1

{username}

A 55-year-old female was diagnosed with breast cancer measuring 3 cm in diameter,
IDC Grade 3 ER positive PR positive HER2 negative KI67-40%.
Preoperative imaging did not demonstrate suspicious axillary nodes.
A lumpectomy was performed in the operating room.

What is the procedure chosen for the axilla?

a. *Axillary Lymph Node Dissection*

b. *Sentinel lymph node resection and frozen section examination. If positive, ALND should be performed at the same surgery.*

c. *Sentinel lymph node resection*

d. *There is no need to remove the sentinel gland*

2

{username}

What is the main physiological goal of performing a pyloroplasty procedure as part of surgery to treat a peptic ulcer, in cases where a vagotomy is also performed?

a. *Reducing the acidic pH in the stomach.*

b. *Preventing bile reflux from the duodenum to the stomach.*

c. *Creating a permanent drainage shunt into the stomach to overcome pyloric atony*

d. *Preventing diarrhea caused by Bile Reflux from the duodenum to the stomach.*

3

{username}

For which of the following surgeries, the mechanism of malabsorption is the predominant one?

a. *Vertical banded gastroplasty*

b. *Sleeve gastrectomy*

c. *Roux-en-Y Gastric Bypass*

d. *Biliopancreatic diversion/Duodenal switch*

{username}

Note: you are presented with two consecutive questions, and they must be answered in the order in which they appear.

4

{username}

Note: you are presented with two consecutive questions, and they must be answered in the order in which they appear.

A 24-year-old female presented to the emergency room after a road accident with a minor injury. A whole-body CT was performed and the following image was obtained:

The interpretation stated that it was a 4 cm liver mass, hypervascular with a central scar that does not enhance. The patient denies abdominal pain.

What is the most likely diagnosis?

a. *HCC (Hepatocellular carcinoma)*

b. *Metastasis*

c. *FNH (Focal nodular hyperplasia)*

d. *LCA (Liver cell adenoma)*

5

{username}

Note: you are presented with two consecutive questions, and they must be answered in the order in which they appear.

Following on from the previous question, what is the recommended treatment for this patient?

a. *Clinical and imaging follow-up*

b. *Chemotherapy*

c. *Radiation*

d. *Surgical excision*

6

{username}

An 83-year-old male, with a background of ischemic heart disease, hypertension, diabetes.
Referred to a surgical clinic after undergoing a spine CT scan due to back pain, which revealed a small inguinal hernia on the right. The patient denies pain or other symptoms.
Physical examination - small, soft, non-incarcerated hernia.

What is true about this situation?

a. *An inguinal hernia discovered in a man requires surgery.*

b. *It should only be operated on if it becomes an incarcerated hernia.*

c. *In light of the patient's age and the low risk of incarceration, monitoring is sufficient*

d. *An abdominal ultrasound should be performed and a decision made on whether to operate on the patient*

7

{username}

In a patient with a low-grade small bowel obstruction treated conservatively with a tube (decompression), which of the following findings most likely predicts failure of conservative treatment after 48 hours?

a. *No bowel movements after 48 hours.*

b. *Absence of bowel sounds in physical examination with a stethoscope.*

c. *Recurrent leukocytosis that does not decrease in blood tests despite adequate hydration treatment.*

d. *Lack of demonstration of contrast material in the colon administered via nasogastric tube after 24 hours.*

8

{username}

Which of the following tumors is the most common tumor in the appendix?

a. *Adenocarcinoma*

b. *Mucinous tumor*

c. *Brenner tumor*

d. *Neuroendocrine tumor*

9

{username}

What is the most common cause of portal hypertension in adults in Western countries?

a. *Prehepatic obstruction such as portal vein thrombosis.*

b. *Infrahepatic obstruction due to splenic vein thrombosis.*

c. *Posthepatic obstruction such as Budd-Chiari Syndrome.*

d. *Intrahepatic obstruction due to cirrhosis.*

10

{username}

Which of the following patients would not be eligible for any bariatric surgery?

a. *A patient whose BMI is over 40 and has controlled diabetes and blood pressure.*

b. *A patient who has failed nutritional therapy (i.e., various types of diets).*

c. *A patient who fails drug treatment for diabetes and continues to have hyperglycemia.*

d. *A patient who suffers from alcoholism and is unable to quit.*

11

{username}

A 70-year-old female presents with fever of 38.6°C for the past two days, soft stools, and lower abdominal pain. She undergoes an abdominal CT that shows diverticulitis of the sigmoid colon and a 4 cm abscess trapped between the mesosigmoid, and an adjacent inflamed small intestine loop.

Which of the following represents the appropriate HINCHEY classification for the patient?

a. *Ia*

b. *Ib*

c. *II*

d. *III*

12

{username}

Which of the following diagnoses is the most common in pregnancy?

a. *Acute appendicitis*

b. *Acute cholecystitis*

c. *Biliary colic*

d. *Biliary pancreatitis*

13

{username}

Which of the following data is most appropriate for the diagnosis of Phyllodes?

a. *Benign phyllodes is similar in imaging to fibroadenoma.*

b. *The tumor usually metastasizes to the lymph nodes*

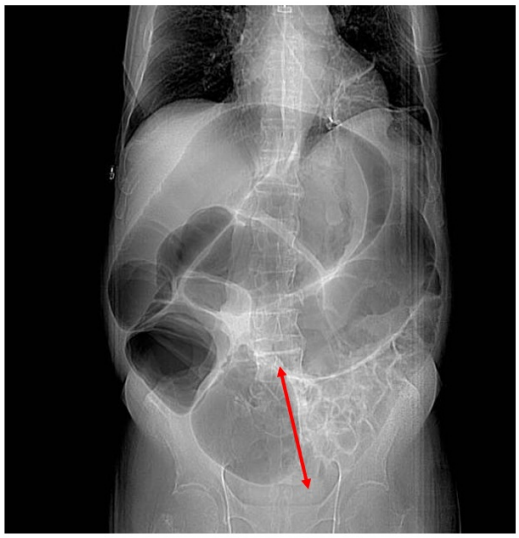
c. *The test of choice for diagnosing the tumor is FINE NEEDLE ASPIRATION*

d. *MRI is the test of choice for diagnosis*

14

{username}

A 78-year-old male, with underlying Parkinson's and depression, no past surgeries. He was referred to the emergency room with abdominal distention that developed gradually over the past 3 days. On examination in the ER, no distress, no tachycardia or hypotension. Abdominal distension with no signs of peritoneal irritation. In the attached plain abdominal x-ray, the marked colon diameter is 11 cm.



What is the therapeutic approach in the first stage?

a. *Decompression via colonoscopy.*

b. *Surgical treatment.*

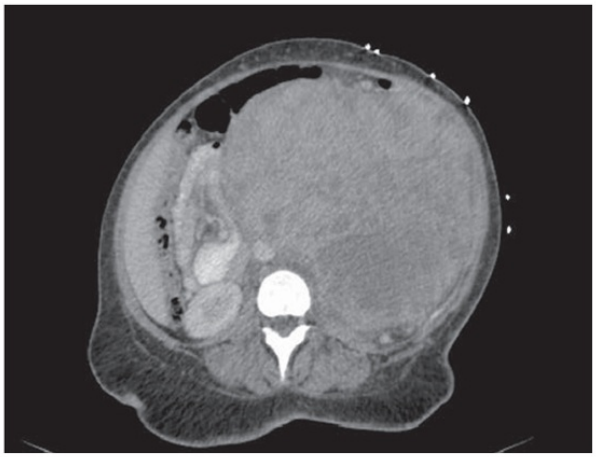
c. *Drug treatment with Neostigmine.*

d. *Supportive care.*

15

{username}

A 34-year-old male presents to the emergency room with abdominal pain and abdominal swelling. No evidence of intestinal obstruction or change in bowel movement habits. The blood tests are normal, and below are the results of the imaging test he underwent:



Upon interpretation, it appears to be a leiomyosarcoma with no evidence of secondary spread or enlarged lymph nodes around it.

