

Class 6 notes

1. A 3-year-old boy has been brought to your office for a routine visit. He has exhibited significant language delay and for over a year you referred him for specialist evaluation. His mother was unable to take the child to the most recent appointment because of her work schedule. She is in her late teens and balancing 2 jobs, she has been struggling financially. The child's grandmother looks after him on most days, but she has significant mobility limitations, and the child has nearly injured himself on multiple occasions. Since the patient's last visit, he was hospitalized briefly for an accidental ingestion and the year before he broke his arm falling out of his crib. The toddler appears happy and interacts appropriately with his mother, but rarely communicates in words and only forms 1-word sentences. You discuss with the child's mother your concerns about his supervision at home. What is the next step?
 - a. Educate the mother on the importance of early intervention for speech delay
 - b. Educate the mother on the importance of early intervention for speech delay and contact Child Protective Services
 - c. Admit the child to the hospital
 - d. Call Child Protective Services and stop the family from leaving the office

2. A 6-month-old infant presents with failure to thrive. The patient has struggled to gain weight with frequent diarrhea that is fatty in consistency. The physical examination reveals the infant that looks small for his age with generalized edema, hyperkeratosis, and skin hyperpigmentation. Analysis of postprandial duodenal aspirate reveals enteropeptidase (enterokinase) deficiency. The levels of which of the following gastrointestinal enzymes would be affected?
 - a. Pepsin
 - b. Trypsin
 - c. Lactase
 - d. Colipase
 - e. Amylase

3. What is the most likely condition in this patient?

Kwashiorkor

4. A 10-year-old girl is evaluated in the pediatric clinic for a 4-hour history of bloating, periumbilical pain, abdominal cramps, flatulence, vomiting and non-bloody diarrhea. She suffered from acute gastroenteritis about one week prior to this episode. Stool examination shows bulky, frothy, and watery stool with decreased pH. Which of the following enzymes is most likely deficient in this patient?

- a. Glucokinase
- b. Fructokinase
- c. Aldolase B
- d. Galactokinase
- e. Lactase

5. What was the most likely cause of this condition?

Infection with rotavirus or norovirus

6. A 12-year-old female patient is brought to your clinic by her father. The main complaint is that the child is having what she called “accidents” where she loses control of her bladder during both day and night. She is embarrassed about this problem and is reluctant to talk about it. She has frequent and urgent urges to urinate. Apparently, there is no dysuria or hematuria present. Father states that they think it is a weak bladder that is responsible for these symptoms. Patient denies flank pains, breathing problems, nausea, vomiting, or diarrhea. She has normal bowel movements. She sleeps well except when she wakes up due to incontinence. She is 62 inches tall and weight 58 pounds. Vital signs are 106/64, HR 78, RR 16, T 98.6. HEENT is normal. Neuro and MS exam is normal. Abdominal exams are normal. Labs show HbA1c is 8.4. Urine culture is negative. Urine specific gravity is 1.018, pH is 6, protein negative, glucose positive, ketones negative, nitrates negative, bilirubin negative. Two hour plasma glucose 243, blood TSH 2.6 uIU/mL. What is the most likely cause?

Diabetes mellitus

7. A 4-year-old girl has been brought to your office by her mother with a complaint of abdominal pain for the past two days. She has no history of previous abdominal pain or other illness. The child has intermittent pain that is localized mainly to the left side of the abdomen. Pain worsens after eating and sometimes is relieved by passing gas. The patient eats pasta, rice and bananas every day. The mother states that at moments pain makes her daughter double over. There is no nausea, vomiting or diarrhea. She has 2-3 bowel movements per week. Normal voiding without desire. The child has no other issues or disease and is not taking any medications. The mother has Chron disease that is well controlled with medications. The patient is alert and responsive. The skin is clean without any lesions. Ooscopic examination is normal. HEENT is normal. Abdominal examination reveals normoactive bowel sounds throughout and slight tenderness to palpation in the left lower quadrant. A digital rectal exam reveals full rectal vault. Blood work shows normal ESR. What is the most likely cause of this patient's abdominal pain?

