

Participation Conditions

Please confirm that you are a **radiologist**.

- ☐ **YES**, I am a radiologist.
- ☐ **NO**, I am **not** a radiologist.

Consent Form

- Your participation is **voluntary**.
- You can **terminate** the experiment at any given time.
- You are at least **18 years old**.
- Your data will be published in **anonymized form**.
- It is **prohibited** to copy, reproduce, distribute, modify, or transmit any parts of the survey.

- ☐ I **agree**.
- ☐ I do **not** agree.

Introduction without AI

Introduction

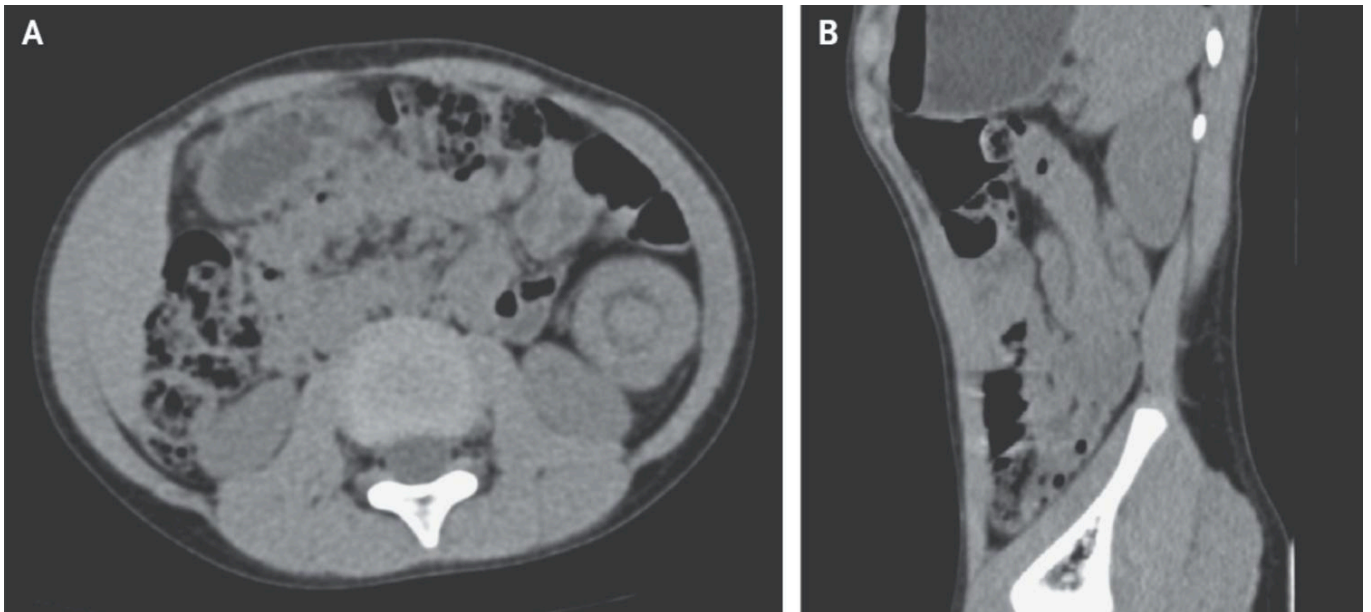
Your Task:

- You will receive a description of the patient's symptoms and an image (CT/MRI).
- You are asked to make diagnoses based on **patient information** and **the images provided**.
- There will be **20 cases** in total.
- **Read** all information provided carefully.

Main Task without AI

Task /20

Patient Information:



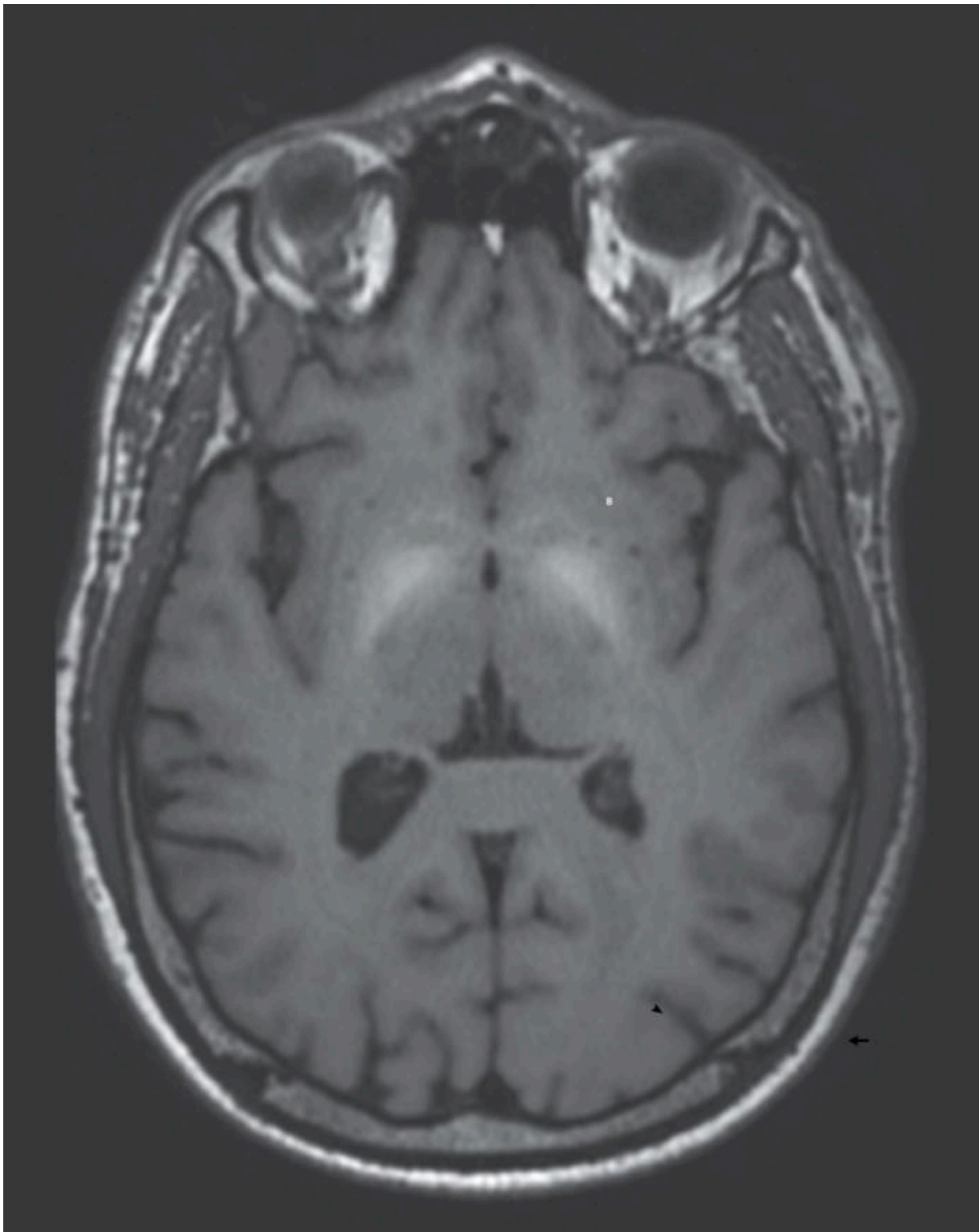
A previously healthy 5-year-old boy was brought to the surgery clinic with a 2-day history of intermittent abdominal pain. On palpation of the abdomen there was pain in

the periumbilical region, but no rebound or guarding. An ultrasound was normal, and a computed tomography of the abdomen was performed (Panels A,B).

Your diagnosis:

Task /20

Patient Information:

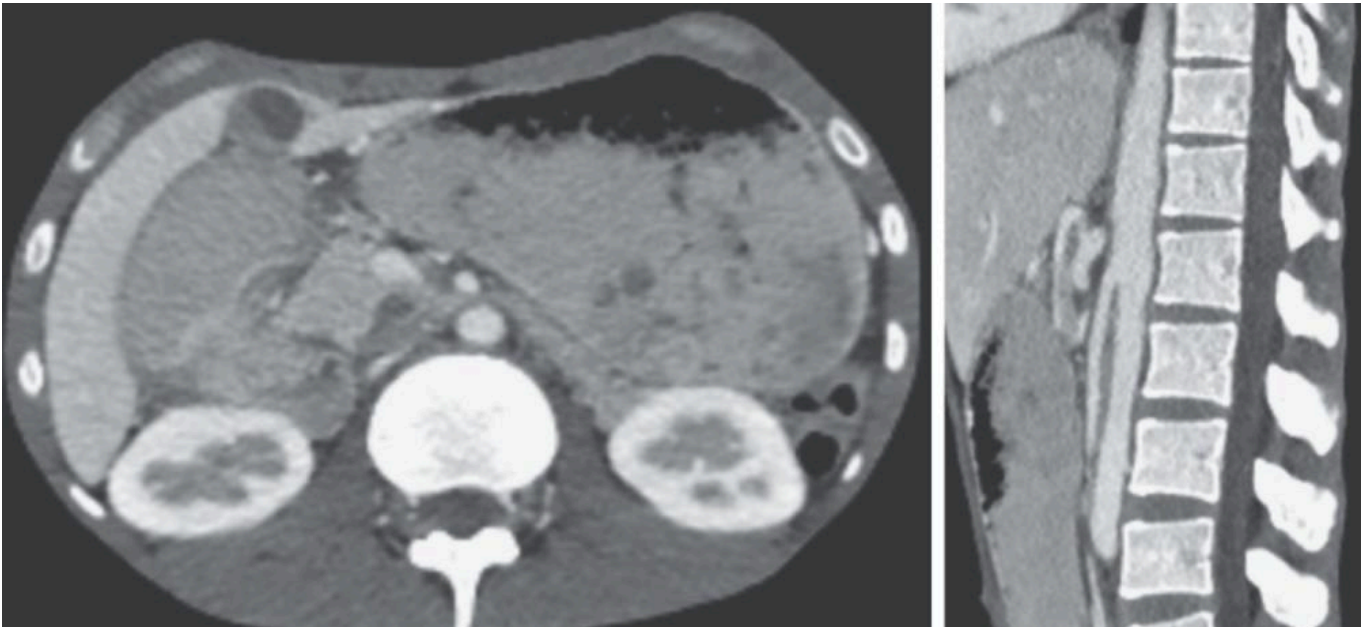


A 55-year-old man presented with 10 years of progressive handwriting impairment and rapid, slurred speech. In his thirties, he had worked as a welder without access to personal protective equipment. Neurologic examination was notable for reduced facial expression, blepharospasm, and cluttered, dysarthric speech. Postural reflexes were mildly impaired. MRI imaging of the head showed a nonenhancing, T1-weighted, hyperintense signal in the basal ganglia on both sides. Ceruloplasmin and iron levels were normal.

Your diagnosis:

Task /20

Patient Information:

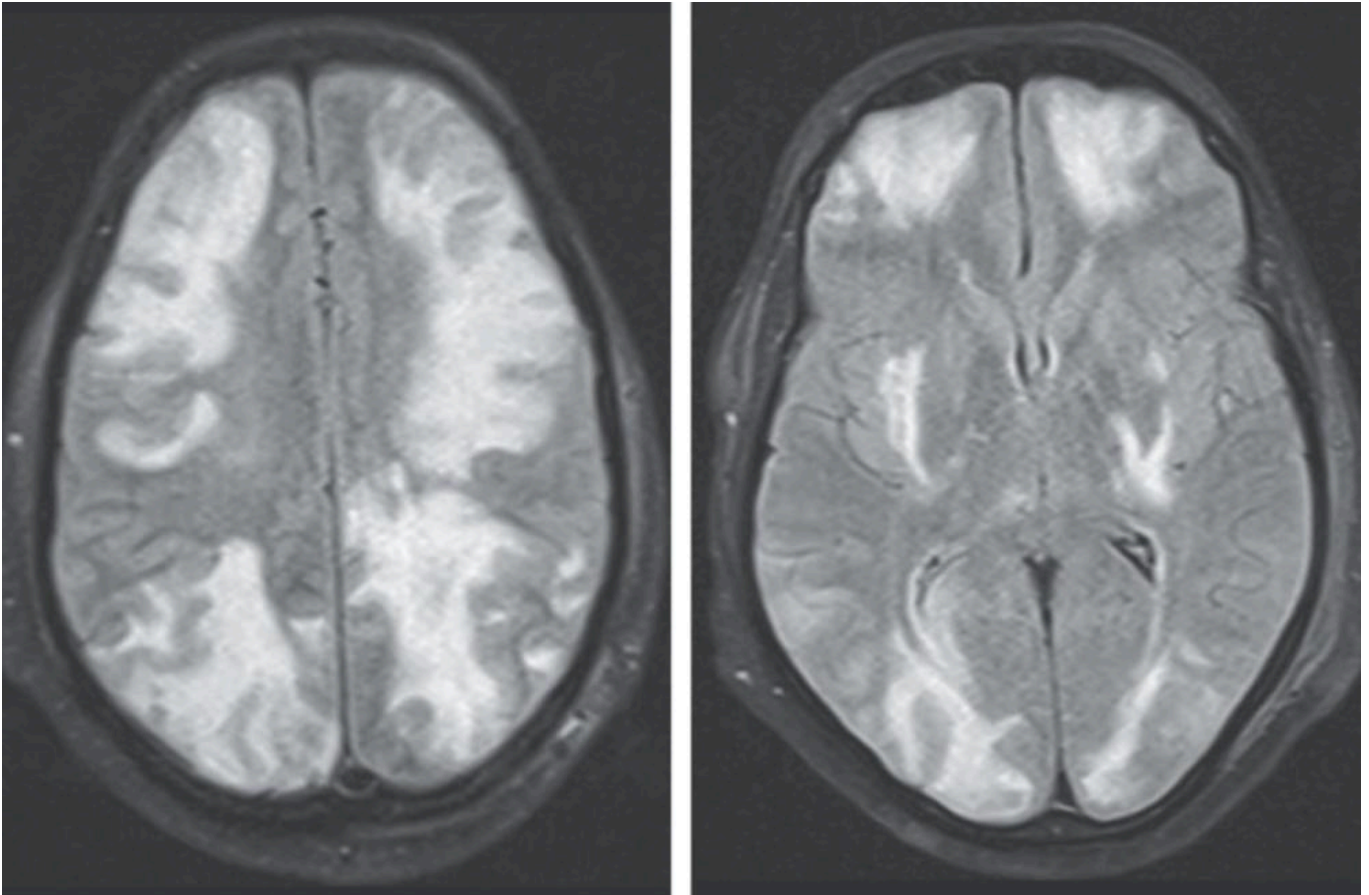


26-year-old man from Somalia presented with a 5-month history of dry cough, night sweats, and unintentional weight loss of 18 kg. During this period, epigastric pain and postprandial vomiting had also developed. His BMI was 11. On examination, he was cachectic with abdominal distention and diffuse tenderness to palpation. On the basis of chest imaging and sputum studies, a diagnosis of pulmonary tuberculosis was made, and intravenous antituberculous treatment was initiated. However, he continued to have postprandial vomiting. Contrast-enhanced CT of the abdomen was obtained.

Your diagnosis:

Task /20

Patient Information:



A 35-year-old man with IgA nephropathy presented with confusion, blurry vision, and seizures. Two weeks before presentation, he had started receiving cyclosporine. Physical examination was notable for a blood pressure of 160/80 mm Hg, drowsiness, and decreased visual acuity. A fundoscopic examination was normal. T2-weighted magnetic resonance imaging (MRI) with fluid-attenuated inversion recovery sequencing of the head was performed.

Your diagnosis:

Task /20

Patient Information:

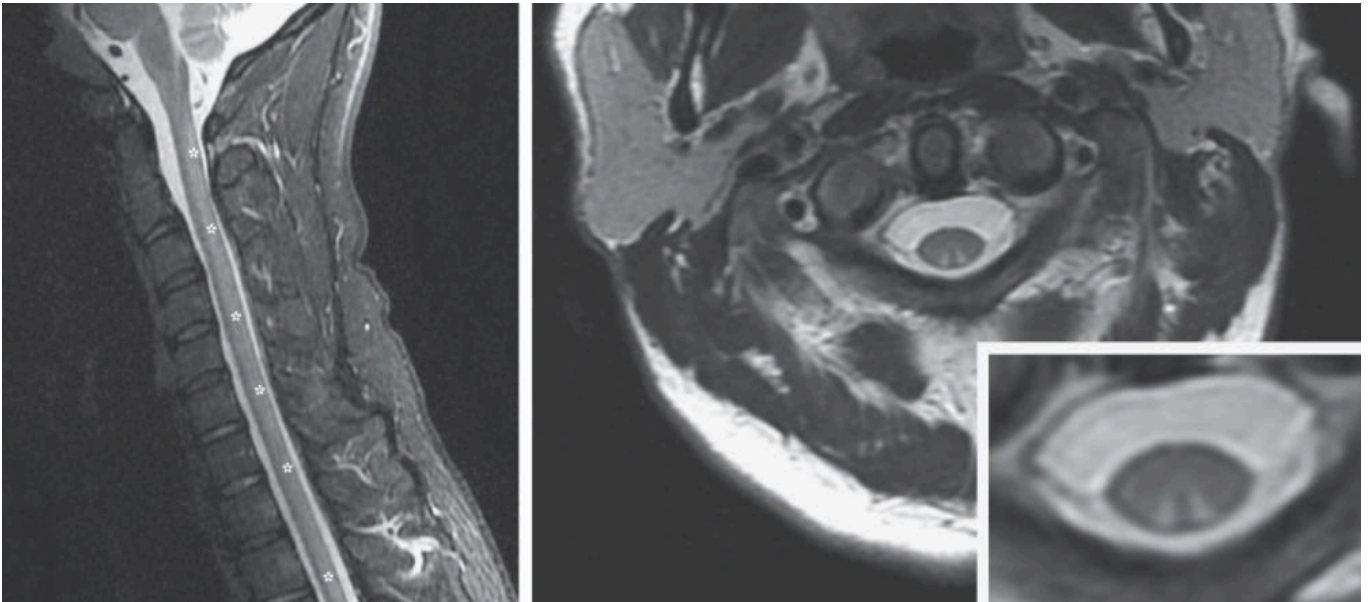


A 52-year-old woman with end-stage kidney disease that was being managed with peritoneal dialysis presented with a 1-month history of bloody dialysate. She had had 3 episodes of bacterial peritonitis in the past 12 years. Physical examination and laboratory studies were unremarkable. Computed tomography of the abdomen was performed.

Your diagnosis:

Task /20

Patient Information:

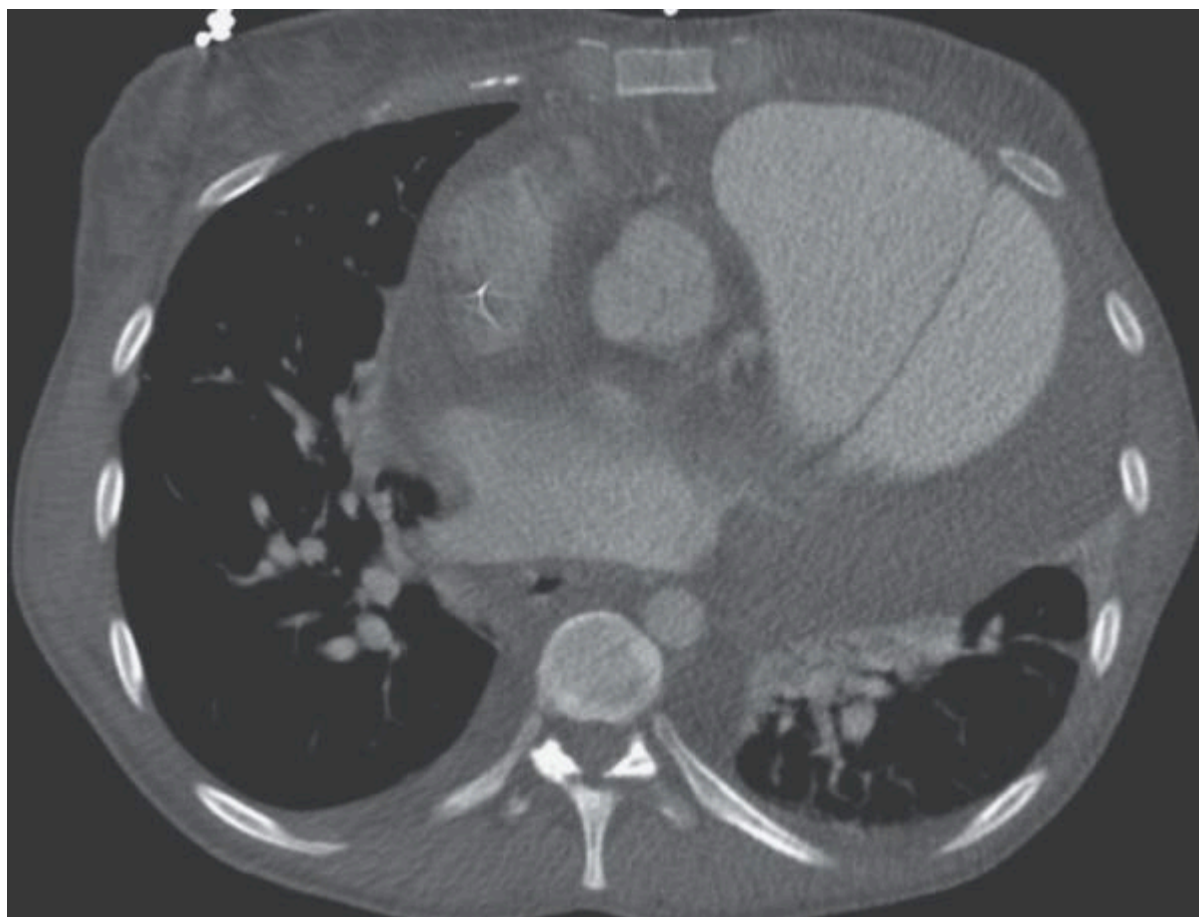


A 32-year-old man presented with a 6-week history of tingling in his arms and legs and a 2-week history of inability to walk. A positive Romberg test, sensory ataxia, impaired proprioception and vibratory sensation, and preserved nociception were noted. Magnetic resonance imaging of the whole spine showed hyperintensity in the posterior spinal cord from C1 to T12 and hyperintense lesions in the dorsal column on T2-weighted images. A vitamin B12 level was 107 pg per ml (reference value, >231) without macrocytic anemia.

Your diagnosis:

Task /20

Patient Information:



A 35-year-old woman with idiopathic pulmonary arterial hypertension and a pulmonary aneurysm presented with chest pain. Computed tomography (CT) of the chest is shown.

Your diagnosis:

Task /20

Patient Information:



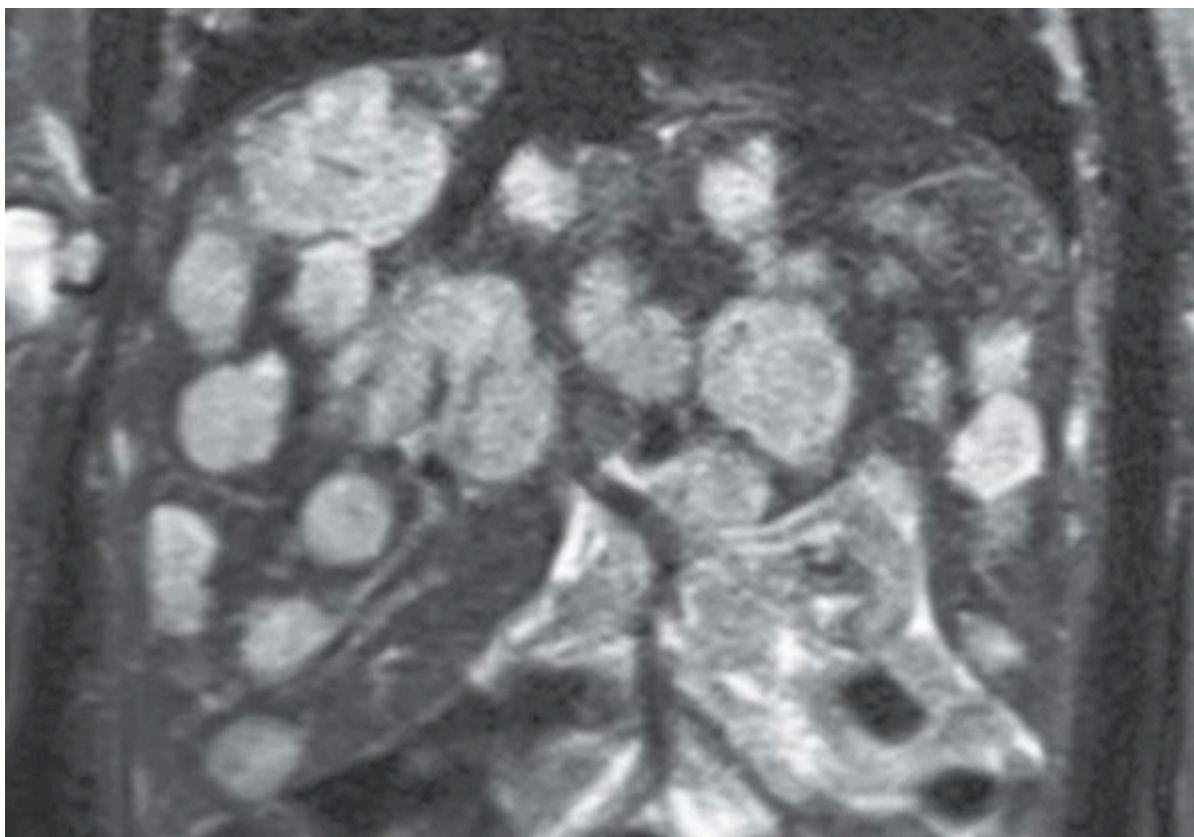
A 38-year-old man presented to the otolaryngology clinic with chronic difficulty breathing through his right nostril. Physical examination showed nasal septal deviation, calcified septal spurs, and a 2-cm perforation in the posterior septum. On rhinoscopy,

a hard, nontender, white mass was observed in the floor of the right nostril. CT of the paranasal sinuses showed a well-defined, radiodense mass.