What is the most correct case management at this point?

a. *Surgery to remove the mass for complete removal with clean margins (R 0)*

b. *DEBULKING surgery to reduce tumor volume while preserving organs to improve prognosis.*

c. *Initial chemotherapy treatment before surgery to reduce the tumor*

d. *A biopsy under US is mandatory before deciding on treatment.*

16

{username}

All of the following patients may develop difficulty in wound healing due to zinc deficiency except for:

a. *A patient hospitalized in a surgical ward following resection of a 60 cm segment of small intestine due to bowel obstruction.*

b. *A patient in intensive care after major polytrauma.*

c. *A patient in the internal medicine department with advanced liver cirrhosis.*

d. *A patient in the plastic surgery department who sustained burns in over 60% of the body surface.*

17

{username}

A 76-year-old male presents to the emergency room due to abdominal pain.
He was sent for an X-ray and the technician on duty calls you after seeing the following photo:

What is the next step in case management?

a. *Inserting a tube and administering a water-soluble contrast agent (Gastrografin) to identify the problem.*

b. *Insertion of a rectal tube to reduce pressure*

c. *Insertion of a urinary catheter and measurement of intra-abdominal pressure*

d. *Abdominal exploration surgery*

18

{username}

A 43-year-old male presents to the emergency room with acute abdominal pain for the past 24 hours, radiating to the back, accompanied by repeated vomiting. Blood tests show, among other things, amylase 1005 and lipase 1234.

Assuming the patient lives in the Western world, what is the most common cause of his condition?

a. *Alcohol consumption*

b. *High blood lipids*

c. *Medications*

d. *Cholelithiasis*

19

{username}

What is the main anatomical origin of the Right Gastric Artery, which supplies blood to the lower part of the Lesser Curvature of the stomach?

a. *Splenic Artery*

b. *Common Hepatic Artery*

c. *Common Celiac Artery*

d. *Superior Mesenteric Artery*

20

{username}

A 40-year-old male with severe Crohn's disease undergoes an ileocecectomy and another resection of several segments of the small intestine. Assuming the remaining intestine is in continuity to the anus.

What is the minimum length of the small intestine that will allow for adequate absorption?

a. *110 cm*

b. *90 cm*

c. *70 cm*

d. *50 cm*

21

{username}

What anatomical layer, absent in the esophagus, is present in most parts of the digestive tract below the diaphragm (such as the stomach and small intestine), the absence of which contributes to the rapid spread of infection/rupture?

a. *Mucosa layer*

b. *Serosa layer*

c. *Submucosa layer*

d. *Muscularis Propria layer*

22

{username}

What group of segments are included in the right lobe of the liver?

a. *I, II, III,IV*

b. *III, IV, V, VI, VII, VIII*

c. *IV, V, VI, VII, VIII*

d. *V, VI, VII, VIII*

23

{username}

What distinguishes the jejunum from the duodenum and ileum?

a. *The jejunum is the longest of the three parts of the small intestine and constitutes approximately 60% of the total length of the small intestine.*

b. *The jejunum is narrower and thinner compared to the duodenum and ileum.*

c. *The mesenteric blood vessels of the jejunum are characterized by fewer arcades and longer VASA RECTA compared to the ileum.*

d. *The transition point between the jejunum and ileum is fixed to the retroperitoneum by the Treitz Ligament.*

24

{username}

What is the most common long-term postoperative complication of open inguinal hernia surgery?

a. *Recurrence of the hernia*

b. *Chronic pain*

c. *Wound infection*

d. *Testicular ischemia*

25

{username}

A 59-year-old male was diagnosed about 10 years ago with ulcerative colitis (UC) and is being treated with medications.

Which of the following conditions is an indication for surgery?

a. *Presence of multiple areas of flat dysplasia, without evidence of a tumor or polypoid lesion.*

b. *Since he has been suffering from the disease for over 8 years, he must be operated on due to the high chance of developing colorectal cancer.*

c. *An incident of diverticulitis.*

d. *Anemia below 8 g/dl.*

26

{username}

A 79-year-old woman presents to the emergency room due to abdominal pain and vomiting.
5 years ago, abdominal surgery due to perforation of a duodenal ulcer.
On examination: slightly distended, soft abdomen, without peritoneal irritation.
Blood pressure 150/95, pulse 90, WBC 9000 in blood.
The patient undergoes an abdominal x-ray (attached):

What is the next step in case management?

a. *Inserting a tube and administering 100 ml of a water-soluble contrast agent through it.*

b. *Performing a gastroscopy to open the obstruction.*

c. *Laparoscopic surgery to open the obstruction*

d. *Open surgery to open the obstruction*

27

{username}

A 45-year-old male was recently diagnosed with Biliary Cystic malformation.

Which type of Choledochal Cyst is the most common?

a. *Type I - Fusiform dilatation*

b. *Type II - CBD diverticulum*

c. *Type III - Choledochocele*

d. *Type V - Caroli disease*

28

{username}

A 51-year-old female presents to the emergency room due to complaints of palpitations, headaches, and a feeling of anxiety for several weeks. Vital signs included blood pressure of 197/109, saturation 97%, pulse 108. The patient undergoes an evaluation that includes, among other things, a 24-hour urine collection for metanephrines and catecholamines, which were high. CT demonstrates a finding in the right adrenal gland.

What is the recommended definitive treatment for her condition?

a. *Drug treatment to balance blood pressure without invasive intervention.*

b. *Angioembolization of the lesion*

c. *Right adrenalectomy*

d. *Inserting a stent into the renal artery*

29

{username}

A 38-year-old male presents with a chronic draining fistula near the anus. In the operating room in the lithotomy position, the external opening was observed in an anterior left position (11 o'clock), approximately 2 cm from the anal verge.

Where is the inner opening most likely to be found?

a. *The internal opening will be in the posterior midline and the course of the fistula will be curvilinear.*

b. *The internal opening will be in an anterior left position (11 o'clock), and the fistula course will be straight (RADIAL)*

c. *The internal opening will be in the anterior midline (ANTERIOR MIDLINE) and the course of the fistula will be straight (RADIAL).*

d. *The internal opening will be in an anterior position on the left (11 o'clock), and the course of the fistula will be curvilinear.*

30

{username}

A woman who underwent a routine mammogram had findings in her breast that corresponded to BIRADS 4B.

What is the next step in managing the case now?

a. *Close monitoring*

b. *CT-guided biopsy*

c. *Stereotactic biopsy*

d. *Lumpectomy and sentinel node resection*

31

{username}

Which of the following patients diagnosed with END STAGE RENAL DISEASE would not be approved for kidney transplantation?

a. *A patient who has not yet started receiving dialysis treatment.*

b. *A patient who had lymphoma 10 years ago with no evidence of disease recurrence*

c. *A patient with vascular disease after CAROTID ENDARTERCTOMY.*

d. *A patient diagnosed with severe lung disease.*

32

{username}

Which of the following findings in a physical examination raises suspicion of malignancy?

a. *Chandelier sign*

b. *Fothergill sign*

c. *Courvoisier sign*

d. *Iliopsoas sign*

33

{username}

A 58-year-old female undergoes a mammogram followed by a biopsy and is diagnosed with Ductal Carcinoma in Situ (DCIS) 1 cm in size.

What is the recommended treatment?

a. *Chemotherapy*

b. *Radiation to the breast*

c. *Lumpectomy + radiation*

d. *Hormone therapy*

34

{username}

A 58-year-old male with severe untreated diabetes was diagnosed with Fournier Gangrene.

Which of the following treatments is the recommended primary treatment?

a. *First-generation Cephalosporin antibiotic treatment*

b. *Urinary catheter and rectal tube*

c. *Debridement of necrotic tissues*

d. *Amputation of the limb above the level of necrosis.*

35

{username}

A 44-year-old male presents to the emergency room due to abdominal pain and undergoes an evaluation that includes an abdominal CT, which reveals a finding suspicious of an inflamed and very enlarged appendix. The patient is offered surgery but refuses. He returns about six months later and now, in addition to abdominal pain, he presents with abdominal swelling, a general deterioration in his condition, and a physical examination reveals a moderate amount of ascites. A CT reveals nodules in the mesentery with ascites, and it is suspected that this is pseudomyxoma peritonei.

