical presentation is poor growth
 - Children with early FTT are at higher risk for short stature, and behavioral and academic difficulties
 - None of the above