Your diagnosis:

Task /20

Patient Information:



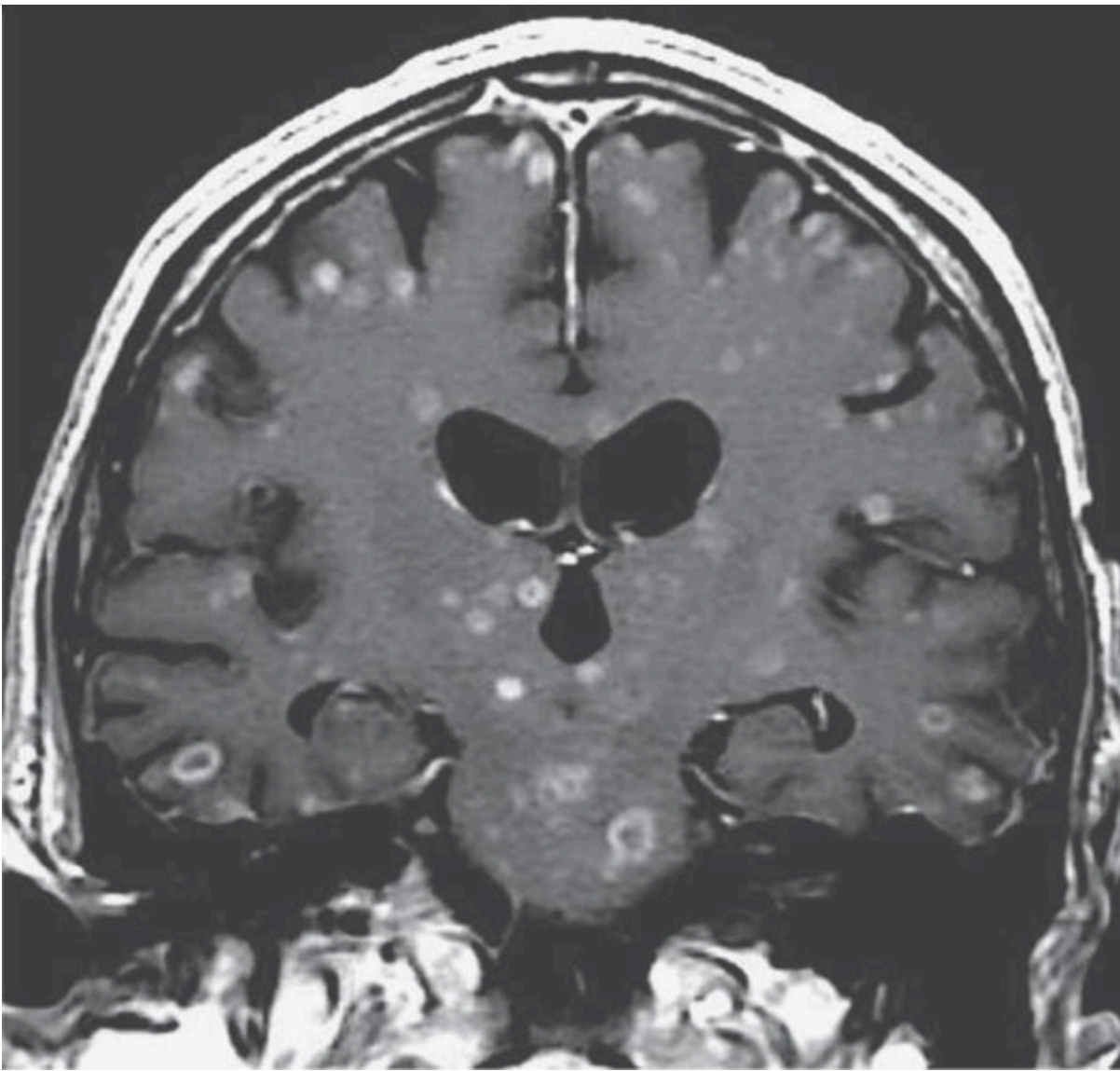
A 16-day-old girl was brought to the emergency department with lethargy. Physical exam showed tachypnea and marked hepatomegaly, as well as small hemangiomas

on the skin. TSH was elevated. MRI showed numerous hepatic lesions and cardiomegaly.

Your diagnosis:

Task /20

Patient Information:



A 71-year-old man was hospitalized with altered mental status progressing over the preceding 3 weeks. The patient had a recent diagnosis of adenocarcinoma of the colon with known metastatic lesions in the lung and bones. A gadolinium-enhanced magnetic resonance image of the brain was performed and is shown.

Your diagnosis:

Task /20

Patient Information:



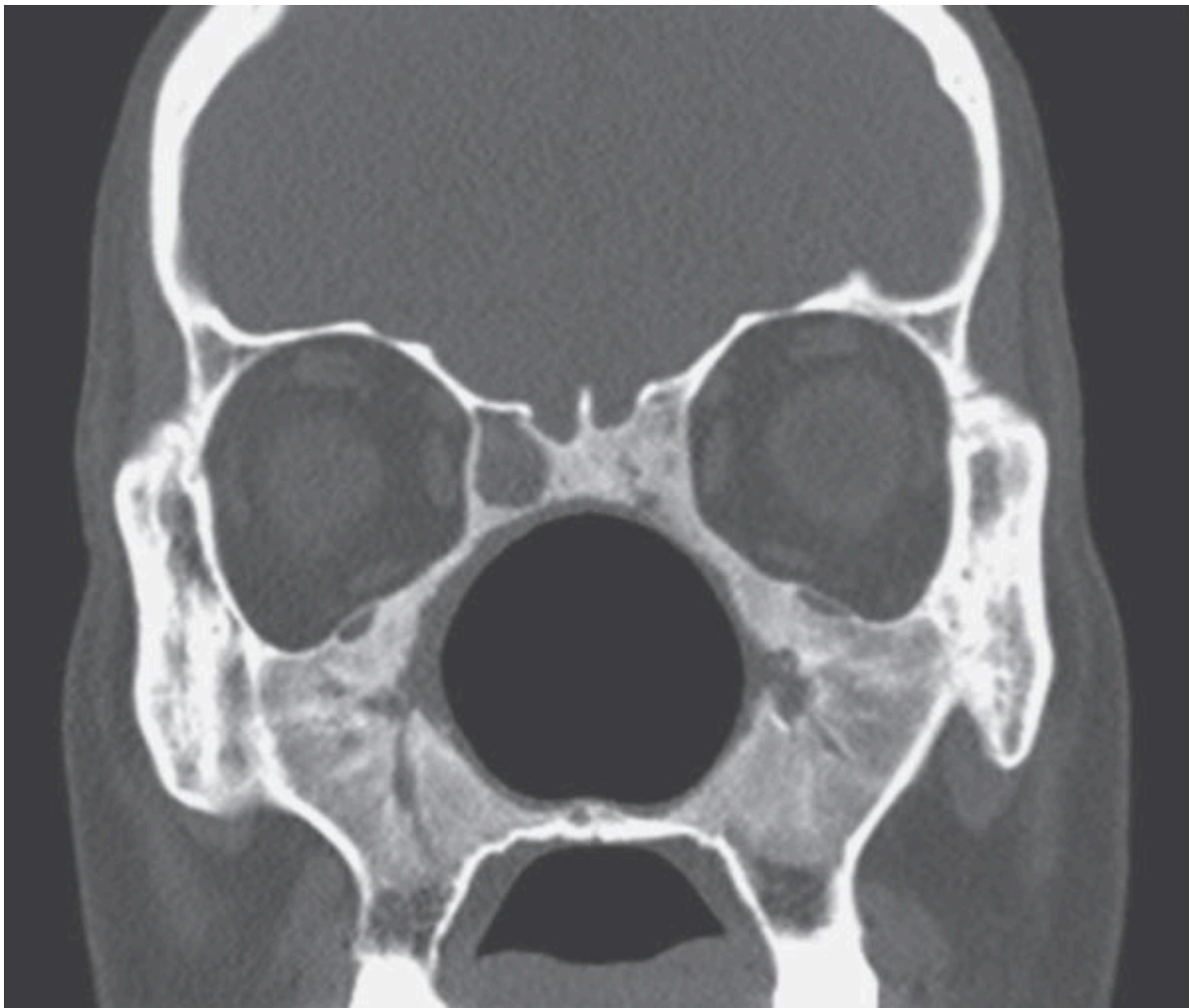
A 29-year-old man with perinatally acquired human immunodeficiency virus (HIV) infection and intermittent adherence to antiretroviral therapy presented to the hospital with abdominal pain and drenching night sweats. On presentation, his CD4 count was 18 cells per cubic millimeter (reference range, 500 to 1500), and the HIV viral load was undetectable. Physical exam showed severe abdominal distention, splenomegaly, and

diffuse abdominal tenderness to palpation. Computed tomography of the abdomen confirmed massive splenomegaly with multifocal infarction of the splenic parenchyma.

Your diagnosis:

Task /20

Patient Information:



A 42-year-old man presented to the clinic with a 3-month history of worsening cough, shortness of breath, and fever. Physical examination showed inflamed nasal mucosa and nasal crusting. Wheezes and rales were heard on auscultation. A computed tomographic scan of the face showed extensive destruction of the structural bones of the midface, resulting in a large nasal cavity.

Your diagnosis:

Task /20

Patient Information:

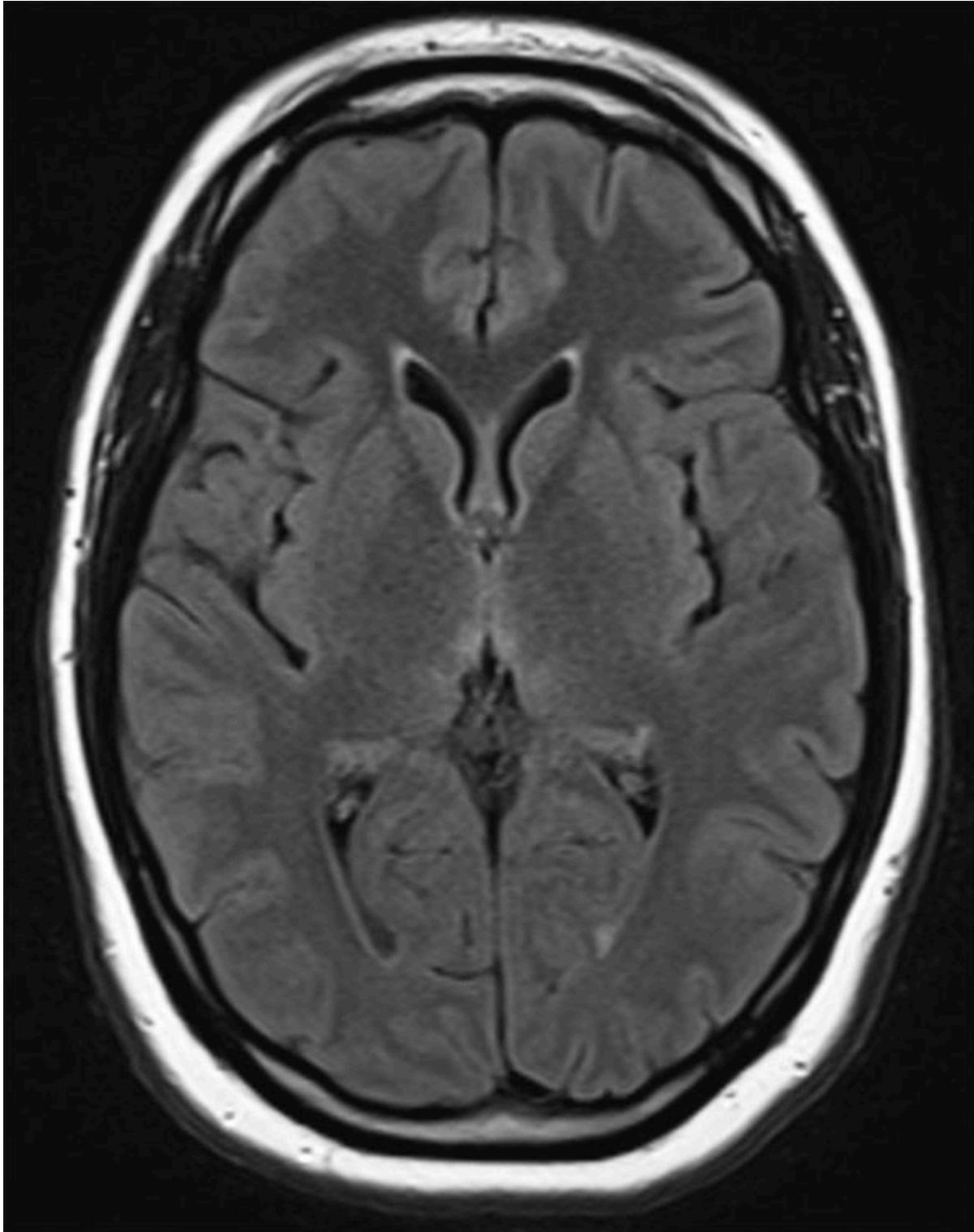


A 63-year-old man presented to the emergency department with a 3-day history of abdominal pain that had started in the periumbilical area and subsequently shifted to the left lower quadrant. Initial laboratory tests showed a white-cell count of 12,000 per cubic millimeter (reference range, 4000 to 10,000) and a lactate level of 1.8 mmol per liter (normal value, <1.9). Contrast-enhanced computed tomography of the abdomen revealed edema of the sigmoid colon with thumbprinting.

Your diagnosis:

Task /20

Patient Information:

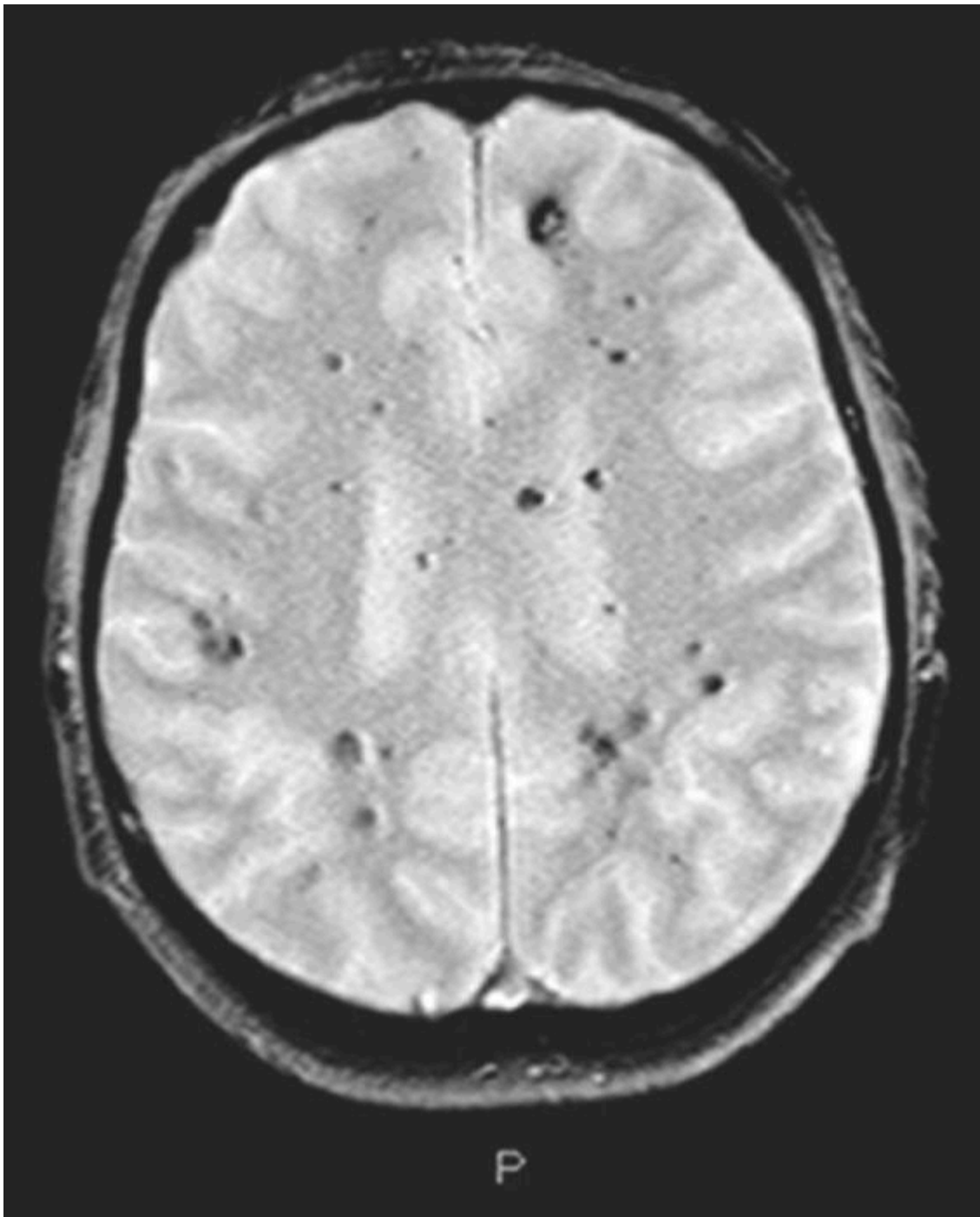


A 28-year-old woman with vertigo, confusion, and falls 2 weeks after a surgical abortion at 11 weeks of gestation presents to the emergency department. Examination revealed spontaneous upbeat nystagmus, gaze-evoked nystagmus, and gait ataxia.

Your diagnosis:

Task /20

Patient Information:



A 59-year-old previously healthy man presented with progressively worsening headaches and bluish nodular skin lesions. Fast-field echo MRI image of the brain showed this finding.

Your diagnosis:

Task /20

Patient Information:

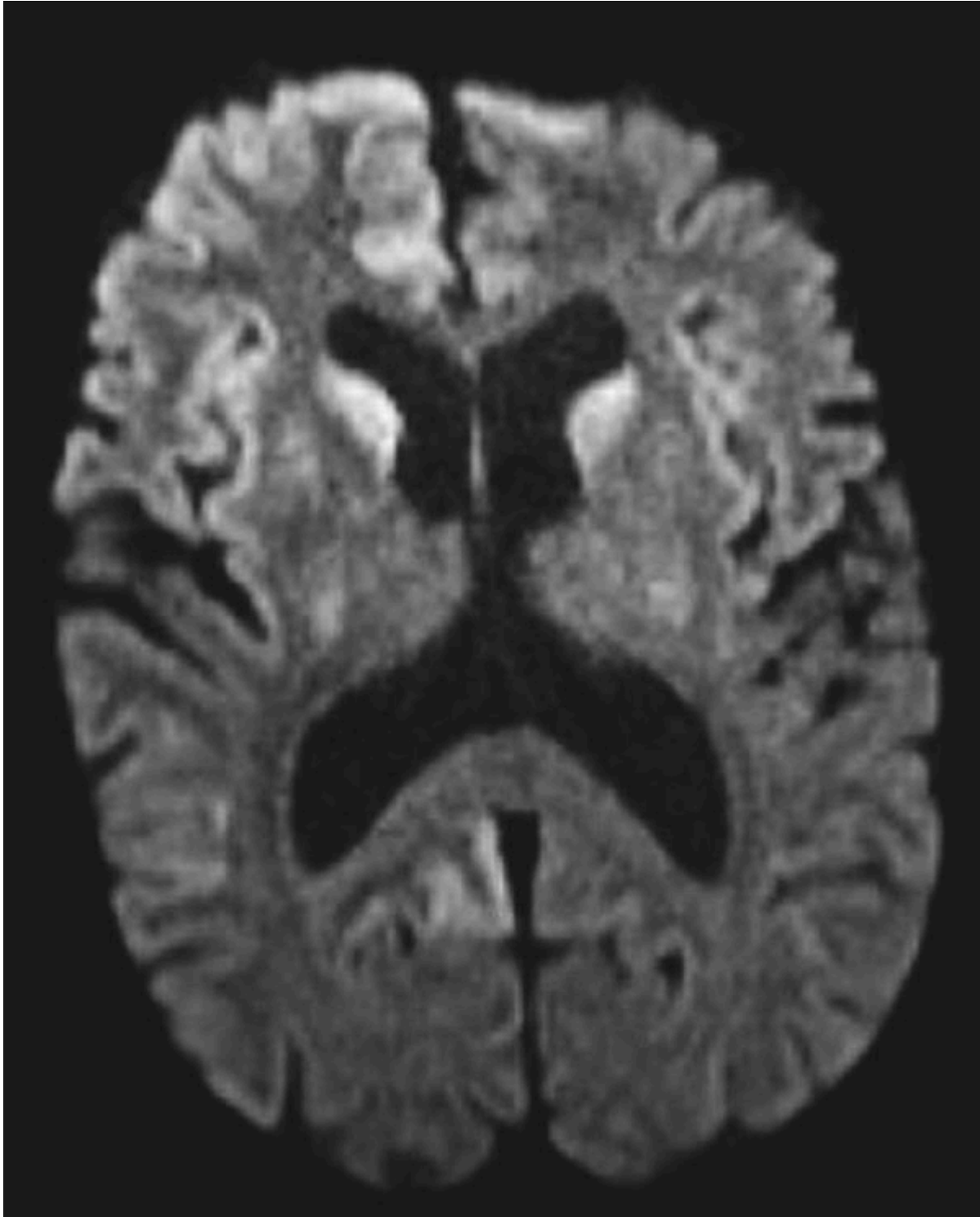


A 44-year-old woman presented to the emergency department with acute chest pain after several months of progressive dyspnea. Her oxygen saturation was 92%, and she had diminished breath sounds on the right side. Chest CT revealed a large right-sided pneumothorax and diffuse, intraparenchymal pulmonary cysts.

Your diagnosis:

Task /20

Patient Information:



A 54-year-old man presented with a 3-week history of cognitive deterioration. Neurologic examination revealed disorientation, horizontal gaze-evoked nystagmus, hyperreflexia, startle myoclonus, and ataxia. Brain MRI with diffusion-weighted imaging revealed hyperintensity of the cortical gyri and caudate heads.

Your diagnosis:

Task /20

Patient Information:



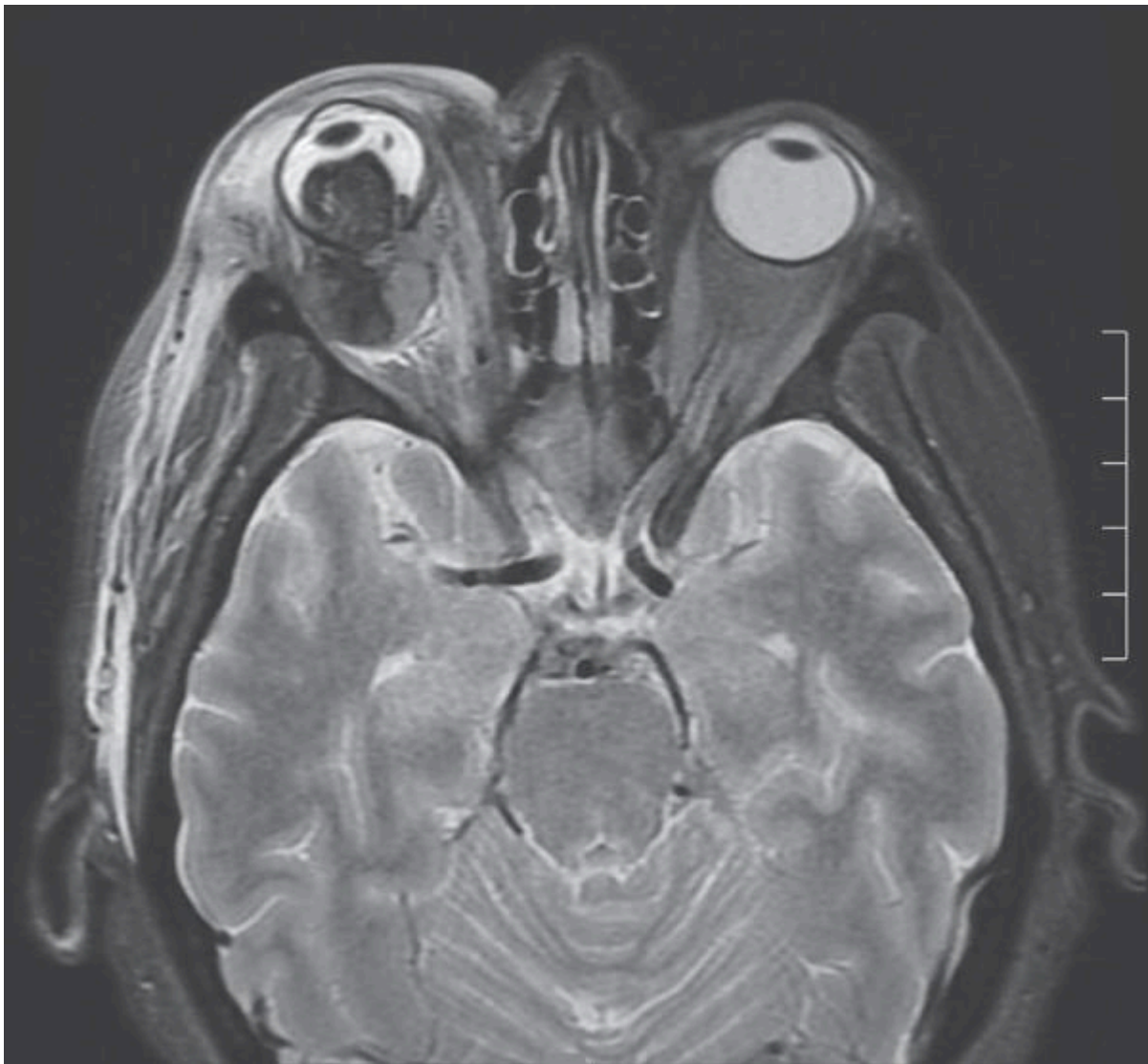
A 30-year-old man presented with a 15-month history of intermittent discomfort in the right upper quadrant of the abdomen. He lived in a rural area of Morocco and had occasional contact with dogs. The physical examination revealed hepatomegaly with

a palpable hepatic mass. Laboratory tests showed a normal white-cell count and a normal absolute eosinophil count. Ultrasonography and computed tomography of the abdomen revealed a large cyst in the right lobe of the liver.

Your diagnosis:

Task /20

Patient Information:

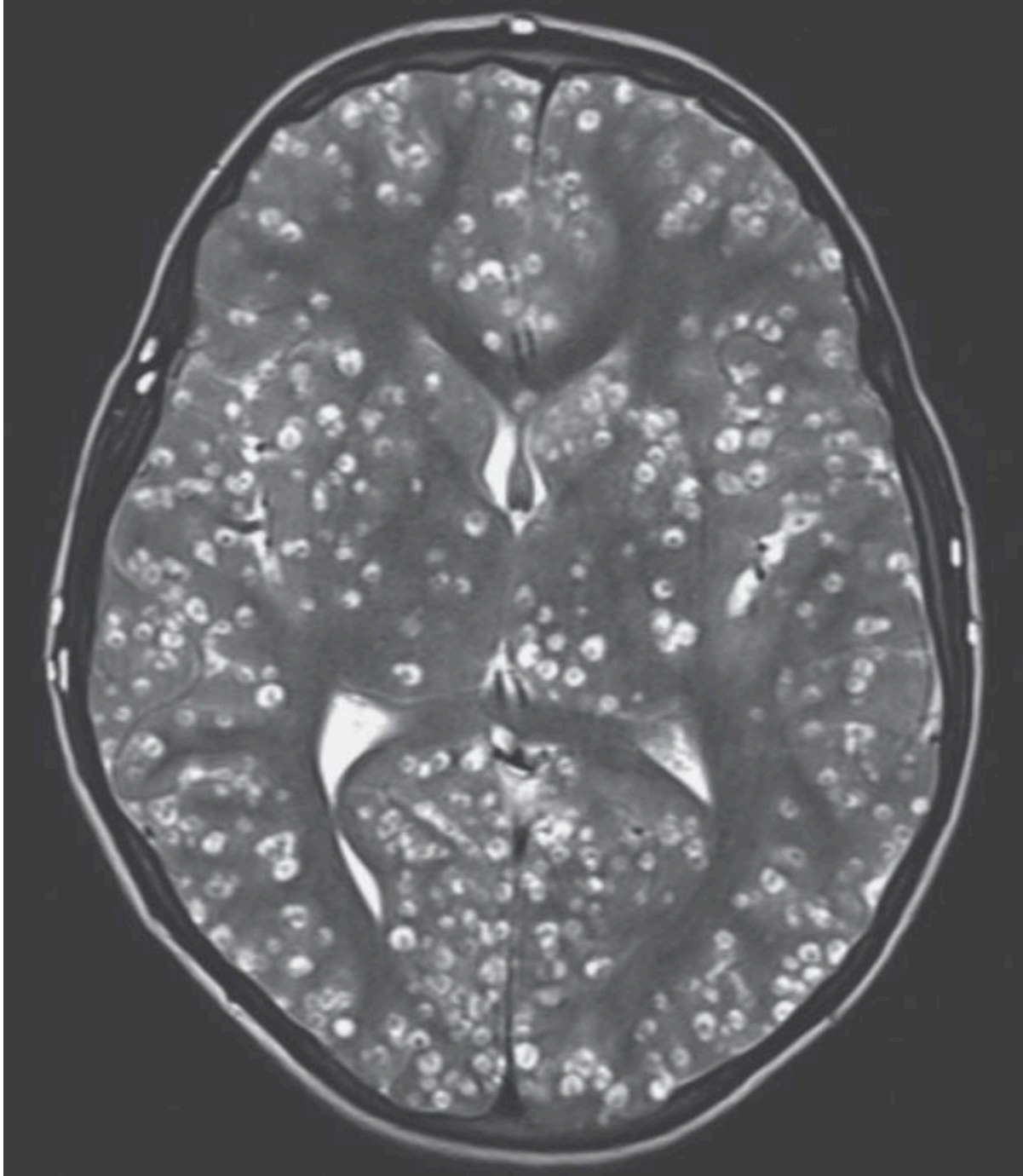


A 59-year-old woman presented to the emergency department with a 4-day history of inflammation and pain in the right eye. She had been blind in the eye for several years before presentation. Magnetic resonance imaging revealed a right orbital mass. Abdominal and thoracic imaging showed numerous hepatic masses, abdominal and thoracic lymphadenopathy, and vertebral sclerotic osseous disease. The right eye was enucleated for palliative relief and to obtain tissue for diagnosis.