What is the best treatment for this patient?

a. *Resection only if complete resection with clean margins can be achieved (R 0)*

b. *Optimal resection surgery (CYTOREDUCTION) followed by the infusion of HEATED INTRAPERITONEAL CHEMOTHERAPY - HIPEC.*

c. *Broad-spectrum radiation to the abdominal cavity to shrink the tumors*

d. *Intravenous chemotherapy with Mitomycin C*

36

{username}

A 40-year-old male, a few months ago he was diagnosed with a peptic ulcer. Presents with abdominal distension, recurrent vomiting. An X-ray is taken (attached). The patient is hemodynamically stable. In abdominal examination, there was no significant tenderness. Following the findings, a gastroscopy is performed, which demonstrates scarring in the gastroduodenal junction.

What is the recommended next step in case management?

a. *Administer a course of IV steroids.*

b. *Distal gastrectomy.*

c. *Distal gastrectomy with vagotomy.*

d. *Endoscopic dilation with/without stent.*

37

{username}

A 56-year-old male, undergoes open inguinal hernia repair. Two days after surgery, pain, tenderness, and swelling of the testicle on the same side of the surgery occurs. Ischemic orchitis is suspected.

What is the recommended treatment in this condition?

a. *Administering pain relievers and anti-inflammatory drugs*

b. *Immediate surgery to restore blood supply*

c. *Immediate orchiectomy*

d. *Orchiectomy only if testicular atrophy develops*

38

{username}

A 64-year-old male, heavy smoker, with no underlying diseases or infectious diseases was recently diagnosed with stage 1 lung cancer. After a preoperative evaluation, a team discussion was held and it was decided to perform a routine elective surgery to resect the right upper lobe of the lung using a robotic approach.

How will the surgical incisions be defined from an infectious point of view?

a. *Clean*

b. *Clean contaminated*

c. *Contaminated Clean*

d. *Dirty*

39

{username}

A 44-year-old male presents at the trauma room after being involved in a road accident with abdominal trauma. The patient speaks without difficulty, has good and even air intake, blood pressure 130/75, pulse 92, pupils are equal and reactive to light. Abdomen with signs of upper abdominal trauma without peritoneal irritation. FAST was performed and its results are shown below.

What is the next step in case management?

a. *Insertion of a chest drain*

b. *Whole-body CT*

c. *Insertion of a urinary catheter*

d. *Abdominal surgery to stop bleeding*

40

{username}

Which of the following values is expected to be elevated during the diagnosis of an active inflammatory bowel disease, in addition to clinical findings and consistent with supportive findings on computed tomography in small intestine protocol (CTE)?

a. *Calprotectin in urine.*

b. *Serum calprotectin.*

c. *Calprotectin in feces.*

d. *Calprotectin in small bowel biopsy.*

41

{username}

A 66-year-old male, who had previously undergone open splenectomy (Midline Laparotomy) following trauma, presented to the emergency room after 3 days of abdominal distention,
lack of bowel movements, and nausea and vomiting. During the examination in the emergency room, he was diagnosed with obstruction of the small intestine.

Which electrolyte disturbance characterizes proximal small bowel obstruction?
(Choose the most accurate answer)

a. *Hyperkalemic Hyporchloremic Metabolic Alkalosis*

b. *Hypokalemic Hypochloremic Metabolic Alkalosis*

c. *Hypokalemic Hypochloremic Metabolic Acidosis*

d. *Hypokalemic Hyperchloremic Metabolic Acidosis*

42

{username}

What level of lymphatic dissection (lymphadenectomy) is recommended in most Western centers as the standard for radical surgical treatment for advanced gastric cancer?

a. *D1 without splenectomy*

b. *D1 with splenectomy*

c. *D2 without splenectomy*

d. *D2 with splenectomy*

43

{username}

A 19-year-old male presents to the trauma room after being involved in a road accident with severe kinematics. He speaks without difficulty, even and good bilateral air entry, BP 110/78, pulse 107, well palpable, pupils are equal and reactive to light, examination revealed no significant injuries.

What is the next step in case management?

a. *Performing a whole-body CT scan*

b. *Placing a collar*

c. *Performing a chest x-ray*

d. *HEXACAPRON administration*

44

{username}

A 63-year-old male is diagnosed with severe alcoholic pancreatitis. His condition deteriorates and he is diagnosed with infected pancreatic necrosis. He receives supportive care and antibiotics, but it appears that due to the lack of improvement in his condition, invasive intervention is required.

What intervention is recommended at this stage?

a. *Endoscopic intervention for drainage and debridement.*

b. *Laparoscopic surgery for debridement.*

c. *Open surgery for debridement up to and including normal margins.*

d. *Open surgery for the debridement of the necrotic tissue only.*

45

{username}

Which of the following anatomical components is included in the definition of the Calot Triangle?

a. *Cystic Artery*

b. *Hepatic artery*

c. *Cystic duct*

d. *Portal vein*

46

{username}

Where is vitamin B12–intrinsic factor complex absorbed?

a. *Duodenum*

b. *Jejunum*

c. *Ileum*

d. *Stomach*

47

{username}

A 24-year-old male presents at the emergency room complaining that he has had black, malodorous stools for about two days. The patient has stable hemodynamics and respiration, and after initial evaluation, he was taken for a gastroscopy. The gastroscopy interpretation revealed a nonbleeding visible vessel, defined on the FORREST scale as type IIA.

The patient is very concerned about the finding and asks what his chances are of suffering from recurrent bleeding?

a. *High chance*

b. *Medium chance*

c. *Low chance*

d. *In the case of an exposed blood vessel, the risk of recurring bleeding cannot be assessed.*

48

{username}

A 78-year-old male was admitted to the emergency room as 3 days ago he began vomiting non-stop after drinking a lot of alcohol. About two days ago he began to feel pain in his throat and neck and swelling in his face. On physical examination, he appears pale, and there is crepitus in the neck. Pulse 108 per minute, blood pressure 135/73, chest x-ray - suspected air around the esophagus and suspected esophageal perforation.

Which of the following data has the greatest impact on this patient's prognosis?

a. *Patient's age*

b. *Pulse 108*

c. *Diagnosis delayed over 24 hours*

d. *Background of alcohol consumption*

49

{username}

A 58-year-old male presents at the trauma room after being rescued from a burning house. Fully conscious, speaking in a hoarse voice and there are signs of burns in the nasal area, air intake is even, BP 150/87, pulse 100, pupils are equal and reactive to light.

What is the next step in case management?

a. *Inserting a tube*

b. *Performing a whole-body CT scan*

c. *Insertion of bilateral chest drains*

d. *Inserting a feeding tube*

50

{username}

A 55-year-old female presented to the emergency room due to abdominal pain.
Her laboratory tests showed the following findings: creatinine 1.2, urea 69, potassium 3.8, sodium 140, chloride 102, and calcium 12.6.

Which of the following diagnoses is most likely for this patient?

a. *Active peptic ulcer*

b. *Primary hyperparathyroidism*

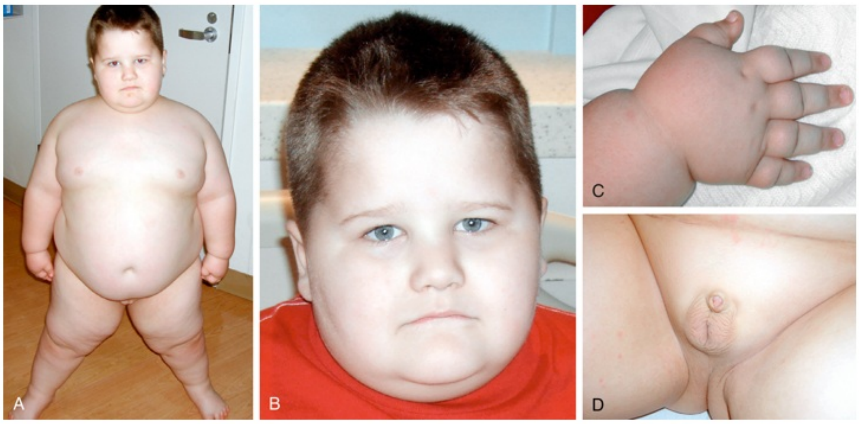
c. *Secondary hyperparathyroidism*

d. *Acute pancreatitis*

51

{username}

A 6-year-old boy with the findings described in the image was referred for evaluation due to developmental delay and excessive weight gain that began at the age of two. Hypotonia and lack of weight gain were reported in the first year of life.