Functional constipation

8. A 24-year-old male patient is in your office with complaints of red eyes. He reports that he woke up with eyes having more crusties than usual. His eyes are hurting a little. He has not had any tearing or discharge from the eyes. He states that no one is ill at home but a few of his friends also have red eyes. He does not wear contact lenses or glasses. He denies any upper respiratory tract infections, seasonal allergies or other conditions like asthma or eczema. His appetite is normal, he is not taking medications or vitamins. Examination of his skin is normal. His blood pressure is 115/75, HR is 67, RR is 14, T is 98.7. Examination of eyes show bilateral red eyes with yellow crusting at the end of the eyelashes. Hyperemia is throughout the conjunctiva and bilateral. Both eyes have normal reflexes to light without pain. Vision is 20/20 and pupils react to light normally. What is the most likely diagnosis?

Bacterial conjunctivitis

9. A 15-year-old female patient presents with complaint of very painful periods. The patient is missing school every month due to this pain. Her menarche occurred at age 14. Her period is at the beginning of each month and lasts 5 days. She used five tampons on the first 3 days and less on days 4 and 5. Her cramps begin the day before period and lasts until the end of the period. There sometimes is also nausea and vomiting during this time. She denies any urinary frequency, urgency, hematuria, vaginal discharge, pruritis or lower abdominal pain. She is 67 inches tall and weighs 102 pounds. Vital signs show BP 105/75, HR 65, RR 14, T98.7. Vaginal examination is normal. What is the most likely diagnosis?

Primary dysmenorrhea

10. A healthy married couple has a child who develops clinical symptoms of a rare disease. Genetic testing reveals that the parents mother carries a mutated gene, but a father is not a carrier. However, the father's brother had the same disease, which also occurred in the sister's son. The pattern is characteristic of which of the following inherited diseases?
- a. G6PD
 - b. Cystic fibrosis
 - c. Phenylketonuria
 - d. Alpha 1 antitrypsin deficiency
 - e. Tay Sachs disease
11. A 40-year-old male is currently attending marriage counseling with his 36-year-old wife. He describes several occasions where after arguing with his wife and becoming very angry, he visits a local gun range to blow off some steam. Which of the following is the best description of this behavior.

Sublimation

12. A husband is angry at his wife and leaves dirty dishes in the sink knowing that that will make her angry. Which of the following is the best description of this behavior?

Passive aggressive

13. A child is throwing a tantrum when parents refuse to buy him a toy in the store. Which of the following is the best description of this behavior?

Acting out

14. A husband plans to cheat on his wife and accuses his wife of cheating on him. Which of the following best describes this behavior?

Projection

15. A senator with hidden drug use problem is campaigning for harsher penalties for drug users. Which of the following best describes this behavior?

Reaction formation

16. A 50-year-old woman presents with consistent discomfort and significant weight loss. She is looking for advice as she had a tarry stool in the early morning which she had never experienced before. She presented with a 2-month history of burning pain in the epigastric abdomen and chest which radiated toward her back. Her pain worsened after taking aspirin and drinking coffee and was relieved after eating food or taking antacids.

Peptic ulcer

17. A 19-year-old male patient visits clinic with a complain of tingling sensation when peeing. He is sexually active and does not use condoms on a regular basis. He explains that his is not using condoms because his girlfriend is on birth control pills. He denies the history of STD but was never tested in the past. He has a history of 7 previous partners, and he did not use any protection. The tingling sensation started last week. Vitals signs: BP 120/80, HR 70, RR 15, T 98.7. A genital examination shows small amounts of clear mucoid discharge from the urethra and 0.5 mm large mobile inguinal lymph node. What is the most likely cause?