Your diagnosis:

Task /20

Patient Information:



An 18-year-old man presented to the emergency department with generalized tonic-clonic seizures. On physical examination, the patient was confused. He had swelling over the right eye and tenderness in the right testis. Magnetic resonance imaging of the head showed numerous well-defined cystic lesions throughout the cerebral cortex.

Your diagnosis:

Introduction with AI

Introduction

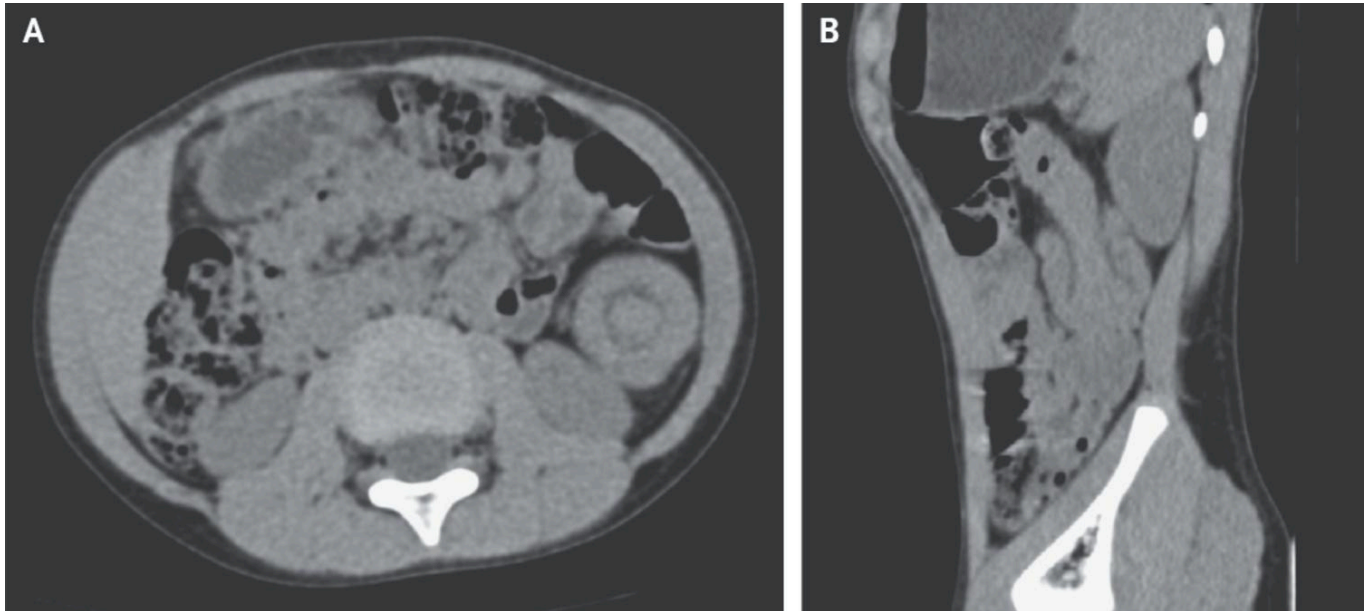
Your Task:

- You will receive a description of the patient's symptoms and an image (CT/MRI).
- You are asked to make diagnoses based on **patient information** and **the images provided**.
- There will be **20 cases** in total.
- An artificial intelligence (AI) will give you advise for making a diagnosis.
- The AI also provides an explanation for its reasoning.
- However, the AI can be **incorrect**.
- **Read** all information provided carefully.

Main Task with AI – Differential Diagnosis Prompting

Task /20

Patient Information:



A previously healthy 5-year-old boy was brought to the surgery clinic with a 2-day history of intermittent abdominal pain. On palpation of the abdomen there was pain in the periumbilical region, but no rebound or guarding. An ultrasound was normal, and a computed tomography of the abdomen was performed (Panels A,B).

AI advice:

List of possible diseases

1. Intussusception
2. Mesenteric Adenitis
3. Acute Gastroenteritis
4. Appendicitis
5. Constipation

Detailed assessment of each possible diagnosis

1. Intussusception:

Best fit: The CT images show a "target" or "sausage-shaped" mass, which is characteristic of intussusception. The patient's intermittent abdominal pain is a common symptom of intussusception.

2. Mesenteric Adenitis:

The CT images do not show significant lymphadenopathy, which is typically seen in mesenteric adenitis. Additionally, mesenteric adenitis often follows a viral infection, which is not mentioned in this case.

3. Acute Gastroenteritis:

Acute gastroenteritis usually presents with vomiting and diarrhea, which are not described in this patient. The CT images also do not show signs consistent with gastroenteritis, such as diffuse bowel wall thickening.

4. Appendicitis:

The CT images do not show an inflamed appendix or periappendiceal fat stranding, which are typical signs of appendicitis. Additionally, the pain in appendicitis usually localizes to the right lower quadrant, which is not the case here.

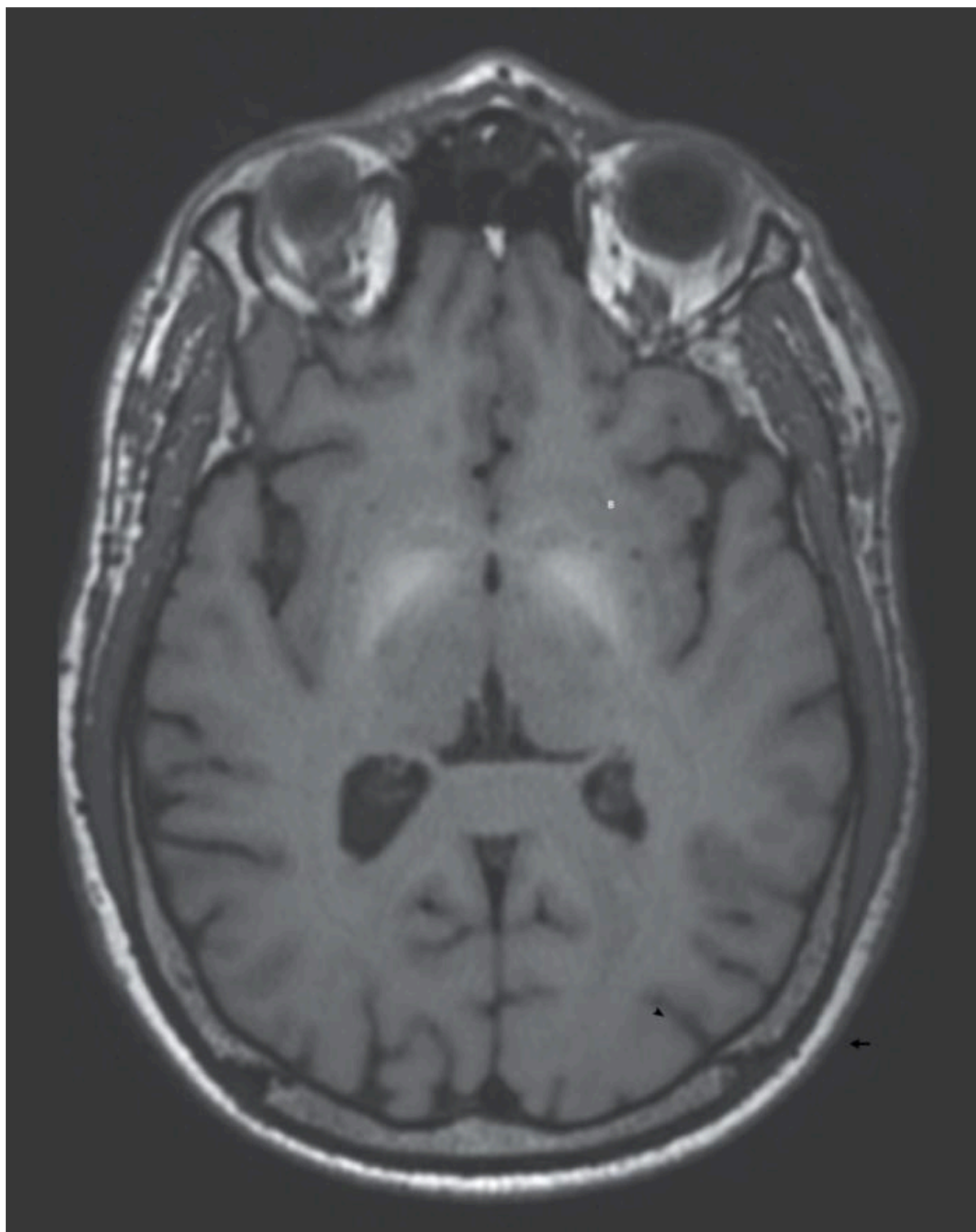
5. Constipation:

Least likely: While constipation can cause abdominal pain, the CT images do not show significant fecal loading or dilated bowel loops indicative of constipation. The clinical presentation of intermittent pain is also not typical for simple constipation.

Your diagnosis:

Task /20

Patient Information:



A 55-year-old man presented with 10 years of progressive handwriting impairment and rapid, slurred speech. In his thirties, he had worked as a welder without access to personal protective equipment. Neurologic examination was notable for reduced facial expression, blepharospasm, and cluttered, dysarthric speech. Postural reflexes were mildly impaired. MRI imaging of the head showed a nonenhancing, T1-weighted, hyperintense signal in the basal ganglia on both sides. Ceruloplasmin and iron levels were normal.

AI advice:

List of possible diseases

1. Manganese Toxicity
2. Parkinson's Disease
3. Wilson's Disease
4. Progressive Supranuclear Palsy (PSP)
5. Multiple System Atrophy (MSA)

Detailed assessment of each possible diagnosis

1. Manganese Toxicity:

Best fit: The patient's history of welding without protective equipment and the MRI finding of hyperintense basal ganglia are consistent with manganese toxicity. The clinical symptoms of reduced facial expression and dysarthric speech also align well with this condition.

2. Parkinson's Disease:

While the symptoms of reduced facial expression and impaired postural reflexes are seen in Parkinson's disease, the MRI finding of a hyperintense signal in the

basal ganglia is not typical. Parkinson's disease usually shows normal or hypointense signals in the basal ganglia.

3. Wilson's Disease:

The patient's normal ceruloplasmin and iron levels make Wilson's disease less likely. Additionally, Wilson's disease typically presents with hepatic dysfunction and Kayser–Fleischer rings, which are not mentioned here.

4. Progressive Supranuclear Palsy (PSP):

PSP often presents with vertical gaze palsy, which is not described in this patient. The MRI findings are also not characteristic of PSP, which typically shows midbrain atrophy ("hummingbird sign").

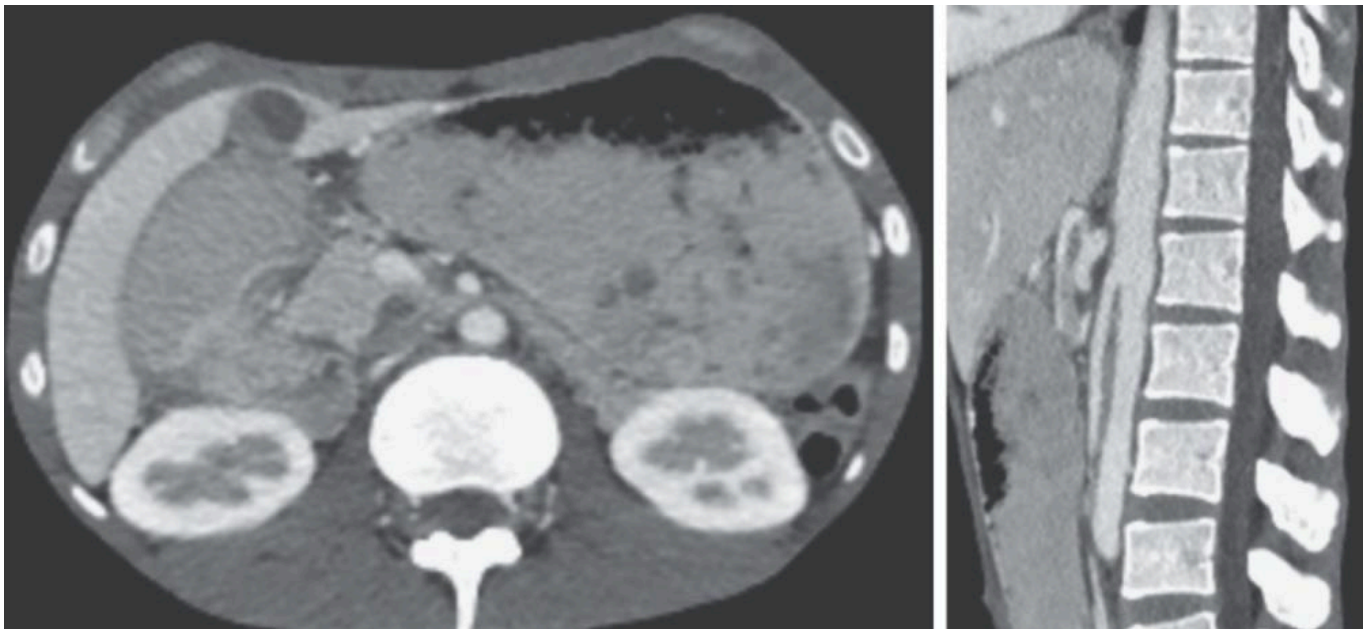
5. Multiple System Atrophy (MSA):

Least likely: MSA often presents with autonomic dysfunction and cerebellar signs, which are not described in this patient. The MRI findings of a hyperintense basal ganglia signal are not typical for MSA, which usually shows changes in the cerebellum and brainstem.

Your diagnosis:

Task /20

Patient Information:



26-year-old man from Somalia presented with a 5-month history of dry cough, night sweats, and unintentional weight loss of 18 kg. During this period, epigastric pain and postprandial vomiting had also developed. His BMI was 11. On examination, he was cachectic with abdominal distention and diffuse tenderness to palpation. On the basis of chest imaging and sputum studies, a diagnosis of pulmonary tuberculosis was made, and intravenous antituberculous treatment was initiated. However, he continued to have postprandial vomiting. Contrast-enhanced CT of the abdomen was obtained.

AI advice:

List of possible diseases

1. Abdominal Tuberculosis
2. Superior Mesenteric Artery (SMA) Syndrome
3. Gastric Outlet Obstruction
4. Malignancy (e.g., Gastric Cancer)
5. Chronic Pancreatitis

Detailed assessment of each possible diagnosis

1. Abdominal Tuberculosis:

Best fit: Given the patient's history of pulmonary tuberculosis and the CT findings of abdominal lymphadenopathy and possible bowel involvement, abdominal tuberculosis is highly likely. The systemic symptoms (cough, night sweats, weight loss) and the endemic region (Somalia) support this diagnosis.

2. Superior Mesenteric Artery (SMA) Syndrome:

While the patient's symptoms of postprandial vomiting and significant weight loss could suggest SMA syndrome, the CT does not show the characteristic compression of the third portion of the duodenum between the SMA and aorta. The presence of systemic symptoms (night sweats, cough) also makes SMA syndrome less likely.

3. Gastric Outlet Obstruction:

The CT findings do not show a clear obstructive lesion at the gastric outlet or duodenum. The systemic symptoms and history of tuberculosis make a primary gastric outlet obstruction less likely as the sole diagnosis.

4. Malignancy (e.g., Gastric Cancer):

The patient's age makes a malignancy like gastric cancer less likely, although not impossible. The CT does not show a mass typical of gastric cancer, and the systemic symptoms are more consistent with an infectious or inflammatory process.

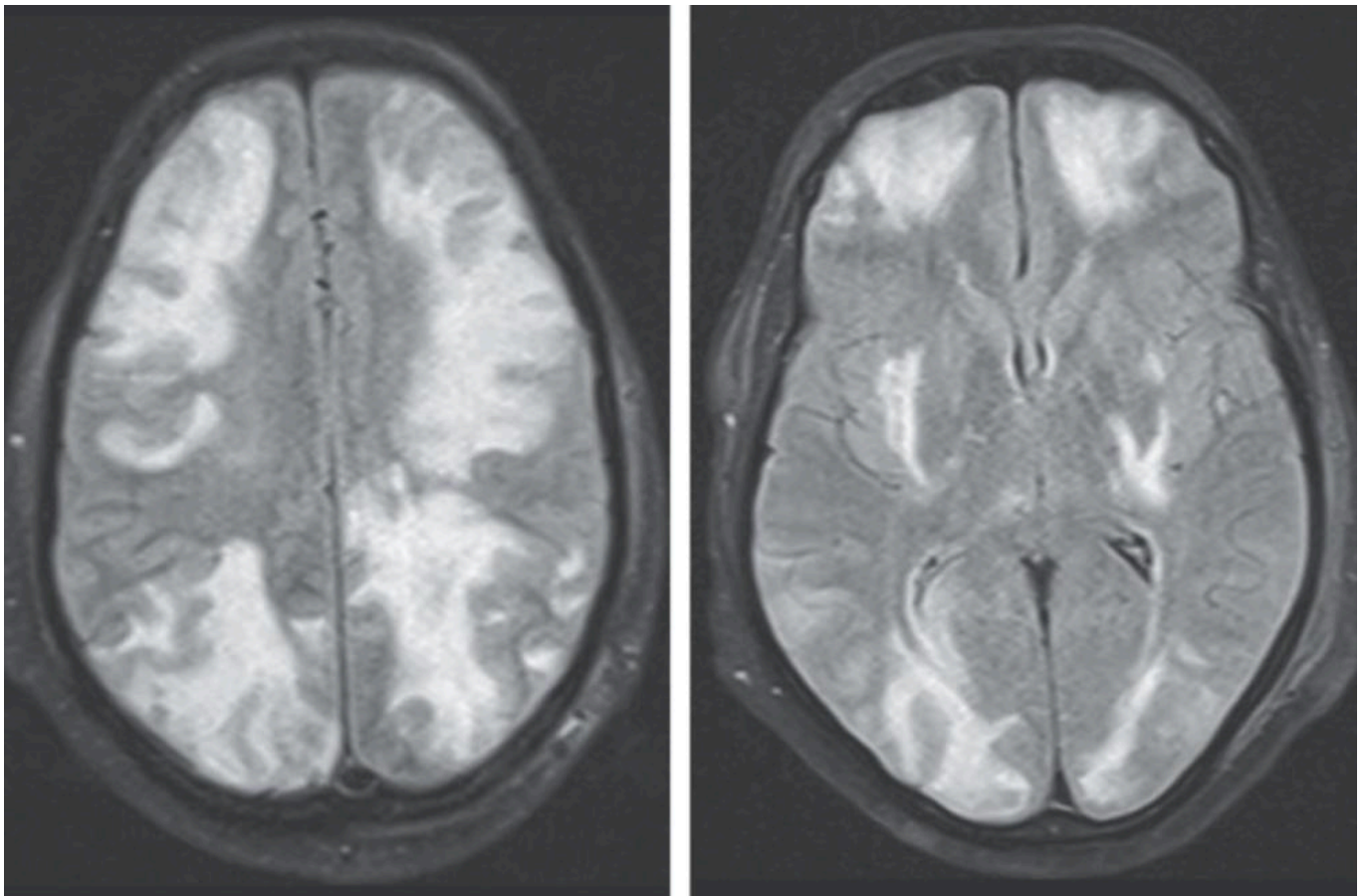
5. Chronic Pancreatitis:

Least likely: While chronic pancreatitis can cause abdominal pain and vomiting, it is less likely given the patient's young age and lack of history of alcohol use or other risk factors. The CT findings do not show the characteristic calcifications or pancreatic duct changes seen in chronic pancreatitis.

Your diagnosis:

Task /20

Patient Information:



A 35-year-old man with IgA nephropathy presented with confusion, blurry vision, and seizures. Two weeks before presentation, he had started receiving cyclosporine. Physical examination was notable for a blood pressure of 160/80 mm Hg, drowsiness, and decreased visual acuity. A fundoscopic examination was normal. T2-weighted magnetic resonance imaging (MRI) with fluid-attenuated inversion recovery sequencing of the head was performed.

AI advice:

List of possible diseases

1. Posterior Reversible Encephalopathy Syndrome (PRES)
2. Cyclosporine Neurotoxicity
3. Hypertensive Encephalopathy
4. Central Nervous System Infection
5. Metabolic Encephalopathy

Detailed assessment of each possible diagnosis

1. Posterior Reversible Encephalopathy Syndrome (PRES):

Best fit: The MRI shows hyperintense areas in the parieto-occipital regions, which are characteristic of PRES. The patient's symptoms of confusion, seizures, and blurry vision, along with hypertension and recent cyclosporine use, align well with this diagnosis.

2. Cyclosporine Neurotoxicity:

While cyclosporine can cause neurotoxicity, the MRI findings are more consistent with PRES. Cyclosporine neurotoxicity often presents with similar symptoms but lacks the typical MRI findings of PRES.

3. Hypertensive Encephalopathy:

The patient's blood pressure is elevated but not extremely high. The MRI findings of parieto-occipital hyperintensities are more suggestive of PRES than hypertensive encephalopathy, which can present with similar symptoms but more diffuse cerebral edema.

4. Central Nervous System Infection:

The normal fundoscopic examination and lack of fever or other infectious signs

make a CNS infection less likely. The MRI findings do not show typical signs of infection such as meningitis or abscess.

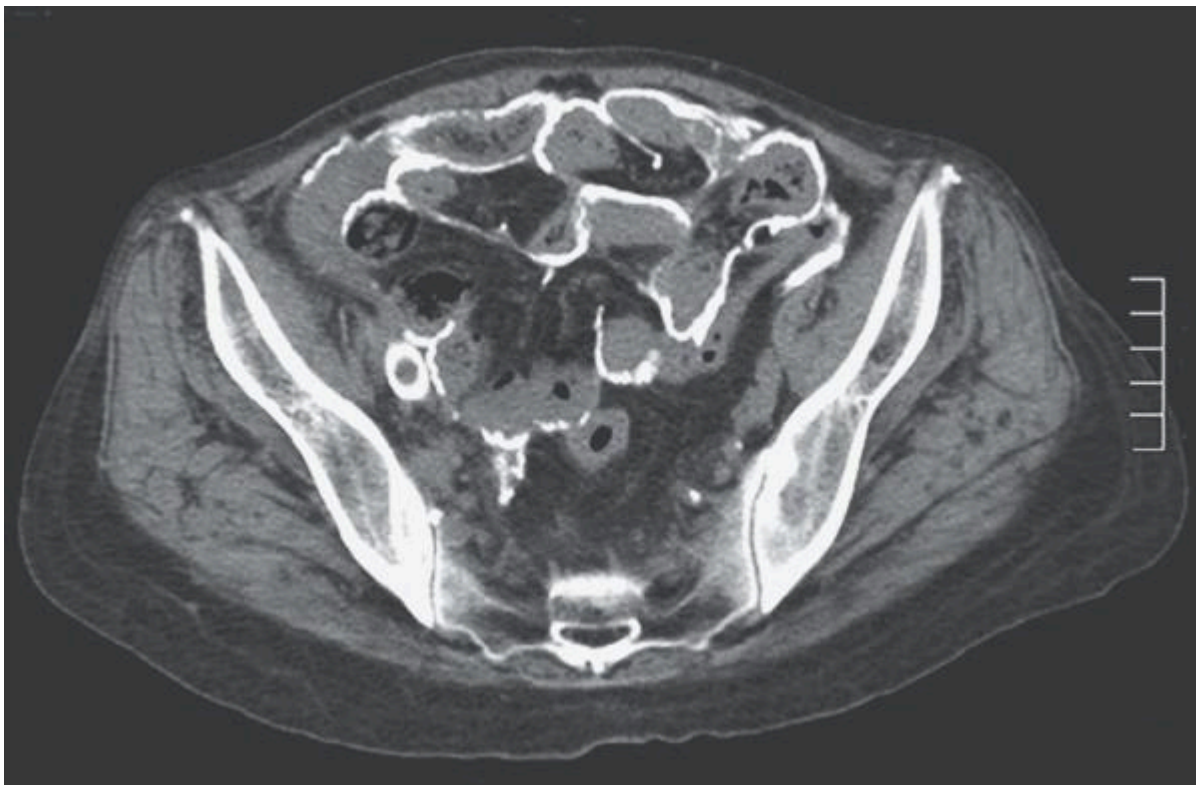
- **Metabolic Encephalopathy:**

Least likely: While metabolic encephalopathy can cause confusion and seizures, the MRI findings are not typical for this condition. Metabolic encephalopathy usually presents with more diffuse brain involvement rather than the localized parieto-occipital changes seen here.

Your diagnosis:

Task /20

Patient Information:



A 52-year-old woman with end-stage kidney disease that was being managed with peritoneal dialysis presented with a 1-month history of bloody dialysate. She had had 3 episodes of bacterial peritonitis in the past 12 years. Physical examination and laboratory studies were unremarkable. Computed tomography of the abdomen was performed.

AI advice:

List of possible diseases

1. Encapsulating Peritoneal Sclerosis (EPS)
2. Peritoneal Dialysis-Associated Peritonitis
3. Peritoneal Carcinomatosis
4. Mesenteric Ischemia
5. Hemorrhagic Cyst of the Ovary

Detailed assessment of each possible diagnosis

1. Encapsulating Peritoneal Sclerosis (EPS):

Best fit: EPS is a known complication of long-term peritoneal dialysis and can present with bloody dialysate. The CT findings of peritoneal thickening and calcification are suggestive of EPS.