Which molecular mechanism is most common in the child's probable illness?

a. *Partial deletion of chromosome 15*

b. *Duplication of chromosome 21*

c. *Monosomy of chromosome X*

d. *Trisomy of chromosome 13*

52

A 13-year-old boy, known to suffer from systemic lupus erythematosus (LUPUS-SLE),
treated with Hydroxychloroquine and low-dose Prednisone,
presents with the acute onset of a severe headache, confusion, and memory difficulties.
The boy is alert but confused about time and place.
On examination, no nuchal rigidity or focal neurological deficits.
A cerebrospinal fluid (CSF) analysis shows: protein 52 mg/ml (slightly elevated),
glucose 58 mg/ml with blood glucose 102 mg/ml, as well as WBC cells 8, all lymphocytes.
Gram stain of cerebrospinal fluid is negative, culture is negative.

Brain MRI with contrast agent does not demonstrate acute infarctions or hemorrhage,
but mild cerebral edema is detected.

Laboratory results:

Norm	Result	Test
4500-10000/μL	3100/μL	WBC/μL
13-16 g/mL	10.1 g/mL	Hgb g/mL
145000-450000 /μL	126000 /μL	PLT /μL
90-180 mg/dL	45 mg/mL	C3 mg/mL
15-45 mg/dL	8 mg/mL	C4 mg/mL
negative	580 IU/mL	Anti dsDNA
0.5-1 mg/mL	1.4 mg/mL	Creatine mg/mL

Urinalysis shows red blood cells and casts.

Given the child's condition, what is the most appropriate treatment at this stage?

a. *Discontinuation of Hydroxychloroquine treatment and monitoring*

b. *Starting empirical antibiotic therapy concurrently with the treatment given*

c. *Starting intravenous steroid pulse therapy*

d. *Reducing steroid treatment and adding an NSAID*

53

{username}

A 6-year-old girl is being examined for weakness in her lower extremities. On examination, gross strength is poor in the legs, normal in the hands. 3 weeks before her visit, diarrhea that resolved. In neurological examination, reflexes were absent in the lower extremities.

What is the most likely cause of the diarrhea she suffered from?

a. *Salmonella Enterica*

b. *Campylobacter jejuni*

c. *E-coli O157:H7*

d. *Yarsinia enterolitica*

54

{username}

A 6-year-old boy is examined in the pediatric emergency room due to fever of 39.5°C and abdominal pain. 3 weeks earlier he was diagnosed with nephrotic syndrome and is currently on steroid treatment. Physical examination now reveals diffuse tenderness on abdominal palpation with signs of peritoneal irritation. Paracentesis produced 450 leukocytes per microliter.

What is the likely pathogen for his current condition?

a. *Klebsiella pneumonia*

b. *Enterococcus fecalis*

c. *Streptococcus pneumoniae*

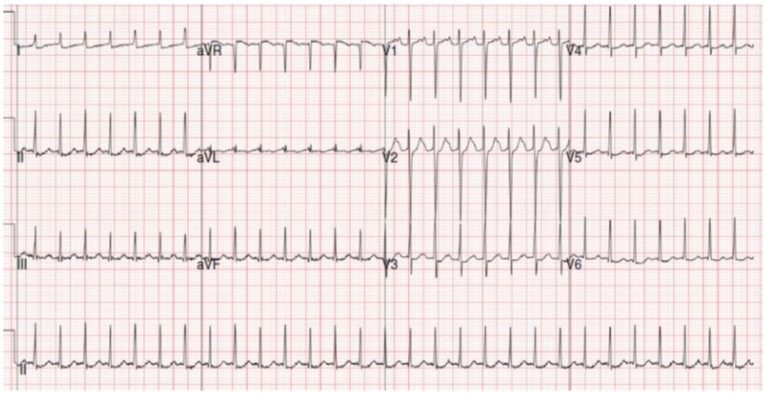
d. *Staphylococcus aureus*

55

{username}

A 5-day-old boy, after a normal pregnancy and birth, presents at the emergency room due to restlessness, reduced appetite, and respiratory distress. On examination, the baby is breathing heavily, approximately 68 breaths per minute, pulse 240 per minute, saturation 88% in room air, and on auscultation of the heart - regular heart sounds, without murmurs or additional sounds, as well as evidence of liver enlargement. A chest x-ray demonstrates pulmonary edema.

ECG as depicted in the image:



What would be <u>the most appropriate</u> next step in treating the newborn?

a. *Intravenous administration of Adenosine at a dose of 0.1mg/Kg*

b. *Synchronized DC cardioversion at 0.5-2 J/Kg*

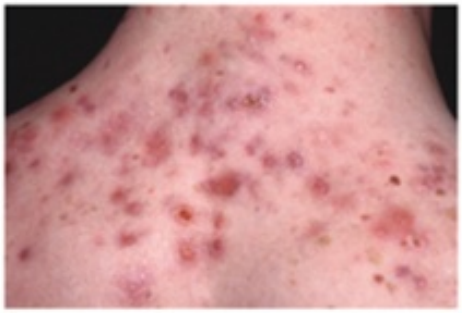
c. *Administering Verapamil intravenously at a dose of 0.1-0.3 mg/Kg*

d. *Applying ice to the face for 15-30 seconds*

56

{username}

What intervention has been proven to modify the disease course when given early to treat the findings in the attached image?



a. *Facial cleansing*

b. *Topical treatment with Benzoyl peroxide*

c. *Dietary change*

d. *Systemic Isotretinoin treatment*

57

{username}

A 6-year-old boy with gait imbalance since the age of two and gradual worsening of coordination. The child suffers from recurrent upper respiratory tract infections.

On examination: nystagmus, dry skin with decreased elasticity.
Laboratory tests found low levels of IgA and IgG2 and increased levels of α-fetoprotein.
During the eye examination - the finding attached in the image is visible

Which of the following mechanisms is the genetic basis for his probable disease?

a. *Impairment of a protein from the prion family that causes progressive cerebellar degeneration*

b. *A mutation in the ATM gene that impairs DNA fragmentation repair and cell cycle control*

c. *Vitamin E deficiency due to malabsorption syndrome*

d. *Frataxin deficiency in the mitochondria causing cellular oxidative damage*

58

{username}

A 6-year-old boy presents for a evaluation at the clinic. The parents report that he refuses to sleep alone in his room, clings to them often, and complains of abdominal pain and nausea every morning before kindergarten. The parents note that they have recently moved, and since then his condition has worsened. Physical examination is unremarkable.

Which of the following diagnoses is the most likely?

a. *School anxiety*

b. *Stranger reaction*

c. *Narcolepsy*

d. *Separation anxiety disorder*

59

{username}

A 4-year-old boy was evaluated for dark, Coca-Cola-colored urine for the past two days. The mother reports a sore throat that went away 10 days ago. On examination, mild swelling around the eye sockets, blood pressure 130/85 mmHg. In urinalysis, protein +3, blood +3, in laboratory tests, creatinine levels were elevated for his age and albumin was normal.

What is expected to be found in the complement proteins level test in his probable illness?

a. *C3 and C4 are normal*

b. *Low C3 and normal C4*

c. *Low C4 and normal C3*

d. *C3 and C4 are low*

60

{username}

A 4-year-old boy presents at the emergency room due to fever of 39.5°C for 5 days. Physical examination reveals splenomegaly and joint pain. His family recently returned from a vacation in a village in the north of the country where goats are raised. Laboratory tests show mild anemia and elevated liver enzymes. A blood culture was taken.