Chlamydial infection

18. A 75-year-old male comes to your office for annual checkup. He is generally healthy with his diabetes and hypertension well controlled with medications. He denies any chest pain, dizziness, nausea, vomiting, diarrhea, constipation, or sudden weight changes. He does complaint of urinary hesitancy and difficulty starting. He denies pain during urination or any previous UTI's. He has no allergies or reactions to drugs. Bowels movements are regular and normal. He also has a history of dyslipidemia and erectile dysfunction. His medications include metformin, Lipitor, HCTZ, and Cialis. Digital rectal examinations show no abnormalities. The urinalysis is normal. The PSA value is 12 ng/mL, a two-fold increase since last examination. What is the most likely cause for his urinary problem?
- a. Bening prostatic hyperplasia
 - b. Testicular cancer
 - c. Prostate cancer
 - d. Bladder cancer
 - e. UTI

19. A 62-year-old male presents with complaints of fatigue and muscle weakness. His fatigue has been getting worse for the last several months. He also noticed that he is losing muscle mass. Bone density has also been gradually decreasing. He also reports that he has difficulty concentrating lately and his skin has become dry. He also reports occasional heartburn, polyuria and wheezing on excursions. He denies chest pain or shortness of breath. He has decreased libido for the last year and half and erectile dysfunction. During the evening hours he sometime experiences abrupt and intense heat sensation affecting his face, resulting in cold sweats and discomfort. He has type 2 diabetes and is treated with insulin. His most recent PSA was 2 and his HgA1c was 7. He does not smoke but has few drinks per week. His medications are Crestor, Humalog and Micardis. What is the most likely cause of this patient's fatigue?

Secondary hypogonadism

20. A 40-year-old female is in your office for general medical care. She states that in the past she had surgery and received blood transfusion. She had been tested in the past for HCV. She did not want to get treated for it and refused advised treatment by her doctor at that time. She has blood work with her that shows ALT levels of 60 (norm 8-35). There is also a lab test showing that HCV antibody test is positive by enzyme immunoassay. She states that she feels ok and just want to be checked out to improve her well being and as preventive measures from future problems. Her physical examination is normal. She denies smoking, alcohol or drug use. Additional to HCV infection history she also has hypertension controlled by **HTCZ**. Vital signs: BP 120/80, RR 20, HR 78, T 98.5. HEENT is normal, as well as lung, heart examinations. Thyroid is non palpable and there is no lymphadenopathy. Skin is normal, muscle strength is 5/5, normal joint ROM. Lab test show positive HCV antibody, ALT 66, AST 76. The HCV RNA was positive for type 1b genotype. What is the most likely diagnosis?
- a. Hepatocellular carcinoma
 - b. False positive results with resolved HCV infection
 - c. Acute hepatitis C viral infection
 - d. Chronic hepatitis C viral infection
 - e. Hepatomegaly

21. A patient with GERD will have lifestyle changes and prescription of
- a. Antispasmodics
 - b. Antacids
 - c. Proton pump inhibitors
 - d. Alpha blockers
 - e. Beta blockers
22. A 40-year-old male patient presents with heartburn, nausea, vomiting with blood, burning epigastric pain, diarrhea, melena. Endoscopy reveals multiple peptic ulcers in esophagus, stomach, duodenum, and jejunum. What is the most likely cause?

Zollinger Ellison syndrome = Gastrinoma that produces gastrin

23. A 25-year-old male presents with GERD. What are the symptoms?

- a. Anorexia and early satiety, dysphagia, vomiting and epigastric pain
- b. Epigastric pain decreases with meals and reappears after 2-3 hours
- c. Upper abdominal pain after meals, worse after bending and lying down
- d. Anorexia, intermittent diarrhea, steatorrhea, weight loss

24. A 65-year-old male patient presents with anorexia, early satiety, epigastric pain, weight loss and dysphagia. What is the most likely cause?