2. Peritoneal Dialysis-Associated Peritonitis:

While peritonitis is a common complication, the absence of signs of infection on physical examination and unremarkable laboratory studies make it less likely. Additionally, the CT findings are more indicative of a chronic process like EPS.

3. Peritoneal Carcinomatosis:

Peritoneal carcinomatosis can cause bloody ascites, but the patient's history and

CT findings are more consistent with EPS. The lack of other systemic symptoms or signs of malignancy makes this diagnosis less likely.

4. Mesenteric Ischemia:

Mesenteric ischemia typically presents with severe abdominal pain and systemic symptoms, which are not described in this patient. The CT does not show the characteristic findings of bowel wall thickening or pneumatosis intestinalis.

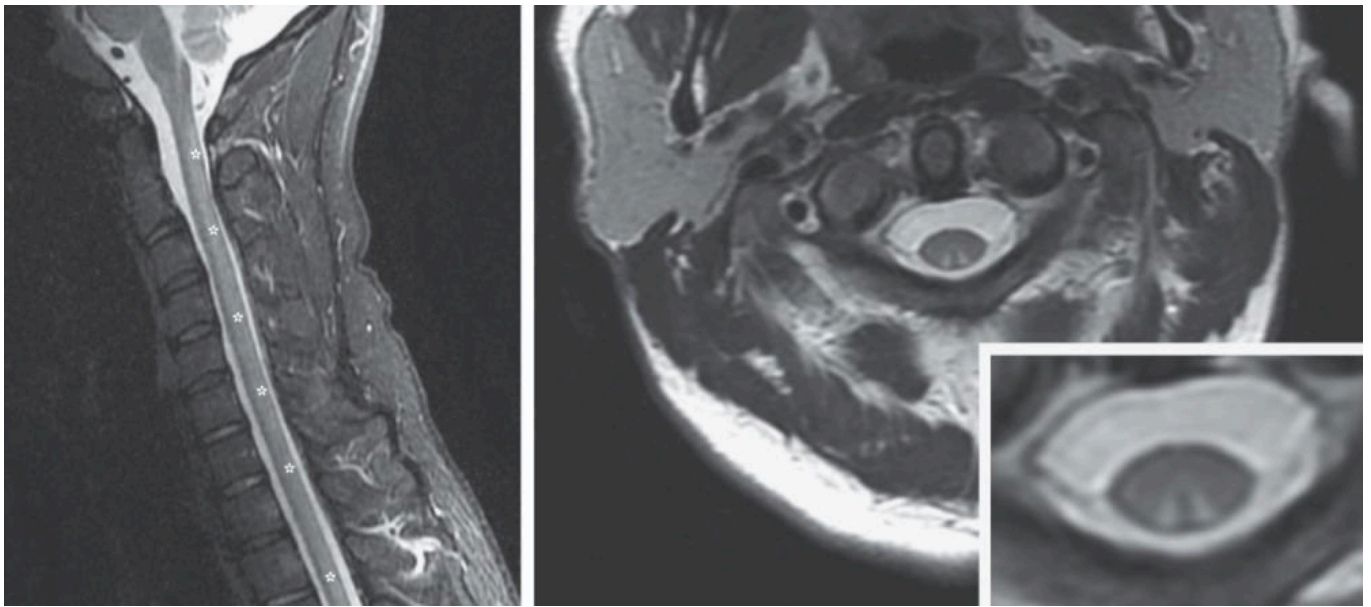
5. Hemorrhagic Cyst of the Ovary:

Least likely: A hemorrhagic ovarian cyst can cause abdominal pain and bleeding, but it is less likely to cause bloody dialysate. The CT findings do not show an ovarian cyst or any related pathology.

Your diagnosis:

Task /20

Patient Information:



A 32-year-old man presented with a 6-week history of tingling in his arms and legs and a 2-week history of inability to walk. A positive Romberg test, sensory ataxia, impaired proprioception and vibratory sensation, and preserved nociception were noted. Magnetic resonance imaging of the whole spine showed hyperintensity in the posterior spinal cord from C1 to T12 and hyperintense lesions in the dorsal column on T2-weighted images. A vitamin B12 level was 107 pg per ml (reference value, >231) without macrocytic anemia.

AI advice:

List of possible diseases

1. Subacute Combined Degeneration (SCD)
2. Multiple Sclerosis (MS)
3. Neurosyphilis
4. Spinal Cord Tumor
5. HIV-Associated Myelopathy

Detailed assessment of each possible diagnosis

1. Subacute Combined Degeneration (SCD):

Best fit: The patient's low vitamin B12 level and the MRI findings of dorsal column hyperintensities are characteristic of SCD. The clinical presentation of sensory ataxia, impaired proprioception, and preserved nociception further supports this diagnosis.

2. Multiple Sclerosis (MS):

MS can cause similar MRI findings, but it typically presents with multiple lesions scattered throughout the CNS, not confined to the dorsal columns. The patient's symptoms and history of low vitamin B12 make SCD more likely than MS.

3. Neurosyphilis:

Neurosyphilis can present with sensory ataxia and dorsal column involvement, but it usually occurs in individuals with a history of syphilis, which is not mentioned here. Additionally, the low vitamin B12 level and MRI findings are more consistent with SCD.

4. Spinal Cord Tumor:

A spinal cord tumor can cause similar symptoms, but the MRI would typically show a mass effect rather than diffuse dorsal column hyperintensity. The patient's low vitamin B12 level and the specific MRI findings make SCD a more likely diagnosis.

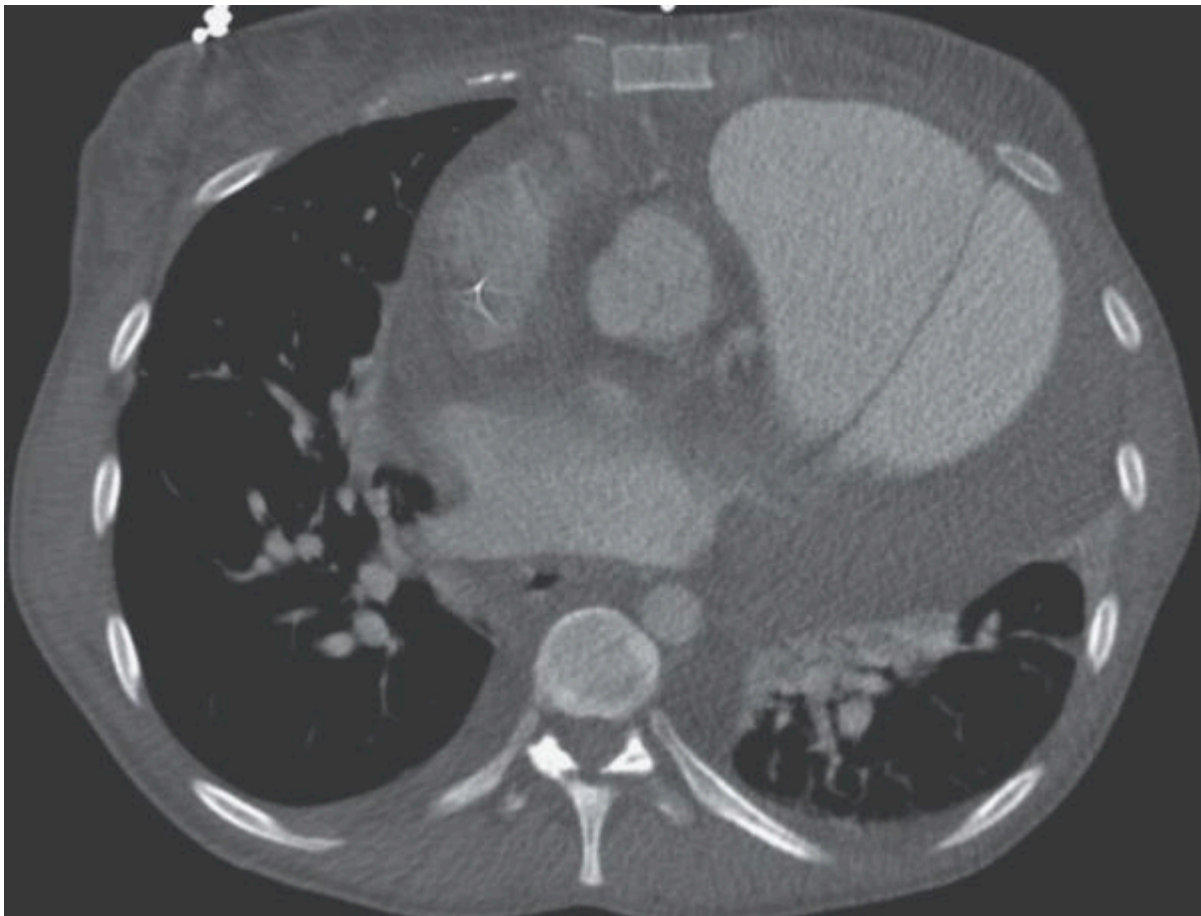
5. HIV-Associated Myelopathy:

Least likely: HIV-associated myelopathy can cause dorsal column involvement, but it usually presents in individuals with known HIV infection and other systemic symptoms. The patient's low vitamin B12 level and the specific MRI findings are more consistent with SCD.

Your diagnosis:

Task /20

Patient Information:



A 35-year-old woman with idiopathic pulmonary arterial hypertension and a pulmonary aneurysm presented with chest pain. Computed tomography (CT) of the chest is shown.

AI advice:

List of possible diseases

1. Pulmonary Artery Aneurysm Rupture
2. Pulmonary Embolism
3. Aortic Dissection
4. Myocardial Infarction
5. Pneumothorax

Detailed assessment of each possible diagnosis

1. Pulmonary Artery Aneurysm Rupture:

Best fit: The CT shows an enlarged pulmonary artery with signs of potential rupture, which aligns with the patient's history of a pulmonary aneurysm and presentation with chest pain. This diagnosis is the most likely given the patient's known condition and the imaging findings.

2. Pulmonary Embolism:

While pulmonary embolism can present with chest pain and the patient has pulmonary arterial hypertension, the CT does not show the characteristic filling defects within the pulmonary arteries. The clinical presentation and patient's history make a pulmonary artery aneurysm rupture more likely.

3. Aortic Dissection:

Aortic dissection can cause severe chest pain and would show a widened mediastinum or a double lumen in the aorta on CT. The CT findings do not indicate an aortic dissection, and the patient's history of a pulmonary aneurysm makes this less likely.

4. Myocardial Infarction:

Myocardial infarction could present with chest pain but is usually diagnosed with ECG changes and elevated cardiac enzymes, not primarily with CT imaging. The patient's history and CT findings suggest a pulmonary cause rather than a cardiac one.

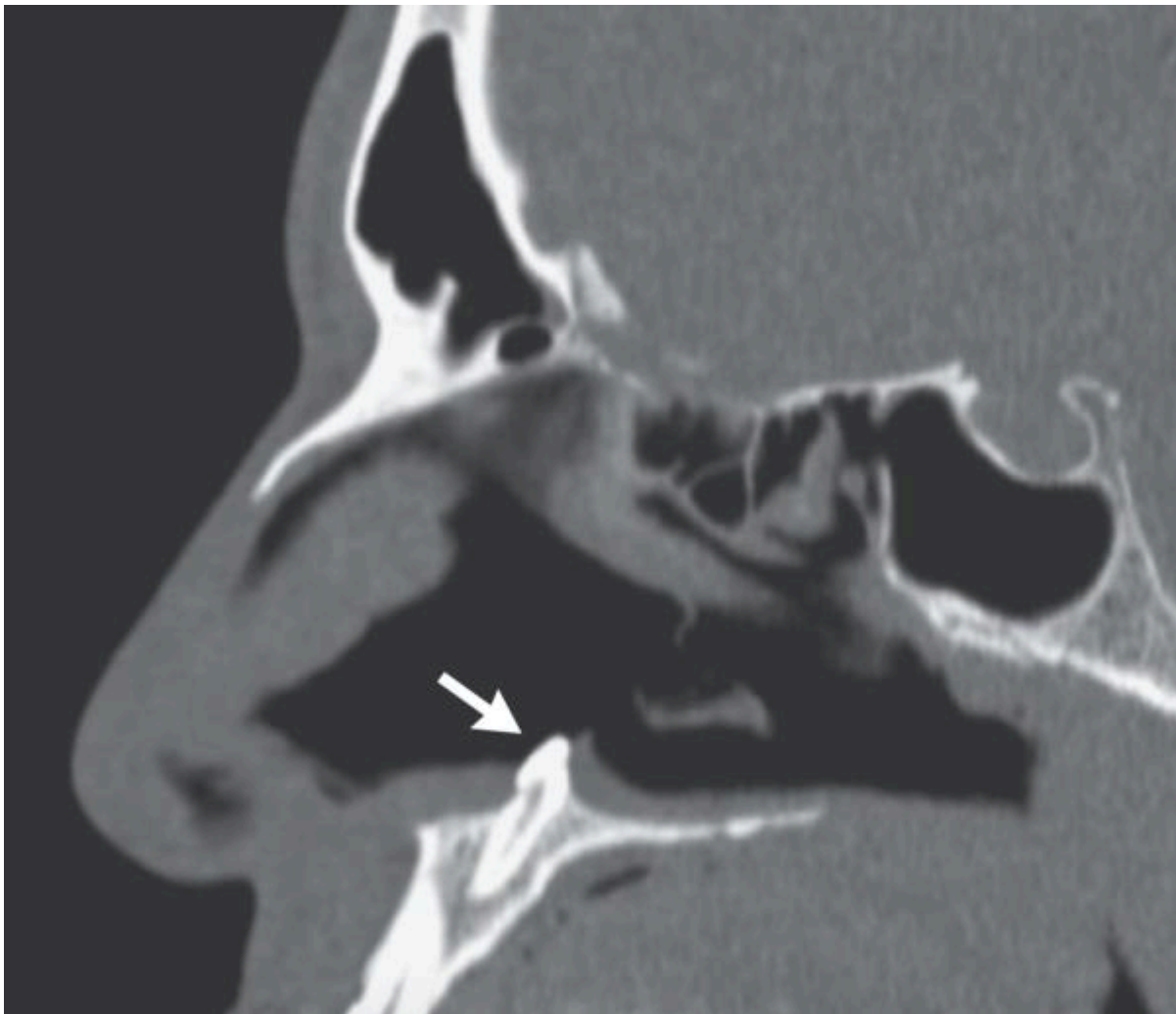
5. Pneumothorax:

Least likely: Pneumothorax would present with chest pain and shortness of breath and show a collapsed lung on CT, which is not observed here. The patient's history and the specific CT findings make pneumothorax an unlikely diagnosis.

Your diagnosis:

Task /20

Patient Information:



A 38-year-old man presented to the otolaryngology clinic with chronic difficulty breathing through his right nostril. Physical examination showed nasal septal deviation, calcified septal spurs, and a 2-cm perforation in the posterior septum. On rhinoscopy, a hard, nontender, white mass was observed in the floor of the right nostril. CT of the paranasal sinuses showed a well-defined, radiodense mass.

AI advice:

List of possible diseases

1. Rhinolith
2. Osteoma
3. Inverted Papilloma
4. Foreign Body

5. Nasal Polyp with Calcification

Detailed assessment of each possible diagnosis

1. Rhinolith:

Best fit: Rhinoliths are calcified masses within the nasal cavity and can present with chronic nasal obstruction and a hard, nontender mass. The radiodense mass observed on CT is characteristic of a rhinolith.

2. Osteoma:

Osteomas are benign bone tumors that can occur in the sinuses but are more typically found in the frontal and ethmoid sinuses. While they can present as hard, radiodense masses, the clinical presentation of a calcified mass in the nasal cavity is more consistent with a rhinolith.

3. Inverted Papilloma:

Inverted papillomas are benign tumors that can cause nasal obstruction but typically present as soft tissue masses rather than calcified masses. The hard, white mass and radiodense appearance on CT make this less likely.

4. Foreign Body:

A foreign body can cause chronic nasal obstruction and might appear as a radiodense mass if calcified. However, the absence of a history of foreign body insertion and the typical appearance on rhinoscopy and CT make a rhinolith more likely.

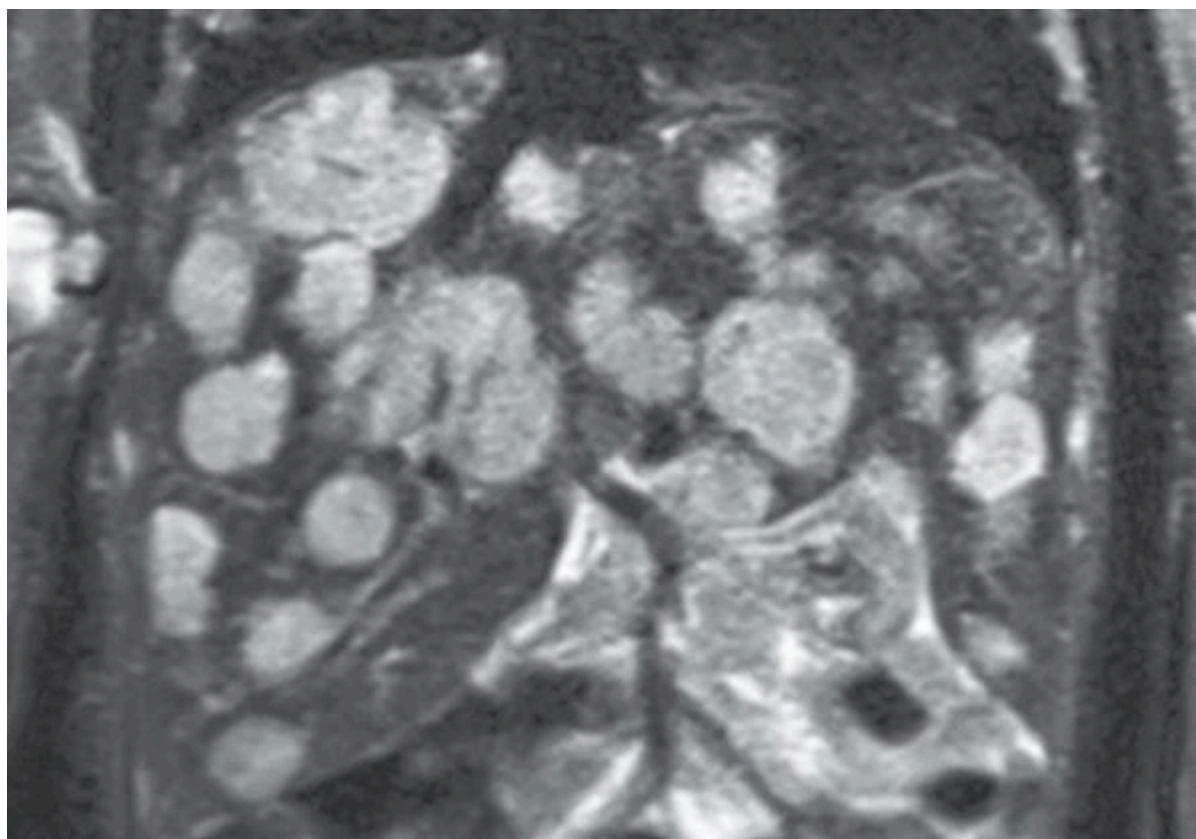
5. Nasal Polyp with Calcification:

Least likely: Nasal polyps are soft, non-calcified masses that can cause obstruction but are not typically hard and radiodense. The CT findings and clinical presentation are more indicative of a rhinolith.

Your diagnosis:

Task /20

Patient Information:



A 16-day-old girl was brought to the emergency department with lethargy. Physical exam showed tachypnea and marked hepatomegaly, as well as small hemangiomas on the skin. TSH was elevated. MRI showed numerous hepatic lesions and cardiomegaly.

AI advice:

List of possible diseases

1. Infantile Hepatic Hemangioendothelioma (IHHE)
2. Congenital Hypothyroidism
3. Neonatal Hemochromatosis
4. Congenital Heart Disease
5. TORCH Infection (e.g., Cytomegalovirus)

Detailed assessment of each possible diagnosis

1. Infantile Hepatic Hemangioendothelioma (IHHE):

Best fit: IHHE often presents with hepatomegaly, multiple hepatic lesions, and can cause cardiomegaly due to high-output cardiac failure. The presence of small hemangiomas on the skin and the characteristic MRI findings strongly support this diagnosis.

2. Congenital Hypothyroidism:

While congenital hypothyroidism can present with elevated TSH and lethargy, it does not typically cause multiple hepatic lesions or hemangiomas. The MRI findings of numerous hepatic lesions and cardiomegaly are more consistent with IHHE.

3. Neonatal Hemochromatosis:

Neonatal hemochromatosis can cause hepatomegaly and liver dysfunction, but it usually presents with iron overload and does not typically present with multiple hepatic lesions or skin hemangiomas. The imaging findings and clinical features are more suggestive of IHHE.

4. Congenital Heart Disease:

Congenital heart disease can cause cardiomegaly and tachypnea, but it does not explain the hepatomegaly, multiple hepatic lesions, or skin hemangiomas. The

MRI findings and clinical presentation are more consistent with a vascular tumor like IHHE.

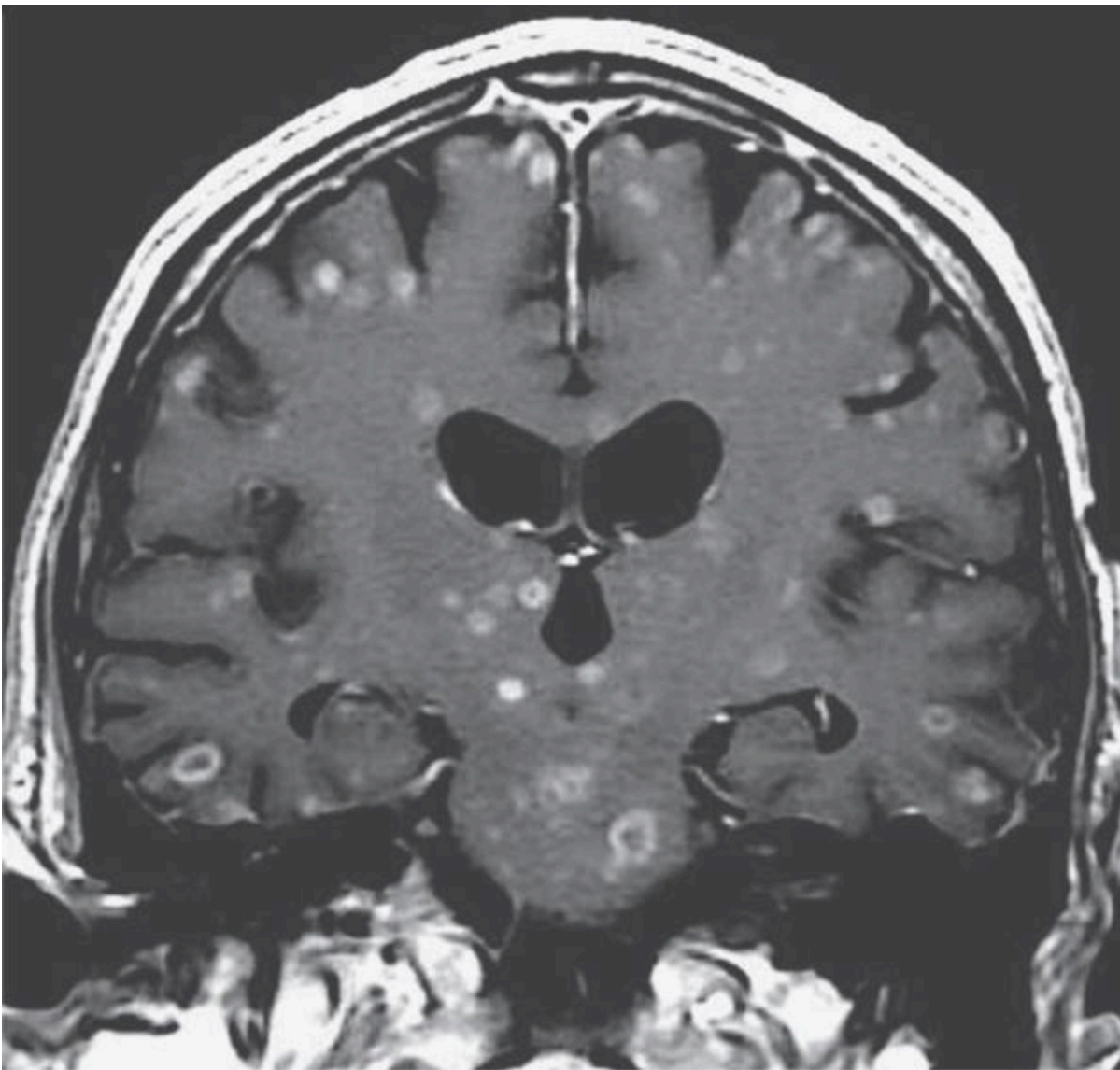
5. TORCH Infection (e.g., Cytomegalovirus):

Least likely: TORCH infections can cause hepatomegaly and neurological symptoms, but they typically present with a different pattern of liver involvement and do not usually cause multiple hepatic lesions or hemangiomas. The MRI findings and clinical presentation are more consistent with IHHE.

Your diagnosis:

Task /20

Patient Information:



A 71-year-old man was hospitalized with altered mental status progressing over the preceding 3 weeks. The patient had a recent diagnosis of adenocarcinoma of the colon with known metastatic lesions in the lung and bones. A gadolinium-enhanced magnetic resonance image of the brain was performed and is shown.

AI advice:

List of possible diseases

1. Cerebral Metastases
2. Primary CNS Lymphoma
3. Brain Abscesses

4. Progressive Multifocal Leukoencephalopathy (PML)

5. Glioblastoma Multiforme

Detailed assessment of each possible diagnosis

1. Cerebral Metastases:

Best fit: Given the patient's history of colon adenocarcinoma with known metastatic lesions and the MRI showing multiple enhancing lesions, cerebral metastases are highly likely. The altered mental status aligns with potential brain involvement by metastatic disease.

2. Primary CNS Lymphoma:

Primary CNS lymphoma can present with multiple enhancing brain lesions, but it is less common in patients without a history of immunosuppression. The patient's known metastatic colon cancer makes cerebral metastases more likely.

3. Brain Abscesses:

Brain abscesses can present with multiple ring-enhancing lesions on MRI, but they are usually associated with infectious symptoms such as fever or a known source of infection. The patient's history of metastatic cancer makes cerebral metastases more likely.

4. Progressive Multifocal Leukoencephalopathy (PML):

PML typically presents with non-enhancing white matter lesions and is associated with immunosuppressed states. The enhancing lesions on MRI and the patient's cancer history suggest cerebral metastases rather than PML.

5. Glioblastoma Multiforme:

Least likely: Glioblastoma usually presents as a solitary, irregularly enhancing mass rather than multiple lesions. The patient's known metastatic disease and the MRI findings make cerebral metastases the most likely diagnosis.

Your diagnosis:

Task /20

Patient Information:



A 29-year-old man with perinatally acquired human immunodeficiency virus (HIV) infection and intermittent adherence to antiretroviral therapy presented to the hospital with abdominal pain and drenching night sweats. On presentation, his CD4 count was 18 cells per cubic millimeter (reference range, 500 to 1500), and the HIV viral load was undetectable. Physical exam showed severe abdominal distention, splenomegaly, and diffuse abdominal tenderness to palpation. Computed tomography of the abdomen confirmed massive splenomegaly with multifocal infarction of the splenic parenchyma.