What is the most likely route of transmission of his disease?

a. *Eating cheese made from unpasteurized milk*

b. *Inhalation of aerosolized bacteria in the barn environment*

c. *Direct contact with birth materials during goat calving*

d. *Mosquito bite carrying the pathogen while playing outside*

61

{username}

A 10-day-old boy is evaluated in the emergency room and hospitalized due to fever, poor eating and drowsiness. In the blood culture taken in the pediatric emergency room, growth of Coagulase negative staphylococcus occurred after 36 hours.
The newborn does not have a central line, feels well, and his physical examination is normal.
A repeat culture taken in the ward 24 hours after his admission shows no growth after 48 hours.

How should the case be managed?

a. *Treatment with IV Vancomycin should be initiated for 10-14 days.*

b. *No further workup is required – he may be discharged*

c. *An echocardiogram should be performed as soon as possible.*

d. *Treatment with IV Cefazolin should be initiated for 10-14 days*

62

{username}

A 5-year-old girl was referred for investigation of exertion intolerance.
In laboratory tests: high CPK value in the blood, increased lactate and pyruvate levels in the blood, and a high lactate:pyruvate ratio.
On brain MRI: enhancement in the basal ganglia.

What would be the test of choice to advance the probable diagnosis?

a. *Karyotype test*

b. *Chromosomal Microarray Test*

c. *Nuclear and mitochondrial gene testing*

d. *Methylation pattern testing*

63

{username}

An 18-month-old boy has had chronic constipation since birth, abdominal pain, and lack of adequate weight gain. On examination: a swollen and distended abdomen and in rectal examination an empty ampoule. A barium enema examination was performed (see figure).

Which of the following tests is the test of choice to confirm the most likely diagnosis?

a. *Rectal suction biopsy*

b. *Colonoscopy*

c. *Meckel's scan*

d. *Magnetic Resonance Enterography*

64

{username}

A two-year-old boy, attending kindergarten, undergoes evaluation due to fever and back pain for the past 3 days. 10 days prior to his current complaints, pharyngitis that resolved. Physical examination revealed limited movement of the lumbar spine and tenderness to palpation of the vertebrae.
The child refuses to walk. In the lab, CRP - 2.5 mg/dL (normal <0.5 mg/dL).

What is the most common pathogen for the child's likely illness?

a. *Staphylococcus aureus*

b. *Streptococcus pyogenes*

c. *Salmonella Enterica*

d. *Kingella kingae*

65

{username}

Which of the following cases meets the definition of a Low risk Brief Resolved Unexplained Event (BRUE)?

a. *Birth at 34 weeks of gestation*

b. *The event lasted 5 minutes.*

c. *There was a similar event before.*

d. *Baby age is 7 weeks*

66

{username}

A preterm baby born at 25 weeks and weighing 750 grams has been hospitalized for 10 days in the preterm intensive care unit. Respiratorily supported with NASAL CPAP, treated with a dose of Surfactant. Now with worsening respiratory distress, increased oxygen demand, tachypnea, bounding pulses, and a continuous murmur. A chest x-ray is attached. Echocardiography demonstrated a patent ductus arteriosus measuring 3 mm with a left-to-right shunt.

Which of the following treatments represents the most appropriate drug therapy at this stage?

a. *Indomethacin*

b. *Surfactant*

c. *Hydrocortisone*

d. *Adrenaline*

67

{username}

A two-month-old boy suffers from repeated vomiting after breastfeeding that has recently increased. The baby seems hungry after vomiting and eats enthusiastically. On examination, he is alert with mild signs of dehydration. On examination after vomiting, a small, hard, and mobile mass was palpated in the right abdomen.

What is the likely diagnosis?

a. *HYPERTROPHIC PYLORIC STENOSIS*

b. *NEUROBLASTOMA*

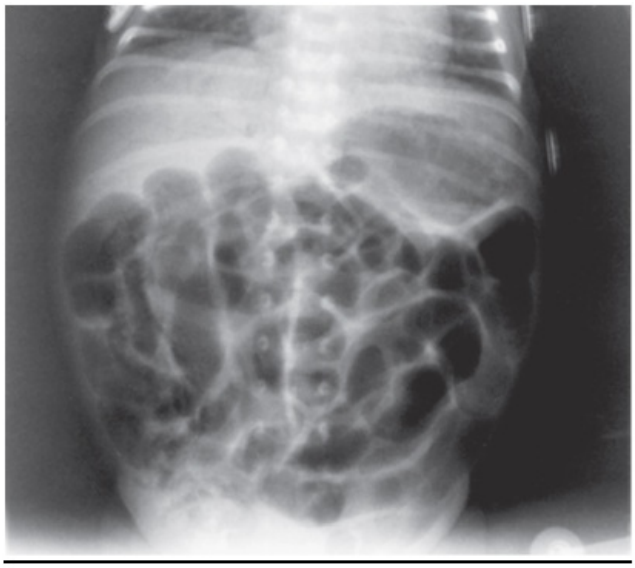
c. *GASTROESOPHAGEAL REFLUX*

d. *DUODENAL ATRERSIA*

68

{username}

A preterm baby born at 30 weeks is now two weeks old. He is fed infant formula for preterm babies, and for the past 24 hours he has had abdominal swelling, one bloody stool, and restlessness. Hemodynamically stable. Abdominal x-ray attached.



What is the next step in case management?

a. *Fasting, fluid therapy, and starting antibiotics*

b. *Changing nutrition to hydrolyzed infant formula - hypoallergenic*

c. *Increasing the volume of the enteral tube feeding*

d. *Starting CPAP respiratory support*

69

{username}

An 8-year-old boy suffers from recurrent pneumonia, failure to thrive, and steatorrhea. In repeat sweat tests, chloride levels above 60 mmol per liter.

What is the most likely inheritance pattern for his condition?

a. *AUTOSOMAL DOMINANT*

b. *X LINKED RECESSIVE*

c. *GENOMIC IMPRINTING*

d. *AUTOSOMAL RECESSIVE*

70

{username}

A 13-year-old girl presents for evaluation due to recurring headaches and transient blurred vision. On examination: bilateral papilledema. Normal imaging tests, lumbar puncture showed increased opening pressure with normal cerebrospinal fluid.

What is the most recommended initial therapeutic approach at this point?

a. *Administration of systemic steroids to reduce intracranial pressure*

b. *Starting treatment with Acetazolamide in a gradual dose*

c. *Performing a VP shunt to prevent vision damage*

d. *Follow-up only since this is a transient syndrome in children*

71

{username}

A 9-year-old girl, presented with fever of 40°C, blood pressure 60/40 mmHg, widespread red rash, vomiting and confusion.
5 days before her visit, she underwent an appendectomy. On examination, redness along the surgical incision and yellow discharge. After administering fluids, there was no change in blood pressure. Subsequently, growth of methicillin-sensitive Staphylococcus aureus in culture from the surgical wound discharge.

What is the most appropriate treatment in this case? (Indicate the most accurate answer)

a. *Vancomycin only*

b. *Nafcillin only*

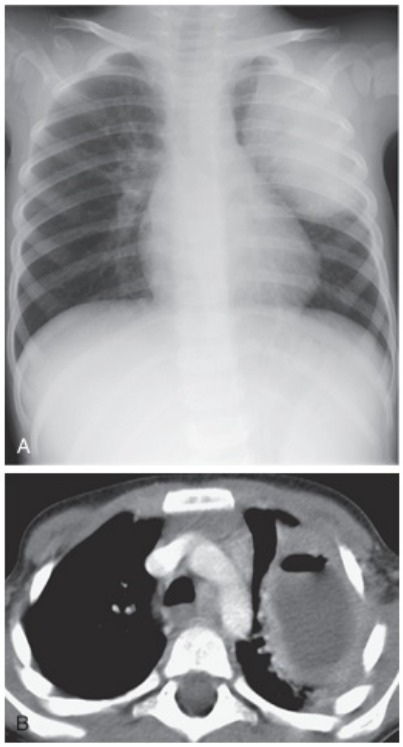
c. *Vancomycin + Clindamycin*

d. *Cefazolin + Clindamycin*

72

{username}

A two-year-old boy with fever and a cough for 5 days. On examination, his vital signs are within normal limits. In lung auscultation, there is reduced air entry on the left. As part of the investigation, a chest x-ray was performed and later a chest CT scan (see attached illustrations).