Gastric cancer

25. The patient is diagnosed with colorectal cancer. Which of the following is not part of the diagnosis of this condition?
- a. Biopsy
 - b. Colonoscopy
 - c. Fecal occult blood
 - d. CA 125
26. The patient presents with frequent colicky abdominal pain relieved by BM, bloating, symptoms worse after eating. What is the most likely cause?

Irritable bowel syndrome

27. Patient is diagnosed with UC. Which of the following is not part of this patient's treatment protocol?

- a. Dulcolax
- b. Prednisone
- c. Asacol
- d. Imodium

28. A 3-year-old child presents with watery diarrhea, anorexia, nausea, vomiting, abdominal cramps, fever

Viral gastroenteritis

Rotavirus, Norovirus, Adenovirus

29. Patient presents with diarrhea with mucus and blood, anorexia, nausea, vomiting, abdominal cramps, fever. bloating and increased peristalsis. What is the most likely cause?

Bacterial gastroenteritis

30. A 50-year-old male patient with long standing history of hypertension presents with severe, diffuse, nonlocalized, constant, and sometimes colicky abdominal pain. Nausea, vomiting and diarrhea. Examination shows abdomen soft on palpation, with little or no tenderness.

Acute mesenteric ischemia

31. Which of the following would not be used in the treatment of chronic pancreatitis?

- a. Cordarone
- b. PPI
- c. Opioids
- d. Low fat diet
- e. Digestive enzymes

32. Which of the following would confirm diagnosis of chronic pancreatitis?

- a. CT scan
- b. Urinalysis
- c. EMG
- d. EKG
- e. Stress test

33. 2-year-old child after starting to eat cereal every morning presents with failure to thrive, anorexia, pallor, abdominal distention, and muscle wasting. The stools are soft and bulky, clay colored and have an offensive smell.

Celiac sprue

34. A 35-year-old male patient presents with complaints of lassitude, weakness, anorexia, mild diarrhea and weight loss. Foul smelling, bulky and greasy stool. Pruritic papulovesicular rash symmetrically over extensor surfaces of knees and elbows (dermatitis herpetiformis)

Celiac disease

35. Patient after vacation to tropics presents with Steatorrhea, Diarrhea, Weight loss, Leg swelling, Abdominal swelling, Fatigue, Fever.

Tropical sprue

36. Patient presents with diarrhea with abdominal pain, fever, anorexia and weight loss. On and off pattern. Can present as esophagitis, gastritis, enteritis, colitis, mimic appendicitis. Patchy chronic transmural inflammation

Chron disease

37. Patient presents with attacks of bloody diarrhea with asymptomatic intervals. Begins as sudden urge to defecate, mild lower abdominal cramp and mucus in stool. Malaise, fever, anemia, anorexia, weight loss. Superficial mucosal ulcers in colon

Ulcerative colitis

38. Patients have left lower quadrant (LLQ) pain and often have palpable sigmoid pain. Nausea, vomiting, fever and even bladder irritation. Peritoneal signs – rebound and/or guarding.

Diverticulitis

39. Patient presents with epigastric, or periumbilical pain followed by brief nausea, vomiting, anorexia. After few hours the pain shifts to the right lower quadrant (RLQ) of abdomen. Pain increases with cough and motion. (Patient likes to be in fetal position, better lying on R side). Examination: During palpation: Right lower abdominal quadrant pain with rebound tenderness located at the McBurney point (line between umbilicus and right ASIS. (At the point between Outer and middle thirds)

Acute appendicitis

40. Patient presents with severe abdominal pain, swelling of abdomen, can become rigid, fever, weight loss. Shock and respiratory failure

Acute peritonitis

41. A 55-year-old male patient presents with fatigue, weight loss, rectal bleeding, abdominal pain

Colorectal cancer

42. Patient presents with Fever, Malaise, Jaundice, Brown urine, Light or white feces, RUQ discomfort, Auscultation, percussion – hepatomegaly. Labs – hyperbilirubinemia, elevated ALT, AST (aminotransferases), low PT/PTT, albumin