AI advice:

List of possible diseases

1. AIDS-related Lymphoma
2. Disseminated Mycobacterium avium Complex (MAC) Infection
3. Splenic Abscess
4. Cytomegalovirus (CMV) Infection
5. Leishmaniasis

Detailed assessment of each possible diagnosis

1. AIDS-related Lymphoma:

Best fit: AIDS-related lymphoma often presents with systemic symptoms like night sweats, severe splenomegaly, and abdominal pain. The patient's extremely low CD4 count and the presence of splenic infarction are consistent with this diagnosis.

2. Disseminated Mycobacterium avium Complex (MAC) Infection:

Disseminated MAC infection can cause splenomegaly and systemic symptoms in patients with advanced HIV/AIDS. However, it typically presents with a more diffuse pattern of organ involvement and lymphadenopathy rather than focal splenic infarction.

3. Splenic Abscess:

Splenic abscess can cause splenomegaly and abdominal pain, but it usually presents with fever and localized signs of infection. The CT findings of multifocal infarction are less typical for a splenic abscess.

4. Cytomegalovirus (CMV) Infection:

CMV infection can cause systemic symptoms and splenomegaly in immunocompromised patients, but it typically involves multiple organs and

causes diffuse splenic involvement rather than focal infarction. The imaging findings are more consistent with lymphoma.

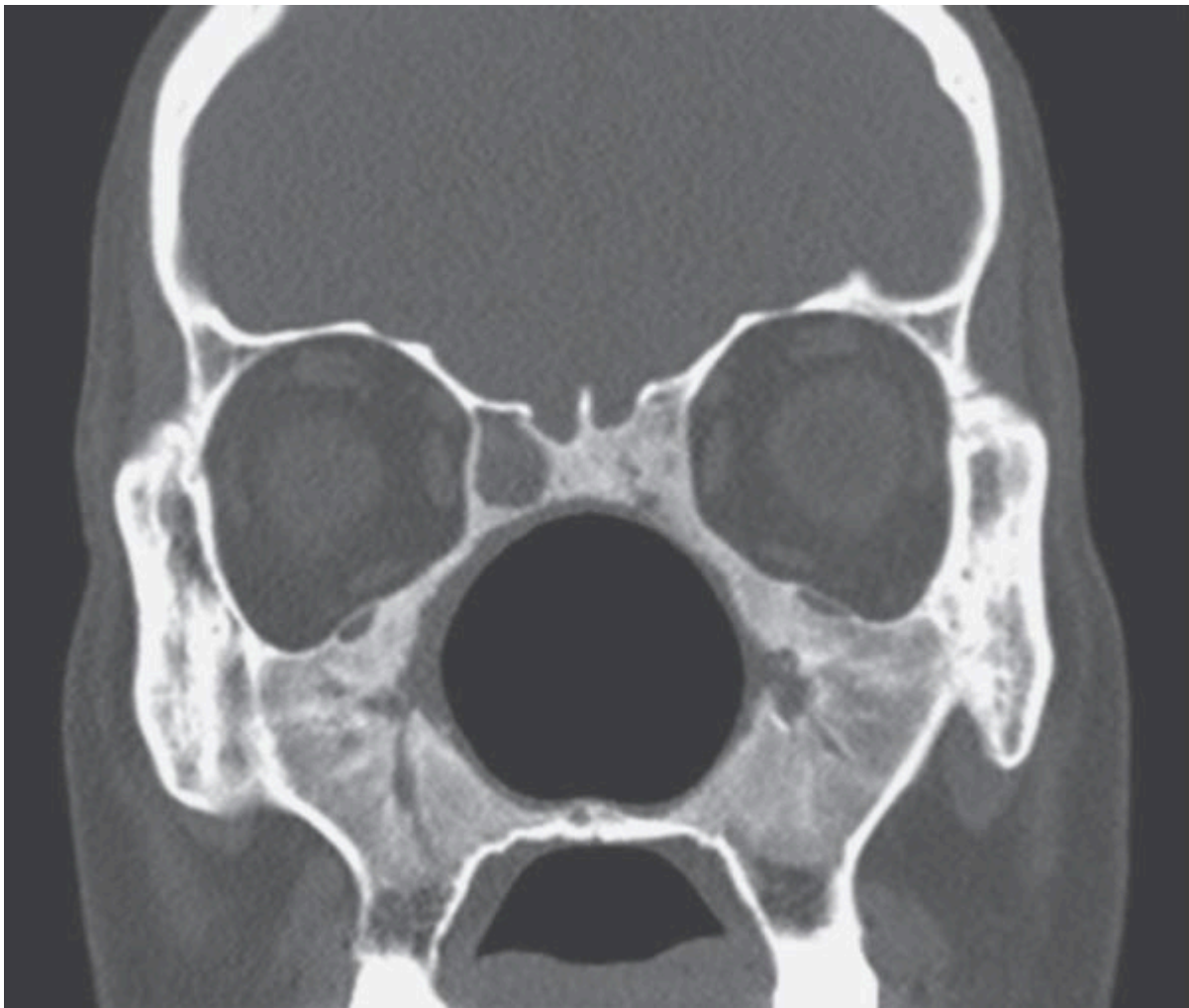
5. Leishmaniasis:

Least likely: Leishmaniasis can cause splenomegaly and systemic symptoms, especially in immunocompromised individuals. However, it typically presents with diffuse splenic enlargement rather than focal infarction, and it is less common in this clinical context.

Your diagnosis:

Task /20

Patient Information:



A 42-year-old man presented to the clinic with a 3-month history of worsening cough, shortness of breath, and fever. Physical examination showed inflamed nasal mucosa and nasal crusting. Wheezes and rales were heard on auscultation. A computed tomographic scan of the face showed extensive destruction of the structural bones of the midface, resulting in a large nasal cavity.

AI advice:

List of possible diseases

1. Granulomatosis with Polyangiitis (Wegener's Granulomatosis)
2. Invasive Fungal Sinusitis
3. Extranodal NK/T-cell Lymphoma, Nasal Type
4. Chronic Rhinosinusitis with Nasal Polyposis

5. Sarcoidosis

Detailed assessment of each possible diagnosis

1. Granulomatosis with Polyangiitis (Wegener's Granulomatosis):

Best fit: Granulomatosis with polyangiitis can present with upper and lower respiratory symptoms, including nasal crusting and bone destruction. The CT findings of extensive midface bone destruction are characteristic of this vasculitis.

2. Invasive Fungal Sinusitis:

Invasive fungal sinusitis can cause bone destruction and severe sinusitis, especially in immunocompromised patients. However, the chronic nature of the symptoms and the presence of systemic symptoms such as cough and shortness of breath make granulomatosis with polyangiitis more likely.

3. Extranodal NK/T-cell Lymphoma, Nasal Type:

This lymphoma can present with destructive nasal lesions and systemic symptoms, but it is less common and often associated with more aggressive and rapid progression. The imaging findings and the chronicity of symptoms are more consistent with granulomatosis with polyangiitis.

4. Chronic Rhinosinusitis with Nasal Polyposis:

Chronic rhinosinusitis with nasal polyposis can cause nasal symptoms and sinusitis but typically does not cause extensive bone destruction. The CT findings and the presence of systemic symptoms make this diagnosis less likely.

5. Sarcoidosis:

Least likely: Sarcoidosis can affect the respiratory tract and cause systemic symptoms, but it typically does not cause the extensive bone destruction seen in this case. The imaging findings are more suggestive of granulomatosis with polyangiitis.

Your diagnosis:

Task /20

Patient Information:



A 63-year-old man presented to the emergency department with a 3-day history of abdominal pain that had started in the periumbilical area and subsequently shifted to the left lower quadrant. Initial laboratory tests showed a white-cell count of 12,000 per cubic millimeter (reference range, 4000 to 10,000) and a lactate level of 1.8 mmol per liter (normal value, <1.9). Contrast-enhanced computed tomography of the abdomen revealed edema of the sigmoid colon with thumbprinting.

AI advice:

List of possible diseases

1. Diverticulitis
2. Ischemic colitis
3. Infectious colitis
4. Inflammatory bowel disease (IBD)
5. Colonic neoplasm

Detailed assessment of each possible diagnosis

1. Diverticulitis:

Best Fit: The left lower quadrant pain and elevated white-cell count are consistent with diverticulitis. The CT findings of edema and thumbprinting in the sigmoid colon support this diagnosis, as it is often associated with inflammation and thickening of the colon wall in diverticulitis.

2. Ischemic colitis:

Ischemic colitis can present with abdominal pain and thumbprinting on CT, indicating mucosal edema and submucosal hemorrhage. However, the absence of more severe symptoms like bloody diarrhea and a normal lactate level make significant ischemia less likely.

3. Infectious colitis:

Infectious colitis can present with abdominal pain and elevated white-cell count. However, it often involves more diffuse colonic involvement rather than being localized to the sigmoid colon, and the imaging findings are less suggestive of an infectious cause.

4. Inflammatory bowel disease (IBD):

IBD, such as Crohn's disease or ulcerative colitis, could present with abdominal pain and elevated white-cell count. However, the acute presentation and specific imaging findings are more characteristic of diverticulitis rather than a chronic inflammatory process.

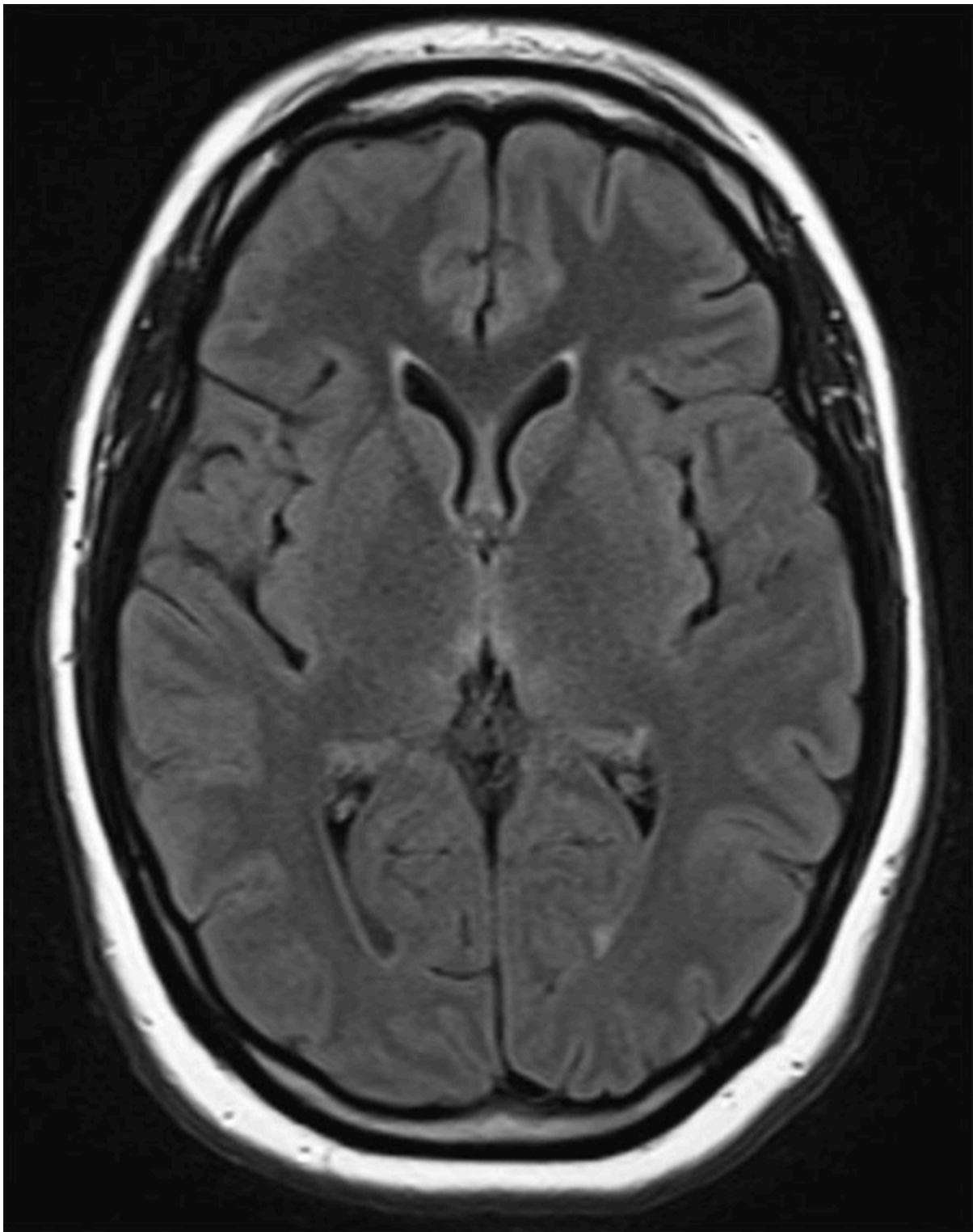
5. Colonic neoplasm:

Least Likely: A colonic neoplasm could present with abdominal pain and elevated white-cell count if there is associated inflammation or obstruction. However, the acute onset of symptoms and imaging findings of edema and thumbprinting are less typical for a neoplasm and more suggestive of an inflammatory or ischemic process.

Your diagnosis:

Task /20

Patient Information:



A 28-year-old woman with vertigo, confusion, and falls 2 weeks after a surgical abortion at 11 weeks of gestation presents to the emergency department. Examination revealed spontaneous upbeat nystagmus, gaze-evoked nystagmus, and gait ataxia.

AI advice:

List of possible diseases

1. Wernicke's encephalopathy
2. Cerebellar stroke
3. Multiple sclerosis (MS)
4. Central nervous system (CNS) infection
5. Brain tumor

Detailed assessment of each possible diagnosis

1. Wernicke's encephalopathy:

Best Fit: The patient's symptoms of vertigo, confusion, nystagmus, and gait ataxia, combined with the history of recent surgical abortion, suggest a possibility of Wernicke's encephalopathy, which can be precipitated by malnutrition or hyperemesis. The MRI image showing hyperintensity in the periaqueductal area is characteristic of this condition.

2. Cerebellar stroke:

A cerebellar stroke can cause vertigo, nystagmus, and gait ataxia. However, the MRI image does not show the acute changes typically associated with a stroke, such as restricted diffusion or hemorrhage, and the patient's history is less suggestive of a vascular event.

3. Multiple sclerosis (MS):

MS can present with a wide range of neurological symptoms, including vertigo, nystagmus, and ataxia. However, the MRI findings are not typical of demyelinating lesions usually seen in MS, and the acute onset of symptoms following surgery is less consistent with MS.

4. Central nervous system (CNS) infection:

A CNS infection could present with confusion, ataxia, and nystagmus. However, the MRI does not show the typical signs of infection, such as meningeal

enhancement or abscess formation, and there are no accompanying systemic signs of infection in the history provided.

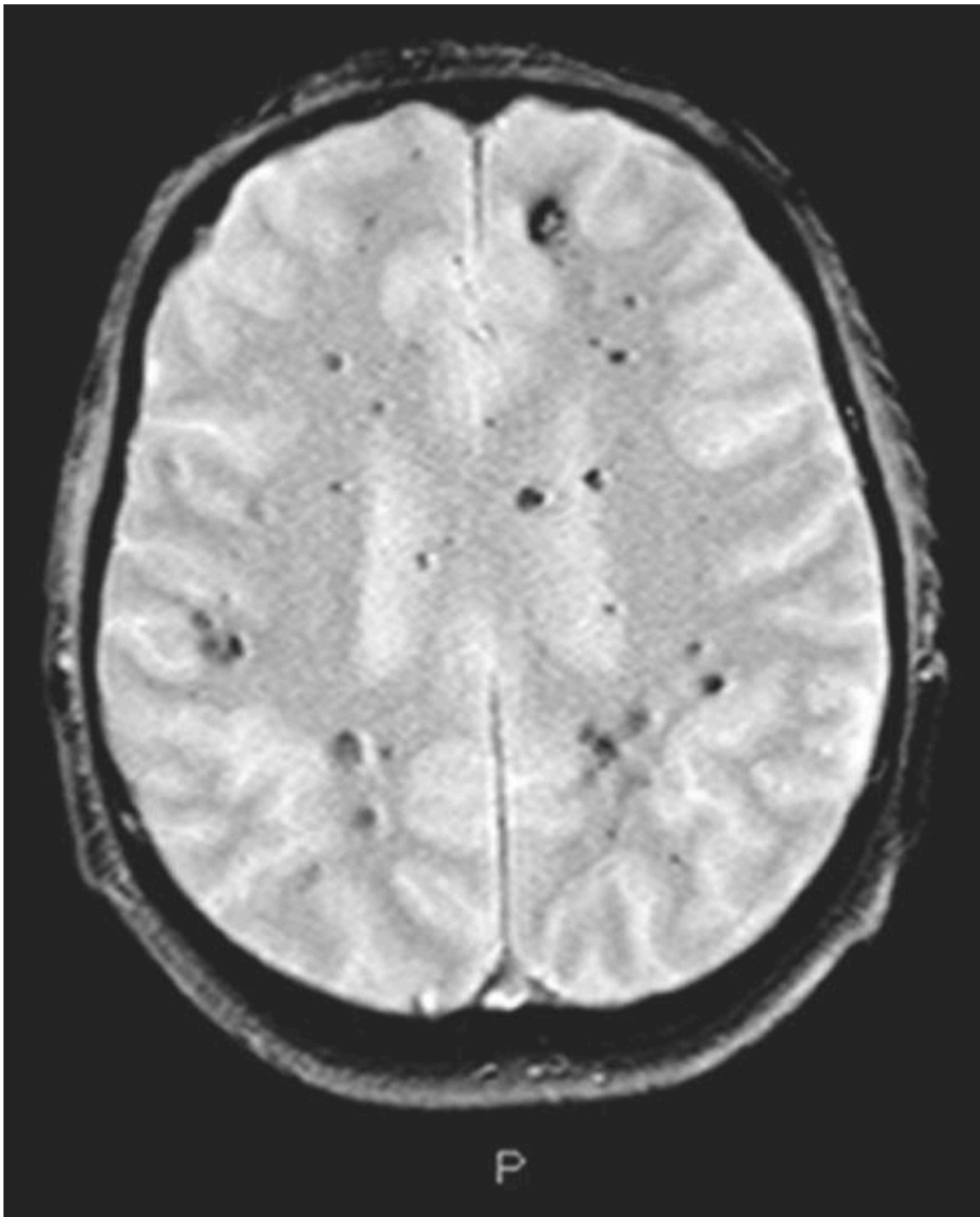
5. Brain tumor: Least likely:

A brain tumor could cause vertigo, nystagmus, and ataxia. However, the MRI does not show a mass lesion or the typical features of a tumor, and the rapid onset of symptoms following surgery is less typical for a brain tumor, which usually presents with a more gradual progression.

Your diagnosis:

Task /20

Patient Information:



A 59-year-old previously healthy man presented with progressively worsening headaches and bluish nodular skin lesions. Fast-field echo MRI image of the brain showed this finding.

AI advice:

List of possible diseases

1. Metastatic melanoma

2. Kaposi sarcoma
3. Meningioma
4. Glioblastoma multiforme
5. Cerebral abscess

Detailed assessment of each possible diagnosis

1. Metastatic melanoma:

Best Fit: The MRI shows multiple lesions, which is characteristic of metastatic disease. Additionally, the presence of bluish nodular skin lesions aligns with cutaneous manifestations of melanoma.

2. Kaposi sarcoma:

Kaposi sarcoma can present with bluish nodular skin lesions and metastasize to the brain. However, it is more common in immunocompromised patients (e.g., HIV/AIDS), and there is no mention of such a condition in the patient's history.

3. Meningioma:

Meningiomas can present with headaches due to increased intracranial pressure. However, they typically present as a single lesion rather than multiple lesions, and there is no direct correlation with bluish nodular skin lesions.

4. Glioblastoma multiforme:

Glioblastoma can present with progressively worsening headaches and multiple brain lesions. However, glioblastomas are usually solitary and rapidly enlarging, with less emphasis on cutaneous manifestations.

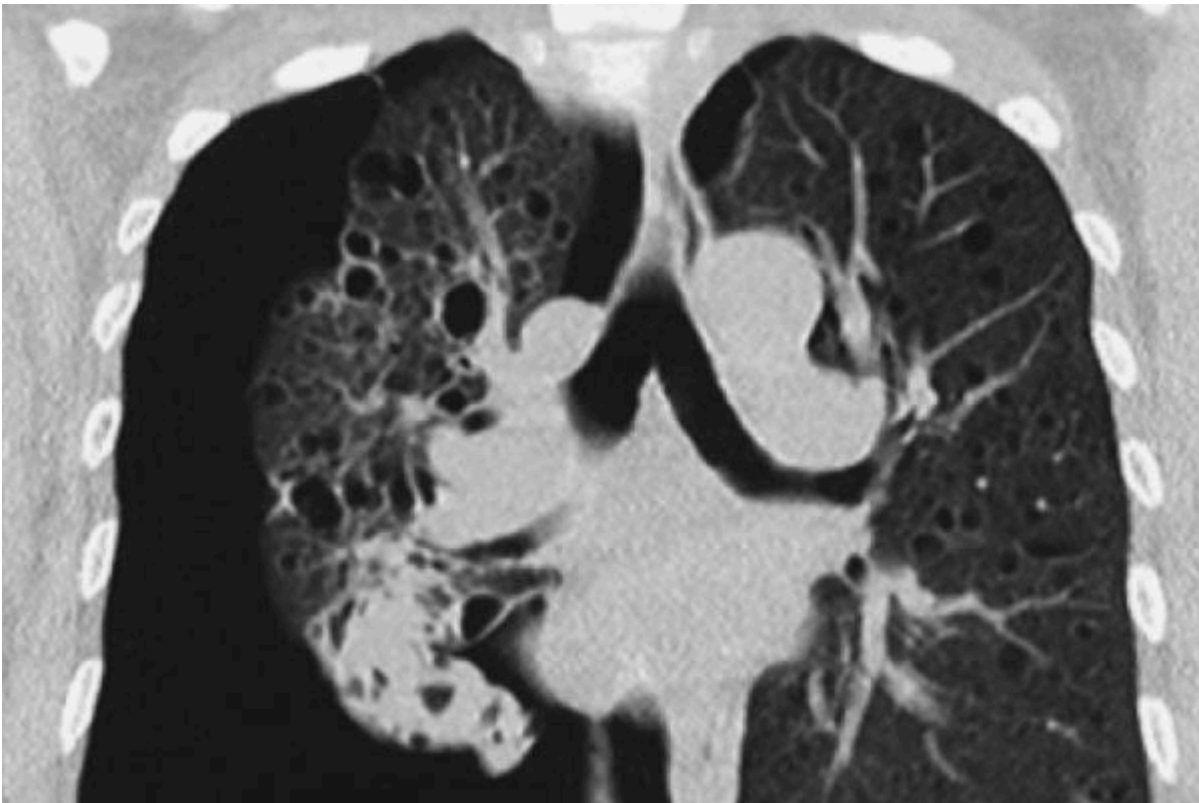
5. Cerebral abscess:

Least Likely: Cerebral abscesses can present with headaches and multiple lesions on MRI. However, they are typically associated with signs of infection (e.g., fever), and bluish nodular skin lesions are not a typical feature.

Your diagnosis:

Task /20

Patient Information:



A 44-year-old woman presented to the emergency department with acute chest pain after several months of progressive dyspnea. Her oxygen saturation was 92%, and she had diminished breath sounds on the right side. Chest CT revealed a large right-sided pneumothorax and diffuse, intraparenchymal pulmonary cysts.

AI advice:

List of possible diseases

1. Lymphangioleiomyomatosis (LAM)
2. Chronic obstructive pulmonary disease (COPD)
3. Pulmonary Langerhans cell histiocytosis (PLCH)
4. Bullous emphysema
5. Pneumocystis jirovecii pneumonia (PCP)

Detailed assessment of each possible diagnosis

1. Lymphangioleiomyomatosis (LAM):

Best Fit: LAM is associated with cystic lung disease and can present with spontaneous pneumothorax, especially in women. The CT scan shows diffuse intraparenchymal pulmonary cysts, which is characteristic of LAM.

2. Chronic obstructive pulmonary disease (COPD):

COPD can cause dyspnea and pneumothorax, but it typically presents with emphysematous changes rather than diffuse cysts. The CT findings of diffuse intraparenchymal cysts are not typical of COPD.

3. Pulmonary Langerhans cell histiocytosis (PLCH):

PLCH can present with cystic lung disease and pneumothorax. However, it is more common in smokers, and the cysts are often irregular and nodular, which is less consistent with the presented image.

4. Bullous emphysema:

Bullous emphysema can lead to pneumothorax and progressive dyspnea.

However, it usually presents with large bullae rather than the diffuse, small cystic changes seen on the CT scan.

5. Pneumocystis jirovecii pneumonia (PCP):

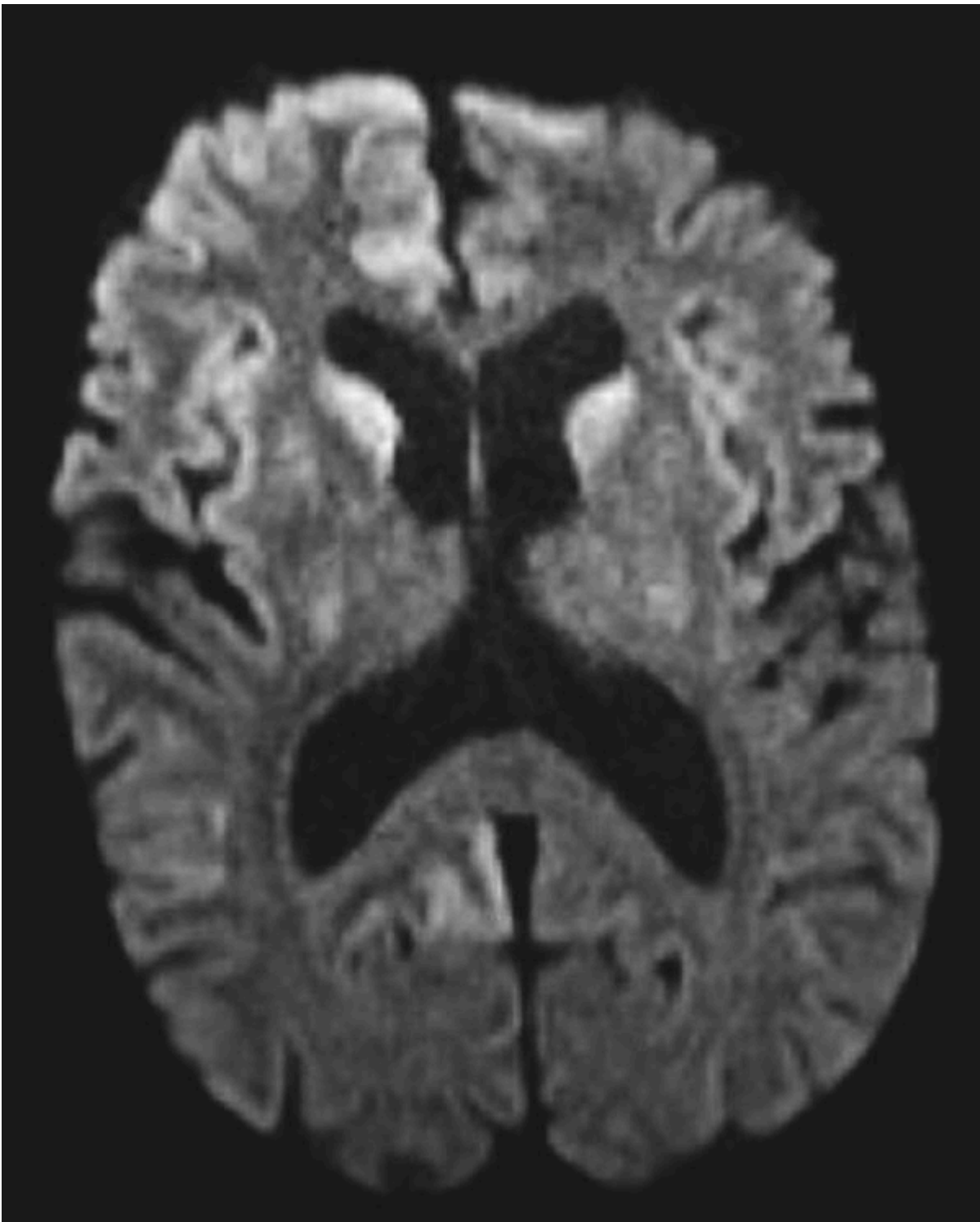
Least Likely: PCP can cause cystic changes in the lungs, especially in

immunocompromised patients, but it typically presents with ground-glass opacities rather than diffuse cysts. The patient's presentation with acute chest pain and pneumothorax is less typical for PCP.