What is the most appropriate next step in treatment?

a. *Image-guided puncture of the lesion*

b. *Prolonged intravenous antibiotic therapy*

c. *Inserting a drain in the operating room*

d. *Connection to positive pressure respiratory support*

73

{username}

A 14-year-old boy, found sitting during a winter climb on Mount Hermon. On examination, he is confused, shaking violently, his speech is slurred. Core temperature measurement: 33.8°C. Heart rate and blood pressure are stable.

What is the most appropriate therapeutic approach at this stage?

a. *Performing CPR due to the risk of ventricular fibrillation*

b. *Administering warm fluids intravenously.*

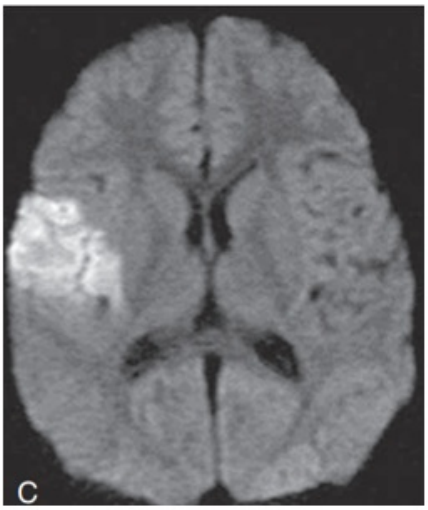
c. *Restricting movement and placing in a lying position while avoiding walking*

d. *Removing wet clothes, thermal insulation, rewarming of the upper back*

74

{username}

A 9-year-old boy developed left hemiparesis and difficulty speaking that lasted about an hour.
In neurological examination: left hemiparesis and mild dysphasia.
The following finding was observed on Diffusion-weighted MRI:



What is the standard initial treatment for his probable illness?

a. *Aspirin*

b. *Steroids*

c. *Phenytoin*

d. *Mannitol*

75

{username}

A 14-month-old boy presents for evaluation due to several months of recurrent infections: bacterial sinusitis, two pneumonias that required hospitalization, and two episodes of gastroenteritis with Giardia lamblia.

On examination: normal growth parameters, the tonsils are not enlarged, no lymph nodes were palpated, and no evidence of hepatosplenomegaly.

Laboratory tests demonstrate immunoglobulin levels significantly lower than normal values, Flow Cytometry demonstrates complete absence of CD19+ B cells, normal counts of CD4+ and CD8+ T cells, and normal counts of NK cells. A chest x-ray shows a normal cardiac silhouette and thymus size appropriate for age.

Which of the following diagnoses is the most likely in this case, and what is important to advise the patient's family regarding administering vaccines in his condition?

a. *Common Variable Immunodeficiency (CVID) - Risk of serious infection from rotavirus vaccine.*

b. *X Linked A-gammaglobulinemia (XLA) - Risk of paralysis when administered with live polio vaccine.*

c. *Transient hypogammaglobulinemia of infancy; risk of hepatitis following hepatitis A vaccination.*

d. *DiGeorge syndrome, risk of liver inflammation (hepatitis) following hepatitis B vaccination*

76

{username}

An 11-year-old boy presents for counseling due to his short stature relative to his classmates.
His annual growth rate is 5.5 cm. He feels well, eats well, and is active in sports.
His father reports that he started shaving at the age of 16.
A hand x-ray shows a bone age of 9 years.

Which of the following diagnoses is the most likely?

a. *Constitutional growth delay*

b. *Familial Short Stature*

c. *Growth Hormone deficiency*

d. *Hypothyroidism*

77

{username}

A one-week-old baby who was born in home delivery, brought in due to bleeding from the umbilical cord and bleeding from the digestive tract.

Blood tests: Normal blood count including platelet level, coagulation studies demonstrate prolonged PT and PTT.

Which of the following diagnoses is most likely in this case?

a. *Hemophilia*

b. *Disseminated Intravascular Coagulation*

c. *Vitamin K deficiency*

d. *Von Willebrand disease*

78

{username}

A 4-year-old girl, presents with intermittent swelling in the right knee for the past 3 months.
The swelling is most noticeable in the morning and improves during the day.
For the past 6 weeks, the girl has been limping but denies significant pain.

On examination: swelling and warmth in the right knee, no local redness, slightly limited range of motion. The rest of her examination is normal without fever, rash, or enlarged lymph nodes.
Laboratory tests show:

Norm values	Result	Test
4500-10000/ µL	7800/ µL	WBC/ µL
12-14 g/dL	11.2 g/dL	Hgb g/dL
negative	1: 640	ANA
negative	negative	RF
<0.5 mg/dL	1.2 mg/dL	CRP mg/dL
<20 mm/hr	28 mm/hr	ESR mm/hr

An X-ray of the knee shows periarticular (around the joint) osteopenia only.

Given the most likely diagnosis, what test is important to perform on this child and why?

a. *MRI scan to rule out sacral involvement*

b. *Echocardiogram to rule out cardiomyopathy*

c. *Eye examination to rule out and monitor uveitis.*

d. *A urinalysis to rule out renal involvement.*

79

{username}

An 8-year-old boy is hospitalized in the intensive care unit due to drowsiness and high fever. On examination on the second day of his hospitalization, widespread hematomas appear on the skin, bleeding from the nostrils, and bleeding from the site of a venous catheter.
On examination – high fever, low blood pressure, tachycardia, and pallor.
Laboratory tests demonstrate the following findings:

- *Prolonged PT*
- *Prolonged PTT*
- *Low platelets*
- *Low fibrinogen levels*
- *Elevated D-dimer levels*

What is the most likely diagnosis?

a. *Hemolytic uremic syndrome*

b. *Disseminated Intravascular Coagulation (DIC)*

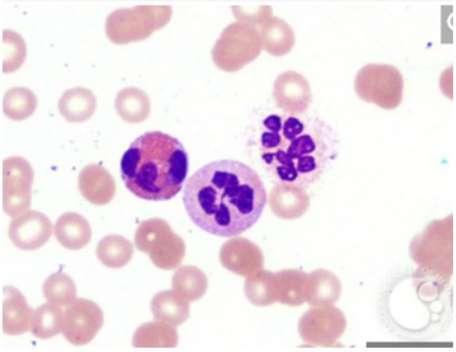
c. *Immune thrombocytopenic purpura*

d. *Acute respiratory distress syndrome*

80

{username}

A 4-year-old boy presents to the clinic complaining of tiredness, pallor, and loss of appetite for the past two months. The mother says that his diet at home is based mainly on pasta and white bread, and he is "very picky." There is no diarrhea and no family history of blood diseases. On examination: pronounced pallor, red and smooth tongue, no splenomegaly.



Laboratory findings:
Hb 6.9 g/dL
MCV 112 fL
Low reticulocytes
Normal leukocytes and platelets
Normal iron levels
A manual blood smear is attached.

What laboratory finding will significantly advance the decision on the likely diagnosis?

a. *Ferritin level*

b. *Vitamin C level*

c. *Folic acid level*

d. *Vitamin B12 level*

81

{username}

A 16-year-old male, was referred for evaluation due to unilateral right-sided breast swelling (as described), Tanner stage 4 on examination, and the rest of the physical examination is normal.

What would be the next step in case management?

a. *Monitoring alone.*

b. *Mammography*

c. *Brain imaging*

d. *Testicular ultrasound*

82

{username}

A two-month-old boy is brought to the pediatric emergency room due to prolonged generalized seizure. His weight now is 4 kg and at birth was 3.5 kg. The mother reports a normal appetite until yesterday and wet diapers. On examination, signs of dehydration are prominent.