Viral hepatitis

Which screening tests you would order in this patient? IgM anti-HAV, HBsAg, IgM-anti-HBc, Anti-HCV

43. A 14-month-old child that has been treated with aspirin to lower fever during acute upper respiratory tract infection presents one week after with jaundice, vomiting, and seizures

Rey syndrome

44. A 45-year-old female presents with sudden pain in right upper abdominal quadrant (RUQ) which increases and decrease in periods of severity that becomes more intense with 15 minutes to 1 hours, remains steady (no colic)

for up to 12 hours (usually less than 6 hours) and then gradually disappears leaving dull ache. Nausea, vomiting. **No fever, no chills.** (no gas or bloating) . Mild tenderness on palpation over RUQ.

Biliary colic, Cholelithiasis

45. A 45-year-old overweight female presents with sudden progressive pain in right upper abdominal quadrant (RUQ). Anorexia, Nausea, vomiting. . Mild tenderness on palpation over RUQ. Right subcostal tenderness. Murphy sign (Pain during palpation of the area of gallbladder in inhalation. Pain stops breathing in attempt). Involuntary guarding of RUQ. Fever and chills

Cholecystitis

46. A 45 year old male patient with history of gallstone disease presents with steady, dull, boring upper abdominal pain that may radiate through the back, that develops suddenly, Nausea and vomiting, anorexia, diarrhea. **Sitting up and leaning forward decreases pain.** **Movement and coughing increases pain.** Patients looks ill, sweaty, in distress. Shallow and rapid respiration. Fast pulse 100-140 b/min. BP varies – sudden dropping of blood pressure (shock). T can be normal (37.7-38.3 C). Decreased diaphragmatic movement (atelectasis). Marked abdominal tenderness and abdominal distension (ileus) with decreased bowel sounds (upper abdomen) Ecchymosis of the flanks (Grey Turner results from retroperitoneal blood), ecchymosis of umbilical region (**Cullen sing**, results from hemoperitoneum)

47. Patient presents with increased urination and thirst. Very diluted urine. Nocturia,

Dehydration

What chemical is out of order in this patient that leads to this presentation?

Diabetes insipidus

48. **Hyponatremia** , Altered personality, Lethargy, Confusion, Hyperreflexia, Seizures, Stupor, Confusion, Coma
abnormally high urine osmolality vs blood osmolality),
Normal function – kidney, heart, liver, adrenal
Patients with hyponatremia and no other organ malfunction

Levels of ADH

SIADH

49. Patients presents with high blood pressure, weakness and hypokalemia (low potassium), Hypernatremia, and hypervolemia, Diastolic hypertension (124/94), Weakness, Paresthesia, Paralysis, Tetany
Primary hyperaldosteronism (Conn syndrome)

50. Moon face (round face), Truncal obesity, dorsal cervical fat pads (buffalo hump), Very slender extremities, Muscle wasting, weakness, Thin and atrophic skin, poor wound healing, Easy bruising, Hypertension, Osteoporosis, Reduced resistance to infection, Glucose intolerance/diabetes, Purple striae on abdomen, Mental disturbances, Menstrual irregularities, hirsutism, baldness (Signs of virilism)
Cushing syndrome

51. Patient presents with hyperpigmentation – tanning of exposed and lesser extend unexposed parts of body. Especially on bony prominences, skin folds, scars and extensor surfaces. Patient also has black freckles.
Weakness, fatigue, hypotension, severe dehydration. There is also hyponatremia and hyperkalemia, salt and water loos = severe dehydration, hypotension, severe insulin sensitivity and disturbance in carbohydrate, fat, and protein metabolism- low sugar, use of protein to make sugar, resistance to stress and trauma is decreased, myocardial muscle weakness.