Your diagnosis:

Task /20

Patient Information:



A 54-year-old man presented with a 3-week history of cognitive deterioration. Neurologic examination revealed disorientation, horizontal gaze-evoked nystagmus, hyperreflexia, startle myoclonus, and ataxia. Brain MRI with diffusion-weighted imaging revealed hyperintensity of the cortical gyri and caudate heads.

AI advice:

List of possible diseases

1. Creutzfeldt-Jakob disease (CJD)
2. Herpes simplex encephalitis (HSE)
3. Wernicke encephalopathy
4. Autoimmune encephalitis
5. Progressive multifocal leukoencephalopathy (PML)

Detailed assessment of each possible diagnosis

1. Creutzfeldt-Jakob disease (CJD):

Best Fit: CJD typically presents with rapidly progressive cognitive decline, myoclonus, and ataxia. The MRI finding of hyperintensity in the cortical gyri and caudate heads is characteristic of CJD.

2. Herpes simplex encephalitis (HSE):

HSE can cause cognitive deterioration and neurologic signs such as hyperreflexia and ataxia. However, it more commonly affects the temporal lobes and is associated with fever and altered consciousness, which are not mentioned here.

3. Wernicke encephalopathy:

Wernicke encephalopathy can present with disorientation, ataxia, and nystagmus. However, it is typically associated with a history of alcoholism or malnutrition, and the MRI findings are more characteristic of CJD than Wernicke encephalopathy.

4. Autoimmune encephalitis:

Autoimmune encephalitis can cause cognitive decline, hyperreflexia, and ataxia. However, the rapid progression of symptoms and the specific MRI findings are more suggestive of CJD.

5. Progressive multifocal leukoencephalopathy (PML):

Least Likely: PML is associated with cognitive decline and neurologic deficits in

immunocompromised patients. The MRI typically shows multifocal white matter lesions rather than hyperintensity in the cortical gyri and caudate heads.

Your diagnosis:

Task /20

Patient Information:



A 30-year-old man presented with a 15-month history of intermittent discomfort in the right upper quadrant of the abdomen. He lived in a rural area of Morocco and had occasional contact with dogs. The physical examination revealed hepatomegaly with a palpable hepatic mass. Laboratory tests showed a normal white-cell count and a normal absolute eosinophil count. Ultrasonography and computed tomography of the abdomen revealed a large cyst in the right lobe of the liver.

AI advice:

List of possible diseases

1. Hydatid disease (Echinococcosis)
2. Hepatic cystadenoma
3. Pyogenic liver abscess
4. Hepatic hemangioma
5. Hepatocellular carcinoma (HCC)

Detailed assessment of each possible diagnosis

1. Hydatid disease (Echinococcosis):

Best Fit: The patient's history of living in a rural area with contact with dogs, along with the imaging showing a large cyst in the liver, strongly suggests hydatid disease. The presence of a cyst with internal septations is characteristic of Echinococcosis caused by *Echinococcus granulosus*.

2. Hepatic cystadenoma:

Hepatic cystadenomas can present with large cysts in the liver and may cause discomfort due to their size. However, they are usually not associated with a history of exposure to dogs or rural living, making this less likely.

3. Pyogenic liver abscess:

A pyogenic liver abscess can present with a hepatic mass and discomfort, but it is typically associated with systemic signs of infection, such as fever and elevated white-cell count, which are not present in this case.

4. Hepatic hemangioma:

Hepatic hemangiomas are common liver lesions that can be large and cause discomfort. However, they usually appear as well-circumscribed, hypervascular lesions on imaging, which does not match the cystic appearance seen in the provided image.

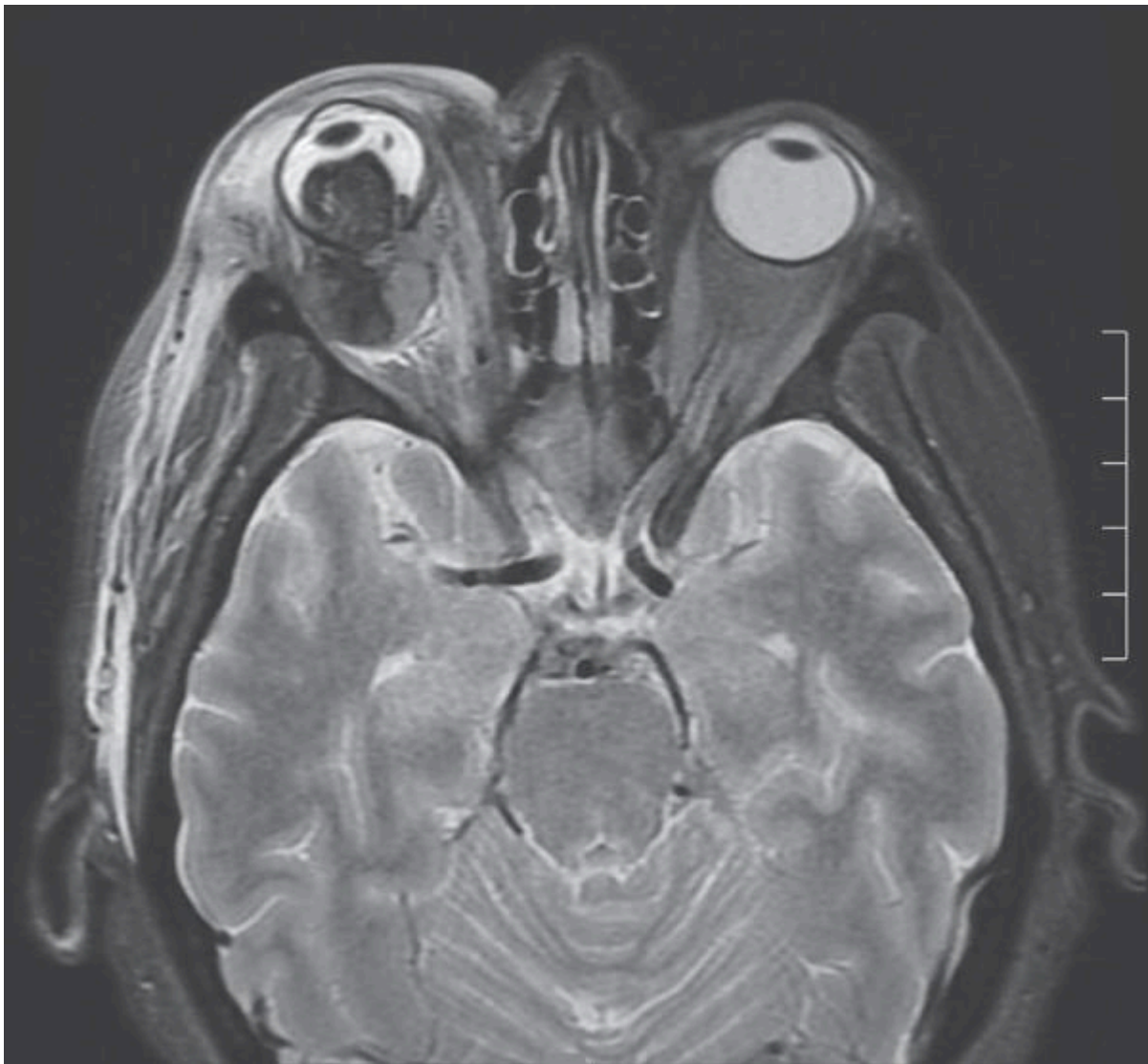
5. Hepatocellular carcinoma (HCC):

Least Likely: HCC can present with a hepatic mass and hepatomegaly, but it is more commonly associated with underlying liver disease, such as cirrhosis or chronic hepatitis. The imaging findings of a large cyst with septations are not typical of HCC.

Your diagnosis:

Task /20

Patient Information:



A 59-year-old woman presented to the emergency department with a 4-day history of inflammation and pain in the right eye. She had been blind in the eye for several years before presentation. Magnetic resonance imaging revealed a right orbital mass. Abdominal and thoracic imaging showed numerous hepatic masses, abdominal and thoracic lymphadenopathy, and vertebral sclerotic osseous disease. The right eye was enucleated for palliative relief and to obtain tissue for diagnosis.

AI advice:

List of possible diseases

1. Metastatic carcinoma
2. Orbital lymphoma

3. Orbital pseudotumor (Idiopathic Orbital Inflammatory Disease)
4. Orbital sarcoma
5. Sarcoidosis

Detailed assessment of each possible diagnosis

1. Metastatic carcinoma:

Best Fit: Metastatic carcinoma is most likely given the presence of numerous hepatic masses, abdominal and thoracic lymphadenopathy, and vertebral sclerotic osseous disease which are common sites for metastases. The mass in the orbit could also be a metastasis.

2. Orbital lymphoma:

Orbital lymphoma is possible given the orbital mass; however, it is less likely because it typically would not present with extensive systemic metastases like the hepatic and vertebral involvement seen here.

3. Orbital pseudotumor:

Orbital pseudotumor usually presents with inflammation and pain in the eye, but it does not explain the hepatic masses, lymphadenopathy, and vertebral disease, making it less likely.

4. Orbital sarcoma:

While orbital sarcoma can present with a mass in the orbit, it is less common and less likely to present with such widespread systemic disease (hepatic masses and vertebral involvement) compared to metastatic carcinoma.

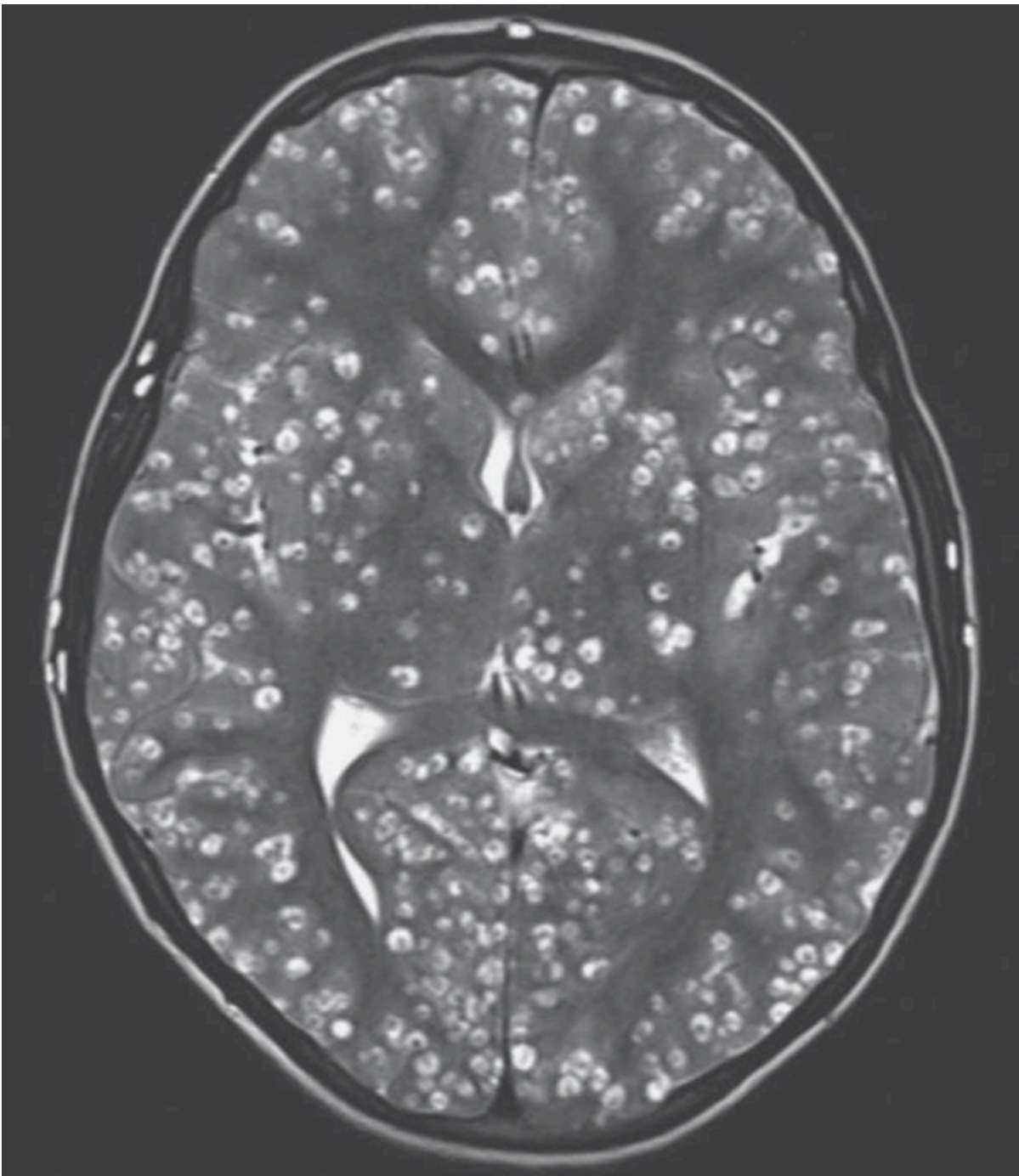
5. Sarcoidosis:

Least Likely: Sarcoidosis can present with lymphadenopathy and orbital involvement, but the presence of numerous hepatic masses and the pattern of bone involvement are atypical, making it the least likely diagnosis.

Your diagnosis:

Task /20

Patient Information:



An 18-year-old man presented to the emergency department with generalized tonic-clonic seizures. On physical examination, the patient was confused. He had swelling over the right eye and tenderness in the right testis. Magnetic resonance imaging of the head showed numerous well-defined cystic lesions throughout the cerebral cortex.

AI advice:

List of possible diseases

1. Neurocysticercosis
2. Toxoplasmosis
3. Tuberculosis
4. Metastatic disease
5. Sarcoidosis

Detailed assessment of each possible diagnosis

1. Neurocysticercosis:

Best Fit: Neurocysticercosis is the most likely diagnosis given the MRI findings of numerous well-defined cystic lesions throughout the cerebral cortex, which are characteristic of this parasitic infection. The patient's seizure and confusion are also consistent with neurocysticercosis.

2. Toxoplasmosis:

Toxoplasmosis can present with multiple brain lesions and seizures, but it typically affects immunocompromised individuals and the lesions are often more varied in appearance, making it a less likely fit for this patient.

3. Tuberculosis:

Tuberculosis can cause central nervous system involvement, but it usually presents with tuberculomas or meningitis rather than numerous cystic lesions, making it less likely in this case.

4. Metastatic disease:

Metastatic disease can present with multiple brain lesions, but the patient's young age and the presence of well-defined cystic lesions without a known primary malignancy make this diagnosis less likely.

5. Sarcoidosis:

Least Likely: Sarcoidosis can involve the central nervous system but typically presents with granulomatous inflammation and is less likely to cause numerous

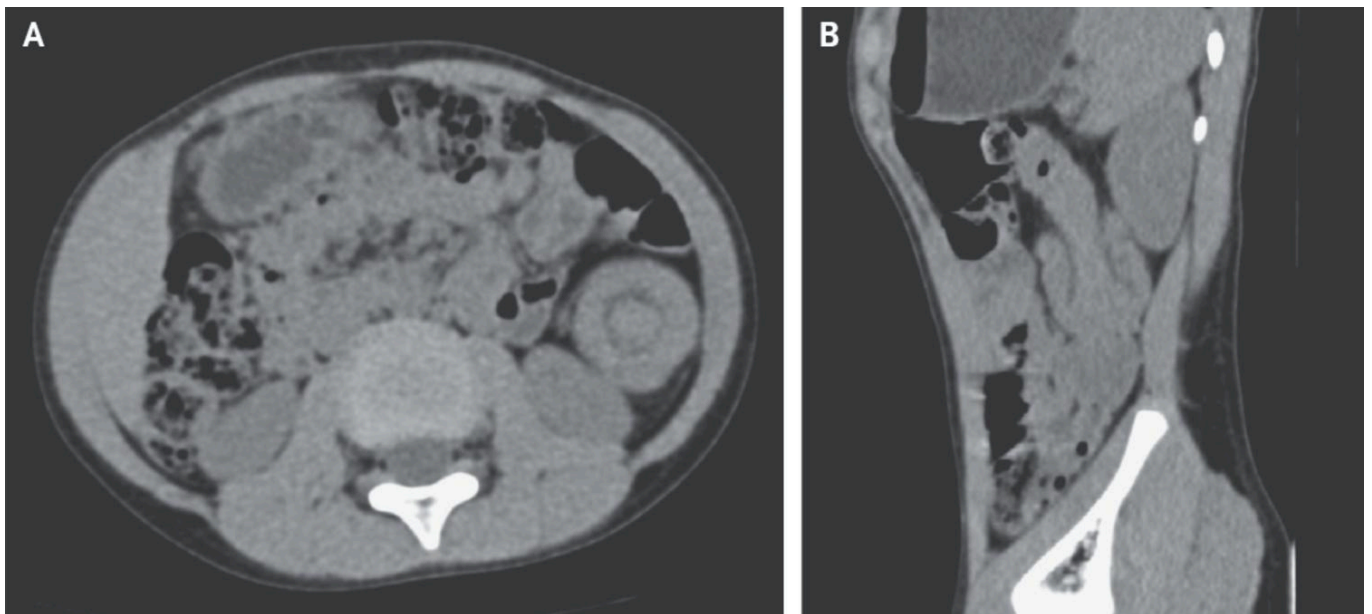
well-defined cystic lesions as seen in the MRI. Additionally, it would usually be associated with other systemic symptoms or findings.

Your diagnosis:

Main Task with AI – CoT Prompting

Task /20

Patient Information:



A previously healthy 5-year-old boy was brought to the surgery clinic with a 2-day history of intermittent abdominal pain. On palpation of the abdomen there was pain in the periumbilical region, but no rebound or guarding. An ultrasound was normal, and a computed tomography of the abdomen was performed (Panels A,B).

AI advice:

The patient is likely suffering from intussusception. This diagnosis is based on several key findings:

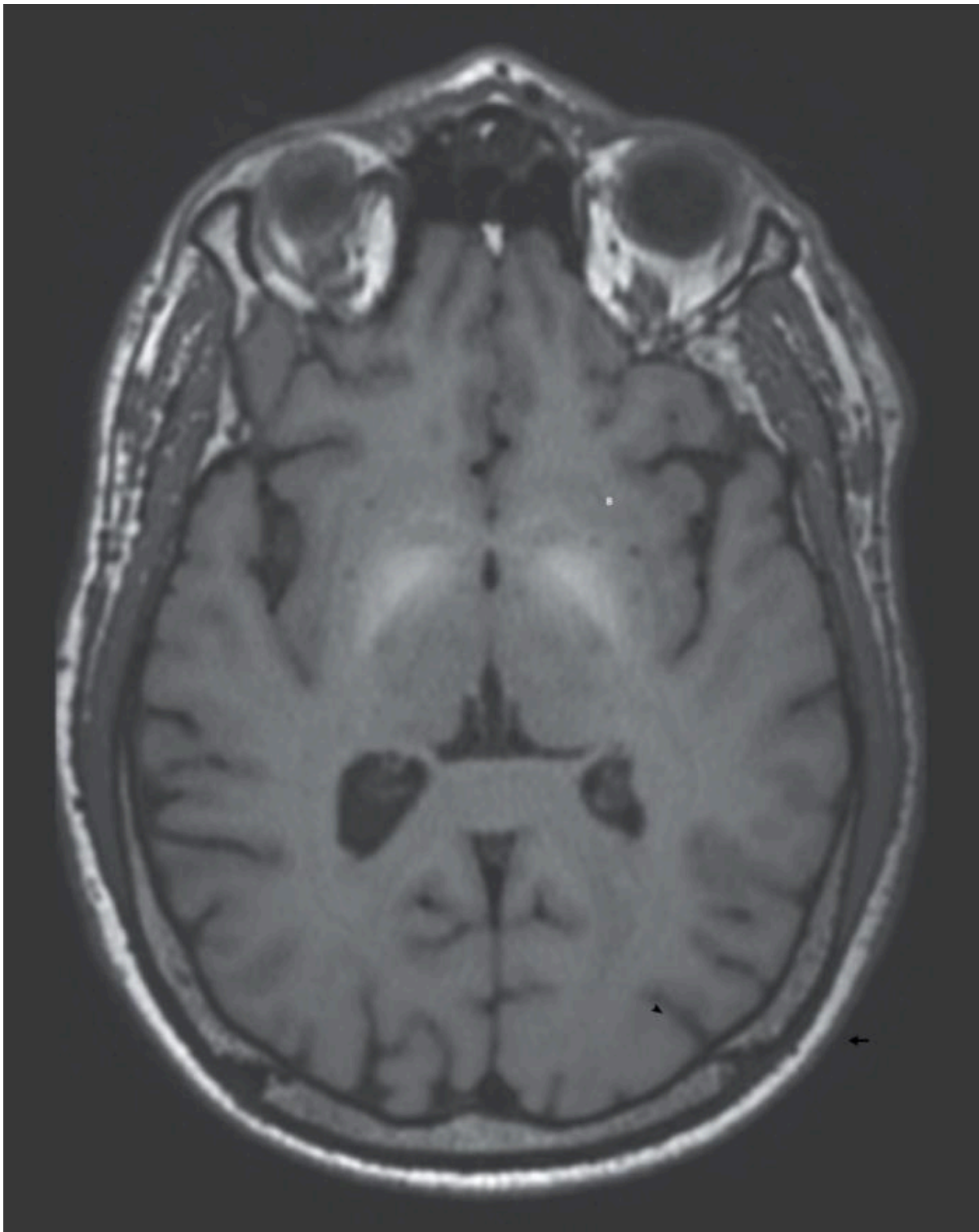
1. Clinical Presentation: A previously healthy 5-year-old boy presented with a 2-day history of intermittent abdominal pain, a classic symptom of intussusception.
2. Physical Examination: Pain was noted in the periumbilical region on palpation, but there was no rebound or guarding, which can be consistent with intussusception in its early stages.
3. Imaging Findings: While the initial ultrasound was normal, the computed tomography (CT) of the abdomen shows a characteristic “target” or “sausage-shaped” mass, indicative of intussusception, where a segment of the intestine telescopes into an adjacent segment.
4. Symptoms Correlation: Intermittent abdominal pain, especially in young children, is highly suggestive of intussusception, which often presents with episodic pain as the telescoping segment moves and obstructs the bowel intermittently.
5. Pathophysiology: Intussusception occurs when a part of the intestine slides into an adjacent part of the intestine (telescoping), leading to bowel obstruction, ischemia, and pain.
6. Risk Factors: Although the specific risk factors in this child are not detailed, intussusception can occur in otherwise healthy children and is the most common cause of intestinal obstruction in this age group.

In conclusion, the combination of clinical symptoms, physical examination findings, and characteristic imaging strongly support the diagnosis of intussusception.

Your diagnosis:

Task /20

Patient Information:



A 55-year-old man presented with 10 years of progressive handwriting impairment and rapid, slurred speech. In his thirties, he had worked as a welder without access to personal protective equipment. Neurologic examination was notable for reduced facial expression, blepharospasm, and cluttered, dysarthric speech. Postural reflexes were mildly impaired. MRI imaging of the head showed a nonenhancing, T1-weighted, hyperintense signal in the basal ganglia on both sides. Ceruloplasmin and iron levels were normal.

AI advice:

The patient is likely suffering from Manganese Toxicity. This diagnosis is based on several key findings:

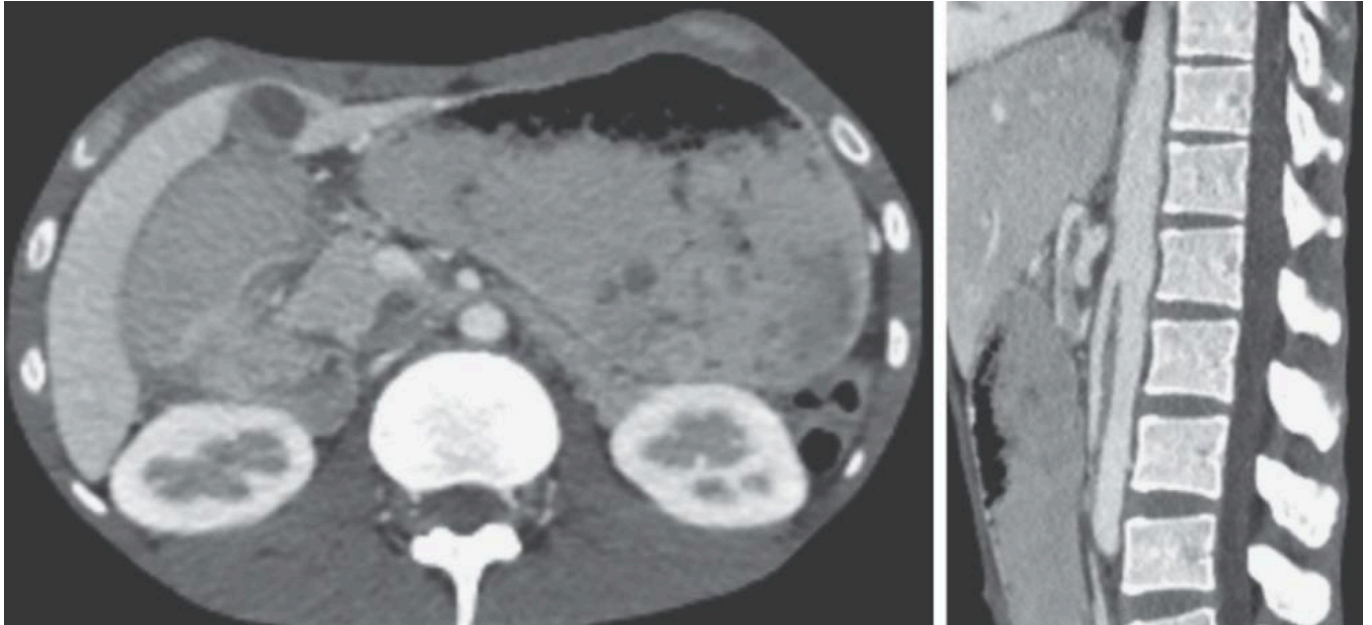
1. Clinical Presentation: The patient has a 10-year history of progressive handwriting impairment and rapid, slurred speech, which are neurological symptoms.
2. Occupational History: The patient's history of working as a welder without protective equipment suggests exposure to manganese, a common component in welding fumes.
3. Neurologic Examination: Findings of reduced facial expression, blepharospasm, cluttered dysarthric speech, and mildly impaired postural reflexes align with symptoms of manganese toxicity.
4. Imaging: The MRI shows a hyperintense signal in the basal ganglia on T1-weighted images, characteristic of manganese deposition.
5. Laboratory Results: Normal ceruloplasmin and iron levels help rule out other differential diagnoses like Wilson's disease and hemochromatosis.