In the laboratory: NA= 160 meq/l, glucose 70 mg/dL, K= 4.5 meq/l, serum osmolality 300 mOsm and urine osmolality 250 mOsm. After stabilizing his condition, an attempt was made to administer Desmopressin without any change in urine osmolarity.

What is the likely etiology of his condition?

a. *Aquaporin channel mutation*

b. *Head injury*

c. *Adrenal insufficiency*

d. *Pituitary tumor*

83

{username}

An 8-year-old boy has been complaining for the past month of severe nighttime pain in his right knee. The parents note that the pain disappears after taking NSAIDs.

On examination: no abnormal findings
A limb X-ray is attached.

What is the most likely diagnosis?

a. *Osteosarcoma*

b. *Brodie abscess*

c. *Ewing sarcoma*

d. *Osteoid osteoma*

84

{username}

A 6-week-old boy, normal pregnancy and birth, breastfed, gaining weight well.
He was referred for examination due to jaundice. In blood tests:

Total Bilirubin 10 mg/dl
Direct Bilirubin 0.6 mg/dl

In physical examination, there was no evidence of hepatosplenomegaly.
A repeat blood test after a week showed similar values.

What is the most likely cause of his condition?

a. *PHYSIOLOGICAL JAUNDICE*

b. *GILBERT SYNDROME*

c. *BILIARY ATRESIA*

d. *BREAST MILK JAUNDICE*

85

{username}

A 10-year-old boy, with severe facial weakness on the right. The parents mention a “mild cold” about two weeks earlier. There is no fever, rash, earache, or weakness in extremities.

On examination: as described in the image, with inability to raise an eyebrow and close the eye on the right side. The rest of the neurological examination is normal.

Which of the following approaches is most appropriate at this stage?

a. *Starting treatment with Acyclovir and steroids*

b. *Performing a brain MRI and lumbar puncture*

c. *Administer tear substitutes and a short course of Prednisone*

d. *Initiation of broad-spectrum antibiotic therapy*

86

{username}

A 5-year-old boy was diagnosed with nephrotic syndrome under steroid treatment.
In a urinalysis 10 days after starting treatment, protein was still +4. The parents are concerned about the lack of improvement in his condition and ask when improvement is expected.

When, in most cases, is a resolution of the findings in his disease expected, if he is defined as a steroid responder?

a. *Within about a week of starting treatment*

b. *Within about two weeks of starting treatment*

c. *Within about 4 weeks of starting treatment*

d. *Within about 8 weeks of starting treatment*

87

{username}

A 10-year-old boy is brought to the emergency room due to an asthma attack.
Upon arriving at the emergency room, he was treated with three inhalations of Ventolin at the appropriate dose, every 20 minutes, without significant improvement.
On examination, he is breathing heavily, about 42 breaths per minute, pulse 120 beats/minute, saturation 87% on 3 L/min oxygen. The boy sits upright, uses auxiliary muscles, suprasternal and intercostal retractions can be seen, is able to speak only a few words, and on auscultation, inspiratory and expiratory wheezing with reduced air entry.
In view of the lack of improvement, he received a dose of steroids (Solu-Medrol) intravenously.
About half an hour after administering the steroids, he is breathing heavily, 32 breaths per minute, pulse 140 per minute, saturation 88% while being on 6 L/min oxygen.
The rest of his physical examination is unchanged.

Given his condition, what will be the next step in treating this child?

a. *Administration of another dose of steroids but this time Dexacort*

b. *Continue treatment with inhaled and systemic steroids*

c. *Intravenous administration of magnesium sulfate*

d. *Starting antibiotic treatment for atypical infection*

88

{username}

A two-year-old boy is presented to the doctor due to fever of 40.2°C for the past two days. On examination, protruding auricle, with redness and swelling of the skin behind the auricle. Examination of the middle ear revealed erythema and bulging of the tympanic membrane. In a neurological examination, the findings are as demonstrated in the image (the image is intended to illustrate the findings in the neurological examination). IV antibiotic therapy was initiated.

What is the next step to advance the diagnosis?

a. *Nasal cavity imaging (sinusitis)*

b. *Head CT with contrast agent*

c. *Emergency rhinoscopy*

d. *Lumbar Puncture (LP)*

89

{username}

A 4-year-old boy, found unconscious. On examination, there is no response to calling his name or pain stimulation.
No effective breathing — only gasping. No femoral pulse is felt on a 10-second examination.

What is the correct immediate step to take now?

a. *Start CPR with 20–30 breaths per minute*

b. *Perform 2 rescue breaths and then check for a pulse again*

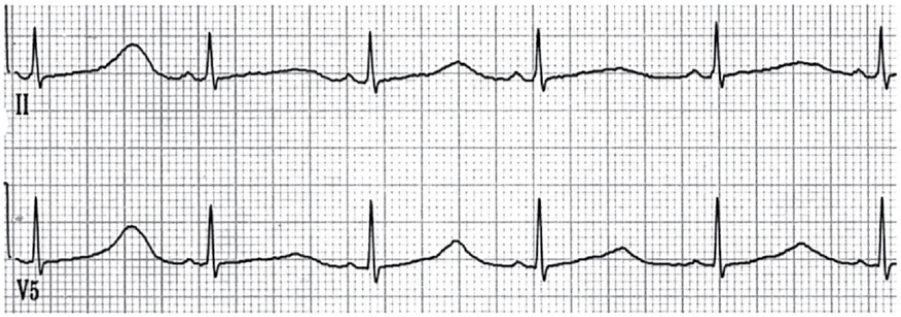
c. *Begin cardiopulmonary resuscitation at a ratio of 30:2*

d. *Begin cardiopulmonary resuscitation at a ratio of 15:2.*

90

{username}

A 10-year-old girl brought for evaluation of syncope that occurred during her swimming lesson. Describes sudden loss of consciousness while swimming with no other symptoms, she was immediately rescued by the lifeguard without injury. In the first few minutes after being removed from the pool, she felt confused for about two minutes, after which she became alert again.
Denies pre-event palpitations, chest pain, or shortness of breath.
In the family, a maternal uncle died suddenly at the age of 22. In physical examination, vital signs are normal, on auscultation of the heart there are regular sounds without murmurs, the rest of the physical examination is normal.
ECG



Echocardiogram - no findings.

What would be the most important first step in treating this child?

a. *Pacemaker implantation*

b. *Treatment with beta blockers, Propranolol.*

c. *Treatment with calcium channel blockers, Verapamil*

d. *Treatment with ACE inhibitors, Captopril*

91

{username}

A 10-year-old boy is brought to the clinic by his parents who report severe irritability and severe temper tantrums occurring 4-5 times a week for the past year. Between outbursts, the child is constantly irritable and difficult to comfort. Parents deny any periods of good mood and pleasant temperament. The outbursts that appear are disproportionate to the situation and occur both at home and at school. He throws objects, yells at teachers, and there were times when he even hit his younger brother. During this period, parents note that he has been sleeping well during the night. This behavior has had a significant adverse impact on his academic achievements and family relationships. In the past year, he has not had a period of more than one day during which his mood was better or uplifted. There is a known history of depression in the mother's family.

Based on the description, what is the most likely diagnosis?

a. *Bipolar I Disorder*

b. *Bipolar II Disorder*

c. *Disruptive Mood Dysregulation Disorder (DMDD)*

d. *Intermittent Explosive Disorder*

92

{username}

A generally healthy 18-month-old boy was referred for evaluation due to pallor after an illness with fever and cough. His physical examination revealed no abnormal findings except for pallor. Results of the laboratory tests:

Test	Result	Normal range
WBC	***7,600***	5,000- 12,000
PLATELET	***300,000***	150,000 – 350,000
hemoglobin	***7.0***	Above 11 g/dL
MCV	***81***	75-85
Reticulocytes	***0.1***	2-5%

Which of the following diagnoses is most likely in this case?

a. *Diamond–Blackfan anemia*

b. *A-plastic anemia*

c. *Iron deficiency anemia*

d. *Transient erythroblastopenia of childhood*

93

{username}

A 15-year-old girl is in the process of evaluating her low stature. On examination, widely spaced nipples, the hands are positioned in cubitus valgus, and the neck is wide.