Adison disease

52. A 55-year-old male presents with increased appetite, thirst and urination. **Patient blood shows high glucose and insulin levels.**
weakness, fatigue, mental status changes.
Weight loss, nausea, vomiting, blurred vision

Type II diabetes mellitus (NIDDM)

A 14-year-old boy presents with increased appetite, thirst and urination.

IDDM

53. Patient presents with Sweating, Nausea, Warmth, Anxiety, Palpitations, Headache, Paresthesia (pins and needles), Loss of consciousness, Seizures

Hypoglycemic

54. Patient presents with polyuria, nocturia, Constipation, ileus, Muscle weakness, confusion, Complication – Arrhythmias, coma

Hypercalcemia

PTH producing adenoma

55. Muscle stiffness, muscle spasm. Tetany, Paresthesia (pins and needles) , Anxiety, depression, irritability, memory issues, visual problems (papilledema – swelling of optic disc), Fatigue, difficulty speaking, swallowing Seizures, arrhythmias, coma, heart failure, Kidney stones, Dry and brittle nails

Hypocalcemia

56. Patient presents with dysuria and purulent discharge

Urethritis

57. Patient presents with frequency, urgency, burning or painful voiding and small volumes of urine

Cystitis

58. Patient presents with sudden fever, chills, flank pain, colicky abdominal pain, nausea,

vomiting, costovertebral angle tenderness,
palpable enlarge kidney

Acute pyelonephritis

59. Pain, nausea, vomiting, hematuria. Pain (renal colic) – typically excruciating and intermittent, lasts 20 to 60 minutes. Nausea and vomiting. Pain in the flank area that radiates across the abdomen (upper ureter), or pain that radiates along the course of ureter (lower ureter). Suprapubic pain along with urinary urgency and frequency – distal ureteral, ureterovesical or bladder calculi.
60. Pain is so severe that patient presents with severe discomfort, pacing the room, ashen, diaphoretic, constantly moving. For some patients first presentation can be hematuria.

Gravel or a calculus in urine. Fever, dysuria, chills, foul smelling urine – infections

Kidney stones (Nephrolithiasis)

61. children 2 weeks after throat or skin infections, Weakness , fatigue, fever, nausea, vomiting, anorexia, abdominal pain. Hematuria, dysmorphic RBC and RBC casts, variable degrees of proteinuria. Edema, Hypertension, Elevated serum creatinine, Uremia

Poststreptococcal glomerulonephritis

62. hematuria, urinary frequency, urgency, dysuria, palpable abdominal mass, flank pain, fever of unknown origin (FUO)

63. Unexplained painless hematuria (gross/80-90% and microscopic), Irritative voiding symptoms (Dysuria, burning, frequency)

Bladder cancer

64. 50-year-old patient with renal insufficiency, enlarging flank and abdominal mass, back pain and hematuria. Both kidneys are massively enlarged, external surface of the kidney is replaced by cysts that compress nephrons

65. Urinary frequency, Urgency, Nocturia, Hesitancy, Intermittency, Decreased size and force of the urinary stream (causes hesitancy and intermittency), Incomplete emptying and rapid filling of bladder (frequency, urgency, nocturia), Terminal dribbling, Hematuria – straining caused damage to blood vessels

Enlarged prostate (BPH)

66. Lower abdominal pain, Perineal pain, Fever, Frequency, urgency, incomplete bladder emptying, need to void again shortly after voiding, nocturia, Painful ejaculation, Acute bacterial – fever, chills, malaise, myalgias, prostate enlarged, tender, spongy
67. Scrotal pain, that can be severe and radiates to the abdomen, fever, malaise, myalgia, headache, nausea, vomiting. Examination – swelling, marked tenderness, and sometimes erythema over epididymis area of scrotum. Sepsis – hypotension, tachycardia, high fever, toxic appearance
68. Rapid onset of severe local pain, nausea and vomiting, Followed by scrotal edema (swelling), Fever, urinary frequency, Cremasteric reflex is absent on affected side. Color doppler ultrasonography