In conclusion, the combination of the patient's occupational exposure, clinical symptoms, and characteristic MRI findings strongly support the diagnosis of Manganese Toxicity.

Your diagnosis:

Task /20

Patient Information:



26-year-old man from Somalia presented with a 5-month history of dry cough, night sweats, and unintentional weight loss of 18 kg. During this period, epigastric pain and postprandial vomiting had also developed. His BMI was 11. On examination, he was cachectic with abdominal distention and diffuse tenderness to palpation. On the basis of chest imaging and sputum studies, a diagnosis of pulmonary tuberculosis was made, and intravenous antituberculous treatment was initiated. However, he continued to have postprandial vomiting. Contrast-enhanced CT of the abdomen was obtained.

AI advice:

The patient is likely suffering from Gastrointestinal Tuberculosis with involvement of the stomach or duodenum leading to gastric outlet obstruction. This diagnosis is based on several key findings:

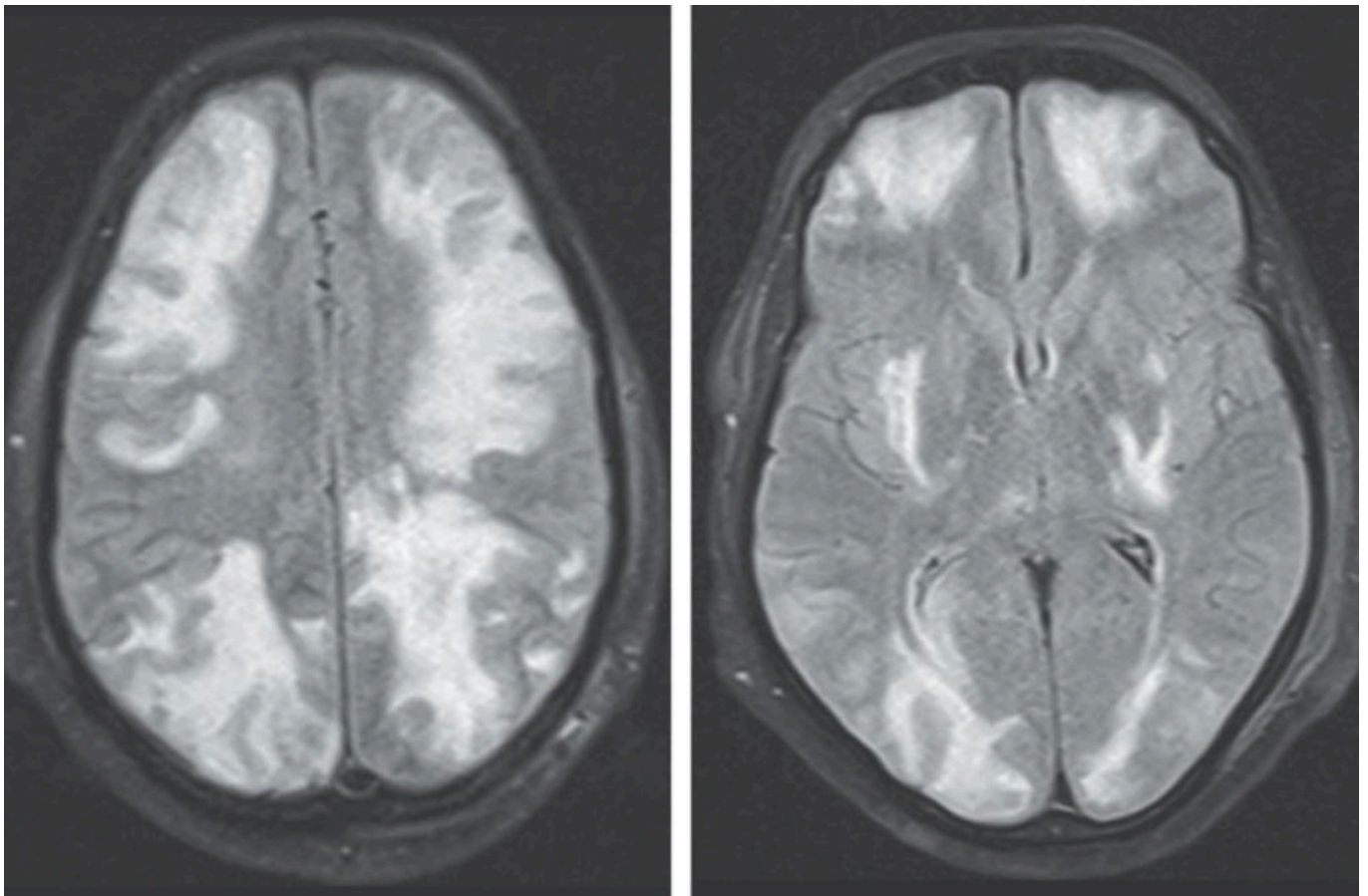
1. Clinical Presentation: A 26-year-old man with a 5-month history of dry cough, night sweats, significant weight loss, epigastric pain, and postprandial vomiting.
2. Physical Examination: Cachectic appearance with abdominal distention and diffuse tenderness, indicating severe malnutrition and potential abdominal pathology.
3. Initial Diagnosis: Pulmonary tuberculosis confirmed by chest imaging and sputum studies, and treatment initiated.
4. Persistent Symptoms: Continued postprandial vomiting despite treatment for pulmonary tuberculosis, suggesting another underlying issue.
5. Imaging: Contrast-enhanced CT of the abdomen shows findings consistent with gastric outlet obstruction, likely secondary to gastrointestinal tuberculosis.
6. Risk Factors: Origin from Somalia, a high TB-endemic region, and the presence of systemic symptoms (night sweats, weight loss).

In conclusion, the combination of systemic and gastrointestinal symptoms, confirmed pulmonary tuberculosis, and imaging findings strongly support the diagnosis of Gastrointestinal Tuberculosis causing gastric outlet obstruction.

Your diagnosis:

Task /20

Patient Information:



A 35-year-old man with IgA nephropathy presented with confusion, blurry vision, and seizures. Two weeks before presentation, he had started receiving cyclosporine. Physical examination was notable for a blood pressure of 160/80 mm Hg, drowsiness, and decreased visual acuity. A fundoscopic examination was normal. T2-weighted magnetic resonance imaging (MRI) with fluid-attenuated inversion recovery sequencing of the head was performed.

AI advice:

The patient is likely suffering from Posterior Reversible Encephalopathy Syndrome (PRES). This diagnosis is based on several key findings:

1. Clinical Presentation: A 35-year-old man with IgA nephropathy presents with confusion, blurry vision, and seizures, which are common symptoms of PRES.
2. Recent Medication: The patient started receiving cyclosporine two weeks before presentation, which is known to be associated with PRES.

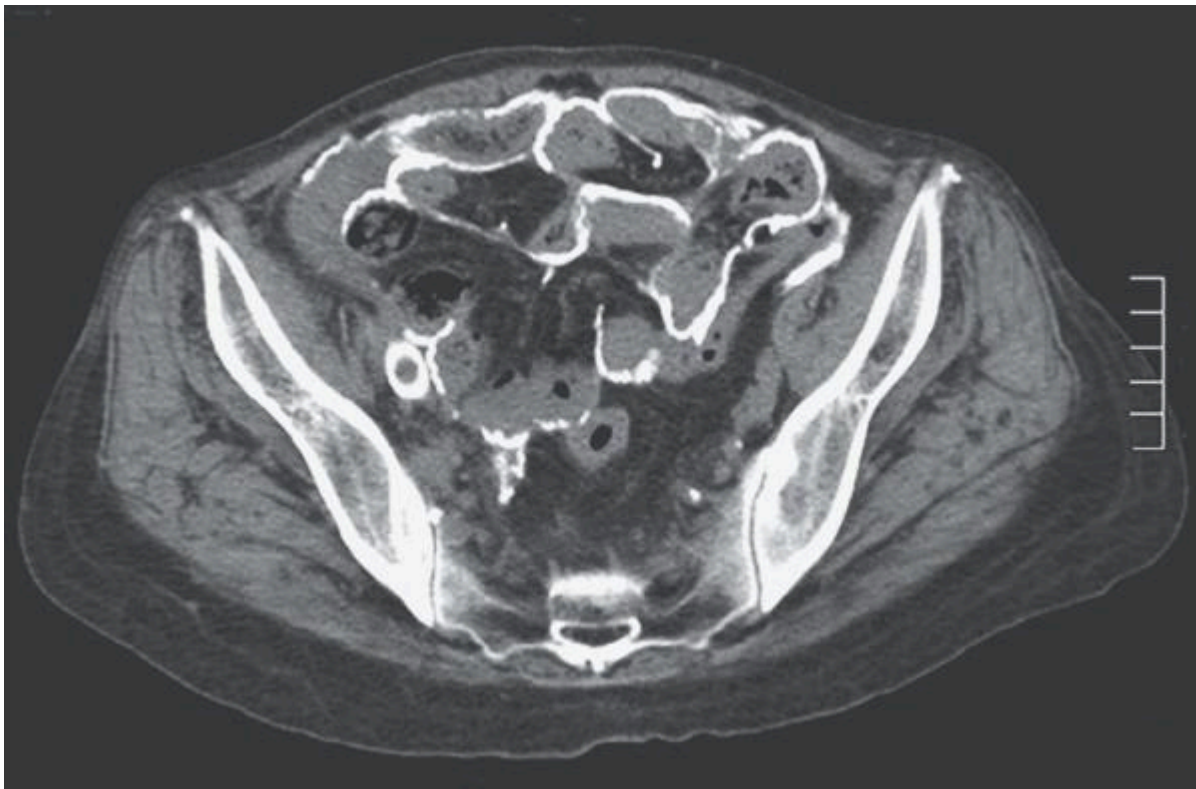
3. Physical Examination: Elevated blood pressure (160/80 mm Hg), drowsiness, and decreased visual acuity, which align with the clinical features of PRES.
4. Fundoscopic Examination: Normal findings, which do not rule out PRES.
5. Imaging: T2-weighted MRI with fluid-attenuated inversion recovery (FLAIR) sequencing shows characteristic hyperintense lesions in the parieto-occipital regions, typical of PRES.
6. Underlying Condition: IgA nephropathy, which can predispose to hypertension and renal dysfunction, contributing to the risk of PRES.

In conclusion, the combination of clinical symptoms, recent cyclosporine use, elevated blood pressure, and characteristic MRI findings strongly support the diagnosis of Posterior Reversible Encephalopathy Syndrome (PRES).

Your diagnosis:

Task /20

Patient Information:



A 52-year-old woman with end-stage kidney disease that was being managed with peritoneal dialysis presented with a 1-month history of bloody dialysate. She had had 3 episodes of bacterial peritonitis in the past 12 years. Physical examination and laboratory studies were unremarkable. Computed tomography of the abdomen was performed.

AI advice:

The patient is likely suffering from encapsulating peritoneal sclerosis (EPS). This diagnosis is based on several key findings:

1. Clinical Presentation: A 52-year-old woman with end-stage kidney disease managed with peritoneal dialysis presented with a 1-month history of bloody dialysate, a common symptom of EPS.
2. Medical History: The patient has had 3 episodes of bacterial peritonitis in the past 12 years, which is a known risk factor for EPS.

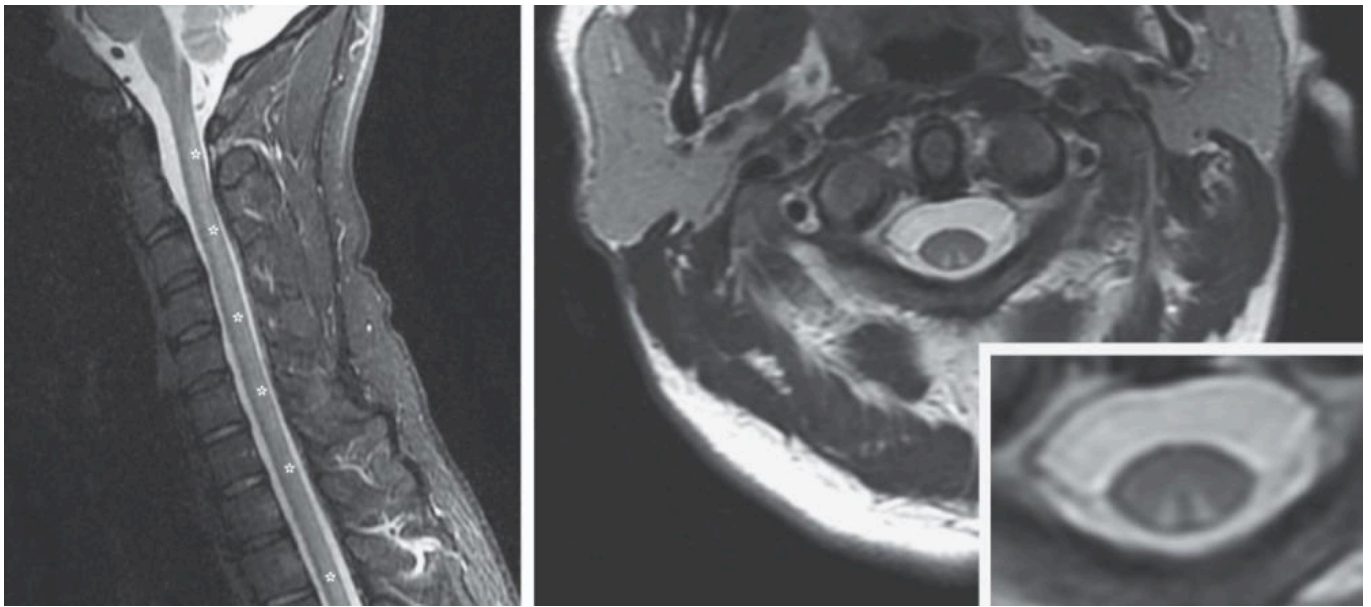
3. Physical Examination and Laboratory Studies: Both were unremarkable, indicating a chronic rather than an acute condition.
4. Initial Imaging: Computed tomography of the abdomen was performed.
5. Current Imaging: The CT scan shows characteristic findings of EPS, such as a thickened peritoneum and encapsulated bowel loops.
6. Epidemiology: Long-term peritoneal dialysis and recurrent bacterial peritonitis are significant risk factors for developing EPS.

In conclusion, the combination of clinical symptoms, medical history, and characteristic findings on CT strongly supports the diagnosis of encapsulating peritoneal sclerosis.

Your diagnosis:

Task /20

Patient Information:



A 32-year-old man presented with a 6-week history of tingling in his arms and legs and a 2-week history of inability to walk. A positive Romberg test, sensory ataxia, impaired proprioception and vibratory sensation, and preserved nociception were noted. Magnetic resonance imaging of the whole spine showed hyperintensity in the posterior spinal cord from C1 to T12 and hyperintense lesions in the dorsal column on T2-weighted images. A vitamin B12 level was 107 pg per ml (reference value, >231) without macrocytic anemia.

AI advice:

The patient is likely suffering from subacute combined degeneration (SCD) of the spinal cord due to vitamin B12 deficiency. This diagnosis is based on several key findings:

1. Clinical Presentation: A 32-year-old man presented with a 6-week history of tingling in his arms and legs and a 2-week history of inability to walk, which are common symptoms of SCD.
2. Physical Examination: A positive Romberg test, sensory ataxia, impaired proprioception and vibratory sensation, and preserved nociception were noted, all of which are consistent with SCD.

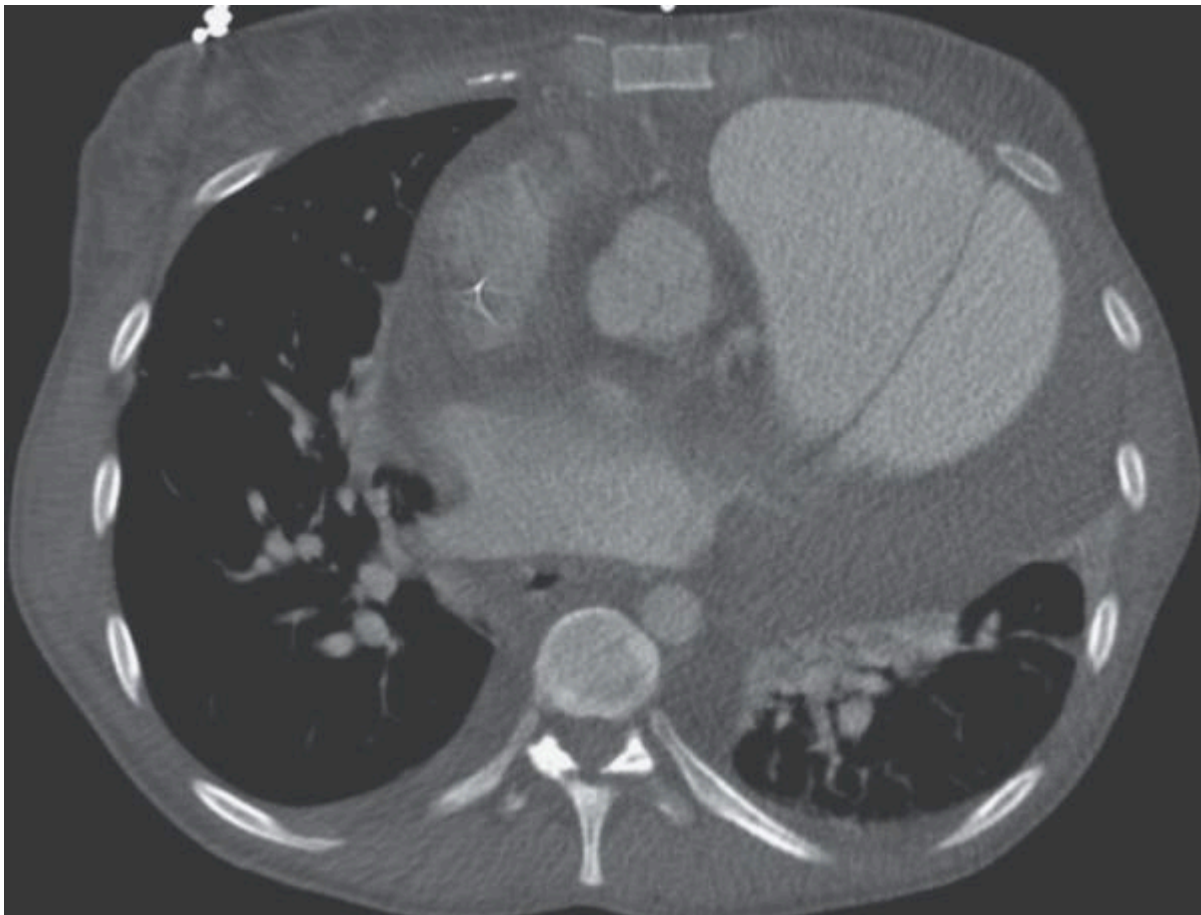
3. Initial Imaging: Magnetic resonance imaging (MRI) of the whole spine was performed.
4. Current Imaging: The MRI showed hyperintensity in the posterior spinal cord from C1 to T12 and hyperintense lesions in the dorsal column on T2-weighted images, which are characteristic findings of SCD.
5. Laboratory Findings: A vitamin B12 level of 107 pg per ml (reference value, >231) without macrocytic anemia was noted, indicating a deficiency in vitamin B12.
6. Pathophysiology: The deficiency in vitamin B12 leads to demyelination of the dorsal and lateral columns of the spinal cord, causing the observed symptoms and MRI findings.

In conclusion, the combination of clinical symptoms, physical examination findings, characteristic MRI findings, and low vitamin B12 levels strongly support the diagnosis of subacute combined degeneration of the spinal cord.

Your diagnosis:

Task /20

Patient Information:



A 35-year-old woman with idiopathic pulmonary arterial hypertension and a pulmonary aneurysm presented with chest pain. Computed tomography (CT) of the chest is shown.

AI advice:

The patient is likely suffering from a pulmonary artery dissection. This diagnosis is based on several key findings:

1. Clinical Presentation: A 35-year-old woman with idiopathic pulmonary arterial hypertension and a pulmonary aneurysm presented with chest pain, which is a common symptom of a pulmonary artery dissection.
2. Medical History: The presence of idiopathic pulmonary arterial hypertension and a known pulmonary aneurysm are significant risk factors for developing a pulmonary artery dissection.
3. Initial Imaging: Computed tomography (CT) of the chest was performed.

4. Current Imaging: The CT scan shows a complex, enlarged pulmonary artery with areas suggestive of a dissection flap or intramural hematoma, indicative of a dissection.
5. Pathophysiology: Increased pressure in the pulmonary artery due to hypertension and aneurysm can lead to a tear in the arterial wall, resulting in dissection.
6. Symptoms Correlation: The acute onset of chest pain in the context of the patient's underlying conditions strongly correlates with a pulmonary artery dissection.

In conclusion, the combination of clinical symptoms, medical history, and characteristic findings on CT strongly support the diagnosis of a pulmonary artery dissection.

Your diagnosis:

Task /20

Patient Information:



A 38-year-old man presented to the otolaryngology clinic with chronic difficulty breathing through his right nostril. Physical examination showed nasal septal deviation, calcified septal spurs, and a 2-cm perforation in the posterior septum. On rhinoscopy, a hard, nontender, white mass was observed in the floor of the right nostril. CT of the paranasal sinuses showed a well-defined, radiodense mass.

AI advice:

The patient is likely suffering from a rhinolith. This diagnosis is based on several key findings:

1. Clinical Presentation: A 38-year-old man presented with chronic difficulty breathing through his right nostril, a common symptom associated with nasal obstructions.

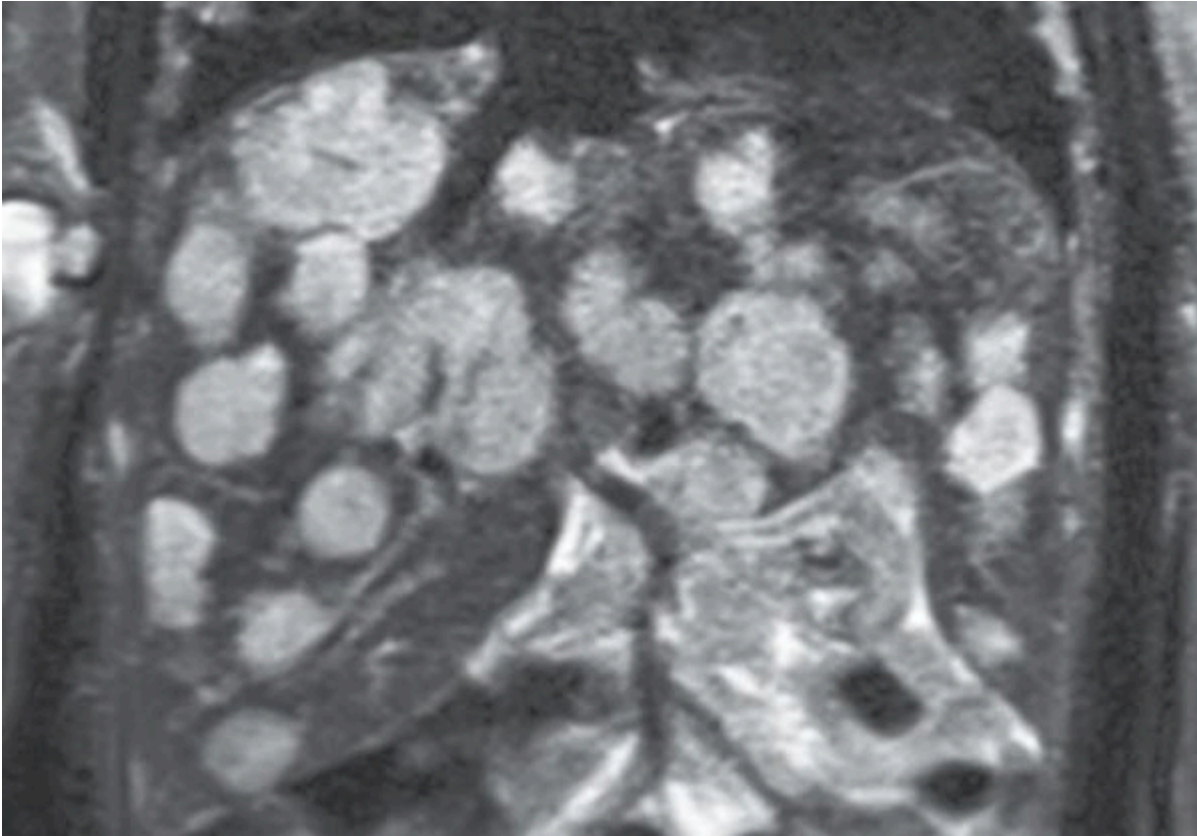
2. Physical Examination: The examination revealed nasal septal deviation, calcified septal spurs, and a 2-cm perforation in the posterior septum, which are structural abnormalities that can complicate nasal airflow.
3. Rhinoscopy Findings: A hard, nontender, white mass observed in the floor of the right nostril during rhinoscopy is indicative of a rhinolith, which is a calcified mass that can form in the nasal cavity.
4. Imaging Findings: CT of the paranasal sinuses showed a well-defined, radiodense mass, which is consistent with the appearance of a rhinolith on imaging studies.
5. Symptoms Correlation: The patient's chronic nasal obstruction and difficulty breathing through the nostril are consistent with the presence of a large mass like a rhinolith.
6. Pathophysiology: Rhinoliths form due to the deposition of mineral salts around an intranasal foreign body or inspissated nasal secretions, leading to a hard, calcified mass.

In conclusion, the combination of clinical symptoms, physical examination findings, rhinoscopy observations, and characteristic CT imaging strongly support the diagnosis of a rhinolith.

Your diagnosis:

Task /20

Patient Information:



A 16-day-old girl was brought to the emergency department with lethargy. Physical exam showed tachypnea and marked hepatomegaly, as well as small hemangiomas on the skin. TSH was elevated. MRI showed numerous hepatic lesions and cardiomegaly.

AI advice:

The patient is likely suffering from congenital infantile hepatic hemangioma with associated hypothyroidism. This diagnosis is based on several key findings:

1. Clinical Presentation: A 16-day-old girl presented with lethargy, which is a common symptom in serious neonatal conditions.
2. Physical Examination: Tachypnea, marked hepatomegaly, and small hemangiomas on the skin were noted. These signs are indicative of a systemic condition affecting multiple organs.