Which laboratory finding is most characteristic given her probable diagnosis?

a. *High ACTH*

b. *High FSH*

c. *Low TSH*

d. *High 17OH*

94

{username}

A 4-month-old boy is brought to the emergency room due to a decreased level of consciousness. The mother reports that he has been restless since morning and that later the baby became unresponsive. On examination: Glasgow Coma Scale=7. No systemic fever, evidence of bulging anterior fontanelle. Eye exam demonstrates retinal hemorrhages. The remainder of the examination was unremarkable, including signs of trauma. Laboratory tests show a normal count, normal chemistry including glucose, and normal blood gases. Head CT demonstrates acute and chronic subdural hematomas with evidence of cerebral edema. A chest x-ray demonstrates multiple posterior rib fractures in various stages of healing.

What is the most appropriate next step in managing this case?

a. *Performing a lumbar puncture to rule out meningitis.*

b. *Starting broad-spectrum antibiotic therapy*

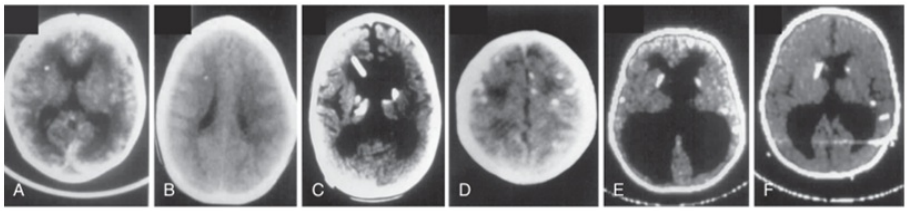
c. *Completion of investigation into the issue of calcium deficiency (Rickets)*

d. *Reporting to Child Protective Services and ensuring the child's safety*

95

{username}

A newborn is evaluated for microcephaly. In physical examination, hepatomegaly without skin rash. Laboratory results show thrombocytopenia. In targeted questioning, the mother reports that she ate raw meat early in pregnancy.
The newborn's brain imaging is attached:



What is the likely pathogen responsible for these findings?

a. *Rubella virus*

b. *Toxoplasma gondii*

c. *Cytomegalovirus*

d. *Treponema pallidum*

96

{username}

An 18-month-old girl is brought in for evaluation because she is not yet walking independently and she is not yet "talking." In a previous visit, when she was 12 months old, she sat independently, had a pincer grasp, and babbled about 2-3 words. Now at 18 months old, she cannot sit without support, has lost her pincer grasp, and no longer babbles or says words. Her parents report reduced communication with them. Growth data are normal. Physical examination shows evidence of axial hypotonia and brisk reflexes.

Which of the following diagnoses does this description best fit?

a. *Global developmental delay (GDD) with expected slow progression*

b. *Autism spectrum disorder with developmental regression*

c. *Progressive encephalopathy with a risk of seizures*

d. *Developmental coordination disorder with intellectual disability*

97

{username}

A 3-week-old boy, exclusively breastfed, presents for weight follow-up. Birth weight 3.45 kg. Today, at 21 days old, the baby weighs 3.0 kg. The mother reports that the baby breastfeeds 8-10 times a day, for 10-15 minutes on each breast. The baby has 6-8 wet diapers a day and 3-4 bowel movements a day. On examination, the baby is alert, not jaundiced, vital signs are normal, skin turgor is normal, and mucous membranes are moist. On examination of the mouth, no ankyloglossia is observed. Observation of breastfeeding shows good attachment and audible swallowing.

What is the most appropriate step in managing the case now?

a. *Continued exclusive breastfeeding, weight loss is within the normal range.*

b. *Referral to a lactation consultant and follow-up every two to three days*

c. *Supplementing meals after each breastfeeding with approximately 30 cc of infant formula*

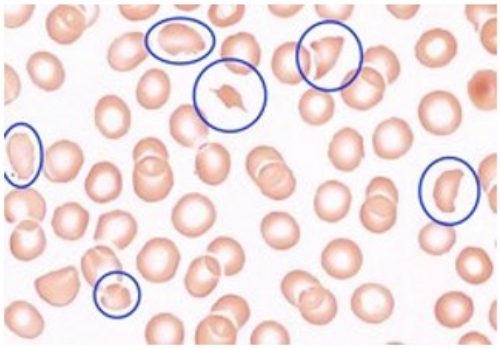
d. *Stopping breastfeeding and transitioning to exclusive formula feeding*

98

{username}

A 10-month-old boy is hospitalized due to severe diarrhea and dehydration. In stool culture, growth of Shigella sonnei. The child is treated with fluids and antibiotics. After 4 days, pallor and a decrease in the amount of urine output are observed. Laboratory as described in the table, manual blood smear is attached.

Norm	Measured	
>10.5	7.5	HgB g/dL
150K-450K	45K	PLT
<0.6	2.1	Cr. mg/dL



What is the most common complication in this case?

a. *Hemolytic uremic syndrome*

b. *Disseminated intravascular coagulation*

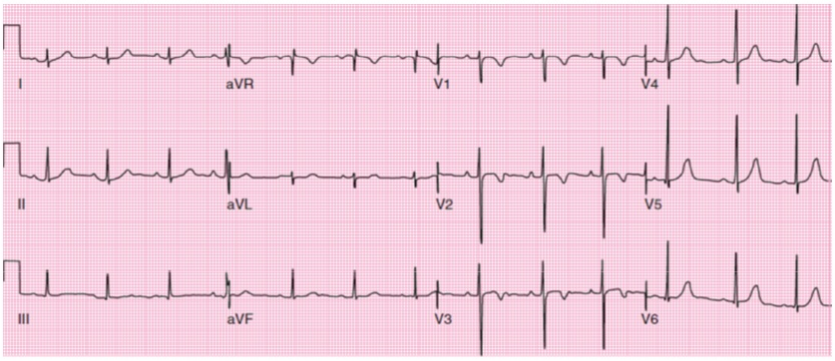
c. *Immune thrombocytopenic purpura*

d. *Acute tubular necrosis*

99

{username}

A 4-year-old boy is referred to a cardiologist for evaluation of a heart murmur discovered during a routine physical examination. The child is asymptomatic and participates without restriction in all physical activities appropriate for his age.
On physical examination: normal growth data, on auscultation of the heart, a strong holosystolic murmur is clearly heard at the sternal border on the left, a physiologically split second sound (S2), normal peripheral pulses, normal blood pressure. Normal chest x-ray.
ECG as shown in the diagram (Diagram 1), echocardiogram shows a peri-membranous ventricular septal defect, 4 mm in size.



What is the recommended treatment in this situation?

a. *Surgical closure as soon as possible*

b. *Starting pharmacological treatment with FUSID*

c. *Reassurance, monitoring, and encouragement of regular physical activity*

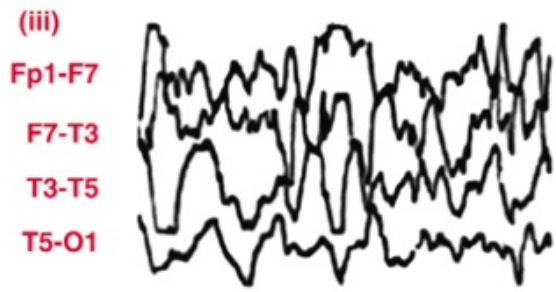
d. *Prophylactic antibiotic treatment before any dental treatments*

100

{username}

A 7-month-old boy is known to have developmental delay and seizures. A skin examination revealed three hypomelanotic spots (“ash leaf spots”). Brain MRI showed subependymal nodules.

The finding shown in the diagram was observed in the EEG



What will be the most appropriate treatment at this point?

a. *Starting treatment with Vigabatrin*

b. *Excision of subependymal nodules*

c. *Administration of Everolimus to prevent lesion growth*

d. *Treatment with ACTH injections*