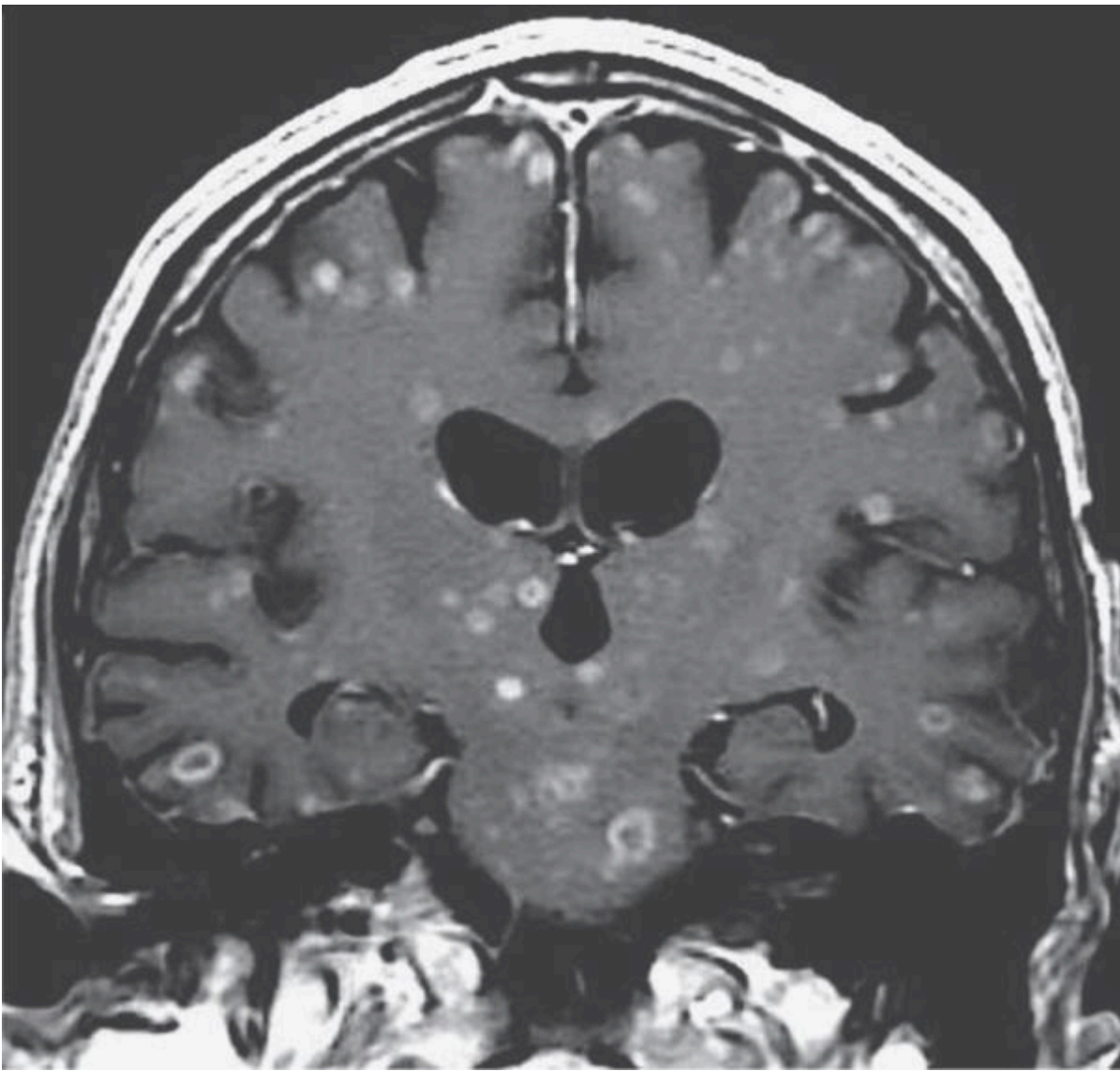
3. Laboratory Findings: Elevated thyroid-stimulating hormone (TSH) levels suggest hypothyroidism, which can be associated with large hemangiomas due to increased metabolism of thyroid hormones.
4. Imaging Findings: MRI showed numerous hepatic lesions and cardiomegaly. The hepatic lesions are characteristic of hepatic hemangiomas, which can be multiple and diffuse.
5. Symptoms Correlation: The combination of lethargy, tachypnea, hepatomegaly, and elevated TSH levels aligns with the clinical picture of infantile hepatic hemangioma complicated by hypothyroidism and potential high-output cardiac failure leading to cardiomegaly.
6. Pathophysiology: Hepatic hemangiomas in infants can secrete high levels of vascular endothelial growth factor (VEGF), leading to increased cardiac output and thyroid hormone consumption.

In conclusion, the combination of clinical symptoms, physical examination findings, elevated TSH, and characteristic imaging findings strongly support the diagnosis of congenital infantile hepatic hemangioma with associated hypothyroidism.

Your diagnosis:

Task /20

Patient Information:



A 71-year-old man was hospitalized with altered mental status progressing over the preceding 3 weeks. The patient had a recent diagnosis of adenocarcinoma of the colon with known metastatic lesions in the lung and bones. A gadolinium-enhanced magnetic resonance image of the brain was performed and is shown.

AI advice:

The patient is likely suffering from brain metastases secondary to metastatic colon adenocarcinoma. This diagnosis is based on several key findings:

1. Clinical Presentation: A 71-year-old man with altered mental status progressing over the preceding 3 weeks, which can be a sign of intracranial pathology

affecting brain function.

2. Medical History: The patient has a recent diagnosis of adenocarcinoma of the colon with known metastatic lesions in the lung and bones, indicating a propensity for the cancer to spread to other organs, including the brain.
3. Imaging Findings: The gadolinium-enhanced MRI of the brain shows multiple enhancing lesions. These lesions are suggestive of metastatic disease, given the patient's known primary cancer.
4. Symptoms Correlation: The altered mental status is consistent with the presence of multiple brain lesions causing increased intracranial pressure or direct disruption of brain function.
5. Metastatic Pattern: Colon cancer commonly metastasizes to the liver, lungs, bones, and brain, and the presence of lung and bone metastases increases the likelihood of brain involvement.
6. Pathophysiology: Metastatic cancer cells can spread to the brain via the bloodstream, forming secondary tumors that disrupt normal brain function.

In conclusion, the combination of clinical symptoms, medical history, and characteristic imaging findings strongly support the diagnosis of brain metastases secondary to metastatic colon adenocarcinoma.

Your diagnosis:

Task /20

Patient Information:



A 29-year-old man with perinatally acquired human immunodeficiency virus (HIV) infection and intermittent adherence to antiretroviral therapy presented to the hospital with abdominal pain and drenching night sweats. On presentation, his CD4 count was 18 cells per cubic millimeter (reference range, 500 to 1500), and the HIV viral load was undetectable. Physical exam showed severe abdominal distention, splenomegaly, and diffuse abdominal tenderness to palpation. Computed tomography of the abdomen confirmed massive splenomegaly with multifocal infarction of the splenic parenchyma.

AI advice:

The patient is likely suffering from disseminated *Mycobacterium avium* complex (MAC) infection. This diagnosis is based on several key findings:

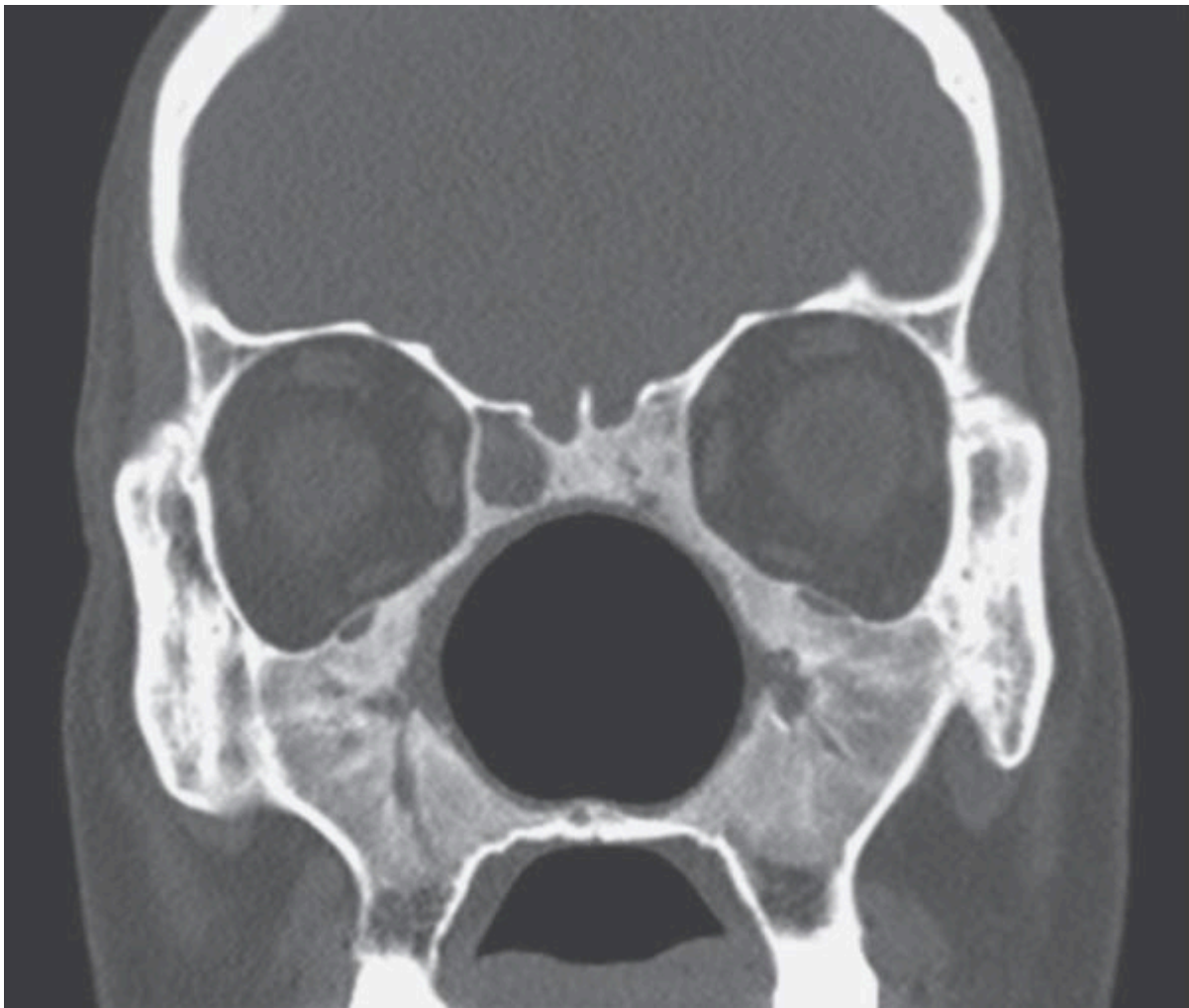
1. Clinical Presentation: A 29-year-old man with perinatally acquired HIV infection and intermittent adherence to antiretroviral therapy presented with abdominal pain and drenching night sweats, which are common symptoms of disseminated infections in immunocompromised patients.
2. Immunological Status: His CD4 count was 18 cells per cubic millimeter, indicating severe immunosuppression, making him highly susceptible to opportunistic infections like MAC. Despite an undetectable viral load, the extremely low CD4 count reflects advanced HIV disease.
3. Physical Examination: Severe abdominal distention, splenomegaly, and diffuse abdominal tenderness to palpation were noted, suggesting significant involvement of abdominal organs.
4. Imaging Findings: Computed tomography of the abdomen confirmed massive splenomegaly with multifocal infarction of the splenic parenchyma, which can be associated with infections causing granulomatous inflammation and vascular compromise.
5. Symptoms Correlation: The combination of abdominal pain, night sweats, severe immunosuppression, and splenomegaly with infarction is highly indicative of disseminated MAC infection, which is known to cause splenomegaly and systemic symptoms in patients with advanced HIV.
6. Pathophysiology: MAC infection can cause widespread granulomatous disease involving the liver, spleen, and lymph nodes, leading to splenic infarction and systemic symptoms.

In conclusion, the combination of clinical symptoms, immunological status, physical examination findings, and characteristic imaging strongly support the diagnosis of disseminated Mycobacterium avium complex (MAC) infection in this severely immunocompromised patient.

Your diagnosis:

Task /20

Patient Information:



A 42-year-old man presented to the clinic with a 3-month history of worsening cough, shortness of breath, and fever. Physical examination showed inflamed nasal mucosa and nasal crusting. Wheezes and rales were heard on auscultation. A computed tomographic scan of the face showed extensive destruction of the structural bones of the midface, resulting in a large nasal cavity.

AI advice:

The patient is likely suffering from granulomatosis with polyangiitis (GPA), formerly known as Wegener's granulomatosis. This diagnosis is based on several key findings:

1. Clinical Presentation: A 42-year-old man with a 3-month history of worsening cough, shortness of breath, and fever, which are common symptoms of systemic vasculitis and pulmonary involvement.

2. Physical Examination: Inflamed nasal mucosa and nasal crusting, wheezes, and rales on auscultation, indicating both upper and lower respiratory tract involvement.
3. Imaging Findings: Computed tomography (CT) of the face showed extensive destruction of the structural bones of the midface, resulting in a large nasal cavity. This destructive sinus disease is characteristic of GPA.
4. Symptoms Correlation: The combination of upper and lower respiratory tract symptoms, systemic symptoms like fever, and destructive nasal and sinus disease aligns with the clinical picture of GPA.
5. Pathophysiology: GPA is a systemic vasculitis characterized by necrotizing granulomatous inflammation affecting small to medium-sized vessels, commonly involving the respiratory tract and kidneys.
6. Differential Diagnosis: Although other conditions like infections or malignancies can cause similar symptoms, the combination of respiratory involvement and characteristic imaging findings strongly suggests GPA.
7. Diagnostic Confirmation: Further testing, such as antineutrophil cytoplasmic antibodies (ANCA), particularly c-ANCA (anti-PR3), and biopsy of affected tissue showing granulomatous inflammation, would confirm the diagnosis.

In conclusion, the combination of clinical symptoms, physical examination findings, and characteristic imaging strongly support the diagnosis of granulomatosis with polyangiitis (GPA).

Your diagnosis:

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Task /20

Patient Information:



A 63-year-old man presented to the emergency department with a 3-day history of abdominal pain that had started in the periumbilical area and subsequently shifted to the left lower quadrant. Initial laboratory tests showed a white-cell count of 12,000 per cubic millimeter (reference range, 4000 to 10,000) and a lactate level of 1.8 mmol per liter (normal value, <1.9). Contrast-enhanced computed tomography of the abdomen revealed edema of the sigmoid colon with thumbprinting.

AI advice:

The patient is likely suffering from acute diverticulitis. This diagnosis is based on several key findings:

1. Clinical Presentation: A 63-year-old man presented with a 3-day history of abdominal pain that started in the periumbilical area and subsequently shifted to the left lower quadrant, which is a common location for diverticulitis pain.
2. Laboratory Findings: Initial laboratory tests showed a white-cell count of 12,000 per cubic millimeter (reference range, 4000 to 10,000), indicating an inflammatory or infectious process, and a lactate level of 1.8 mmol per liter (normal value, <1.9), suggesting no severe ischemia or sepsis.
3. Imaging Findings: Contrast-enhanced computed tomography of the abdomen revealed edema of the sigmoid colon with thumbprinting, which are characteristic findings of diverticulitis.
4. Symptoms Correlation: The combination of left lower quadrant abdominal pain, elevated white-cell count, and the specific CT findings align with the clinical picture of acute diverticulitis.
5. Pathophysiology: Diverticulitis is caused by inflammation or infection of diverticula, which are small bulging pouches that can form in the digestive tract, particularly the sigmoid colon.
6. Risk Factors: Risk factors for diverticulitis include age (commonly affects older adults), a low-fiber diet, and a sedentary lifestyle. Although the patient's specific risk factors are not detailed, his age is a significant contributing factor.

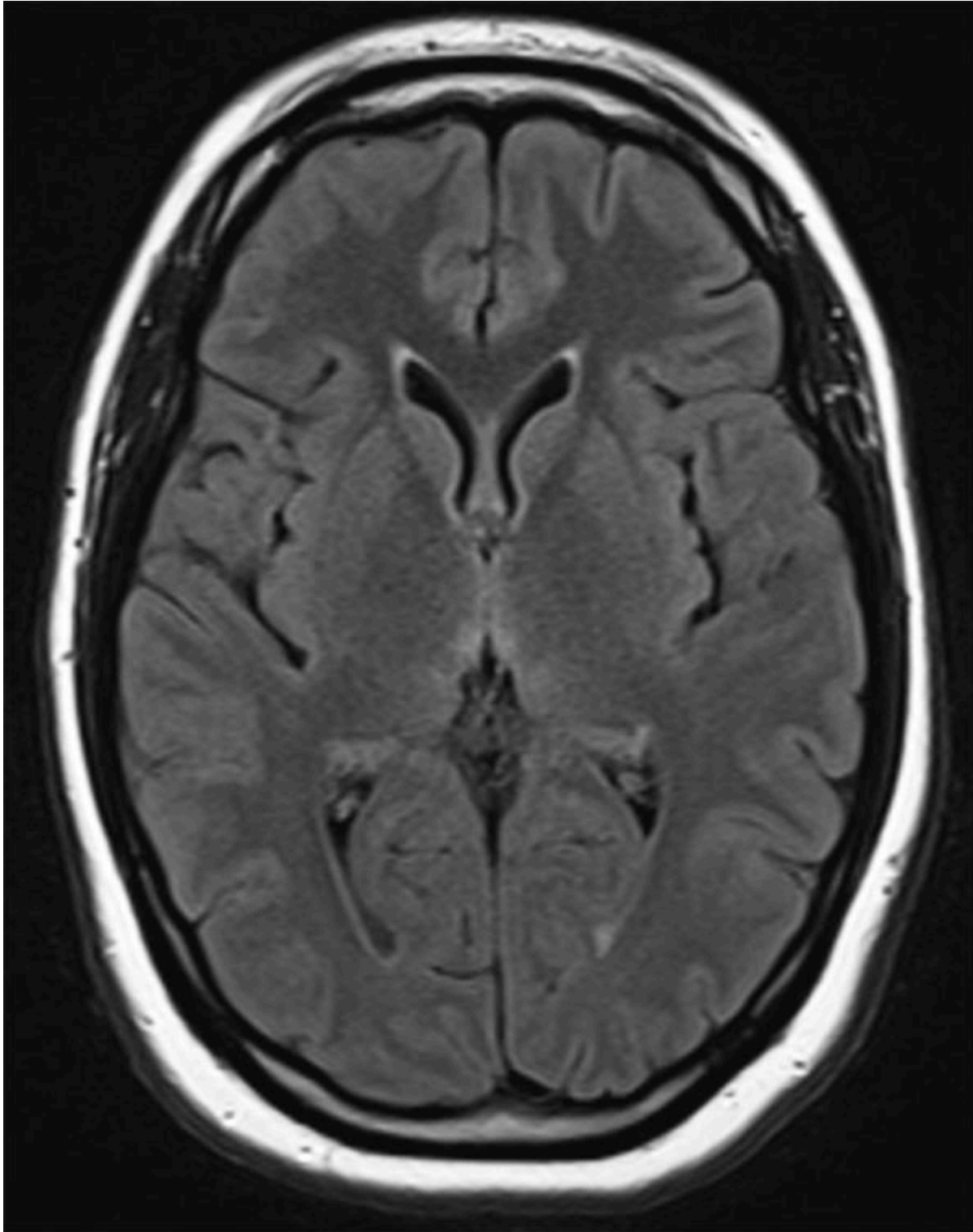
In conclusion, the combination of clinical symptoms, laboratory findings, and characteristic imaging strongly support the diagnosis of acute diverticulitis.

Your diagnosis:

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Task /20

Patient Information:



A 28-year-old woman with vertigo, confusion, and falls 2 weeks after a surgical abortion at 11 weeks of gestation presents to the emergency department. Examination revealed spontaneous upbeat nystagmus, gaze-evoked nystagmus, and gait ataxia.

AI advice:

The patient is likely suffering from Wernicke encephalopathy. This diagnosis is based on several key findings:

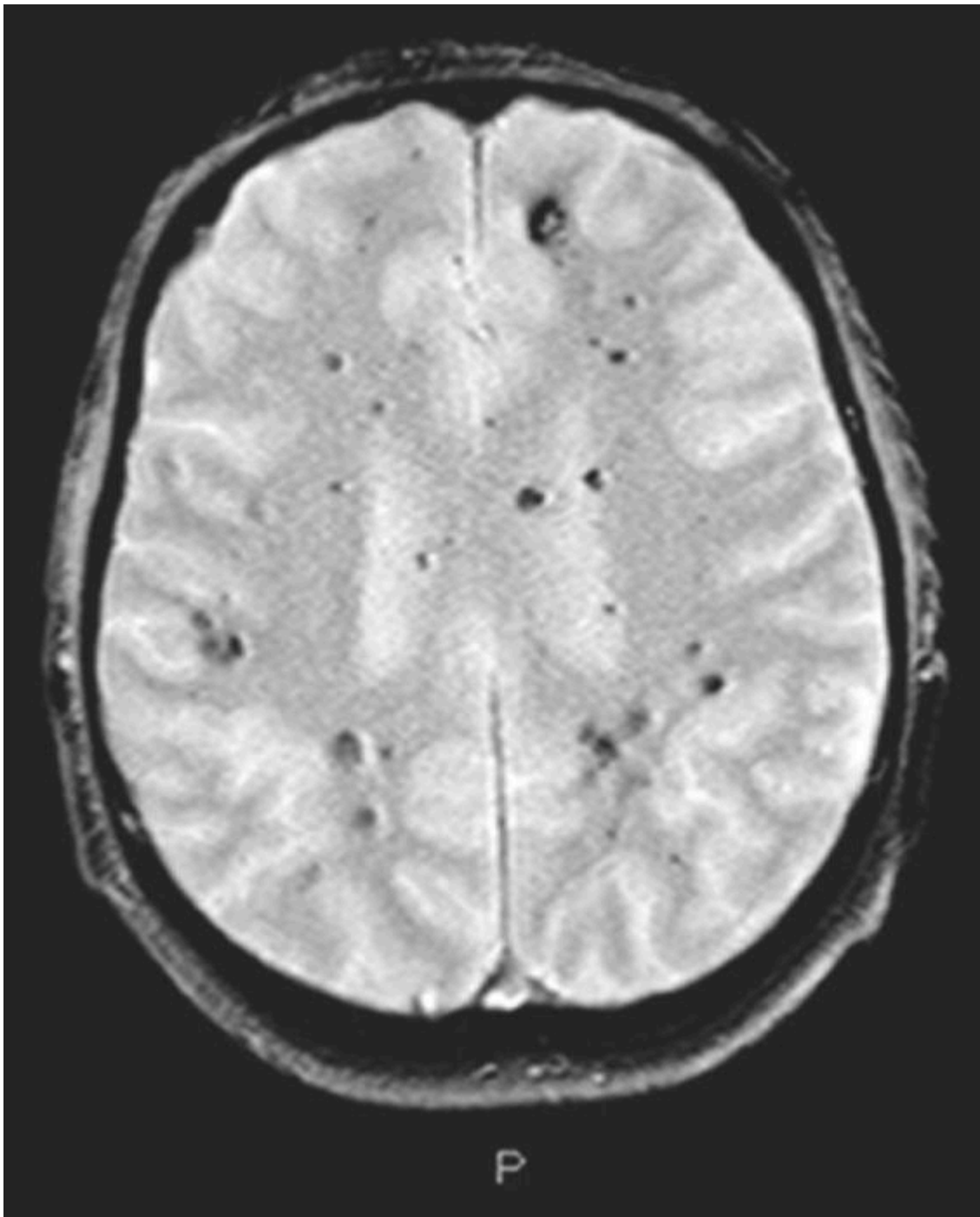
1. Clinical Presentation: A 28-year-old woman with vertigo, confusion, and falls 2 weeks after a surgical abortion at 11 weeks of gestation.
2. Neurological Examination: Examination revealed spontaneous upbeat nystagmus, gaze-evoked nystagmus, and gait ataxia, which are classic signs of Wernicke encephalopathy.
3. Imaging Findings: The MRI image shows hyperintense lesions in the periaqueductal region and the thalamus, which are characteristic findings in Wernicke encephalopathy.
4. Symptoms Correlation: The combination of vertigo, confusion, nystagmus, and gait ataxia, along with the MRI findings, aligns well with the clinical picture of Wernicke encephalopathy.
5. Pathophysiology: Wernicke encephalopathy is caused by a deficiency of thiamine (vitamin B1), which can occur after significant metabolic stress such as surgery or malnutrition.
6. Risk Factors: Recent surgical abortion and possible nutritional deficiencies or hyperemesis gravidarum during pregnancy could contribute to thiamine deficiency.

In conclusion, the combination of clinical symptoms, neurological examination findings, and characteristic imaging strongly support the diagnosis of Wernicke encephalopathy.

Your diagnosis:

Task /20

Patient Information:



A 59-year-old previously healthy man presented with progressively worsening headaches and bluish nodular skin lesions. Fast-field echo MRI image of the brain showed this finding.

AI advice:

The patient is likely suffering from cerebral amyloid angiopathy (CAA) with possible systemic amyloidosis. This diagnosis is based on several key findings:

1. Clinical Presentation: A 59-year-old previously healthy man presented with progressively worsening headaches and bluish nodular skin lesions. These symptoms are indicative of a neurological condition with possible systemic involvement.
2. Medical History: The patient's age aligns with the typical demographic for CAA, which commonly affects older adults.
3. Imaging Findings: The fast-field echo MRI image of the brain shows multiple microbleeds. This pattern is characteristic of CAA, which involves amyloid deposition in cerebral blood vessels leading to microhemorrhages.
4. Symptoms Correlation: The combination of progressively worsening headaches and bluish nodular skin lesions aligns with the clinical picture of CAA with potential systemic amyloidosis, as amyloid deposits can affect multiple organs.
5. Pathophysiology: CAA is caused by the deposition of amyloid-beta peptides in the walls of small- and medium-sized cerebral blood vessels, leading to vascular fragility and microbleeds. Systemic amyloidosis can manifest with skin lesions due to amyloid deposits in the skin.
6. Risk Factors: The primary risk factor for CAA is age, as amyloid deposition increases with aging.

In conclusion, the combination of clinical symptoms, age, and characteristic imaging findings strongly supports the diagnosis of cerebral amyloid angiopathy with possible systemic amyloidosis.

Your diagnosis:

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Task /20

Patient Information:



A 44-year-old woman presented to the emergency department with acute chest pain after several months of progressive dyspnea. Her oxygen saturation was 92%, and she had diminished breath sounds on the right side. Chest CT revealed a large right-sided pneumothorax and diffuse, intraparenchymal pulmonary cysts.

AI advice:

The patient is likely suffering from lymphangioleiomyomatosis (LAM). This diagnosis is based on several key findings:

1. Clinical Presentation: A 44-year-old woman presented with acute chest pain after several months of progressive dyspnea, which are common symptoms of LAM.

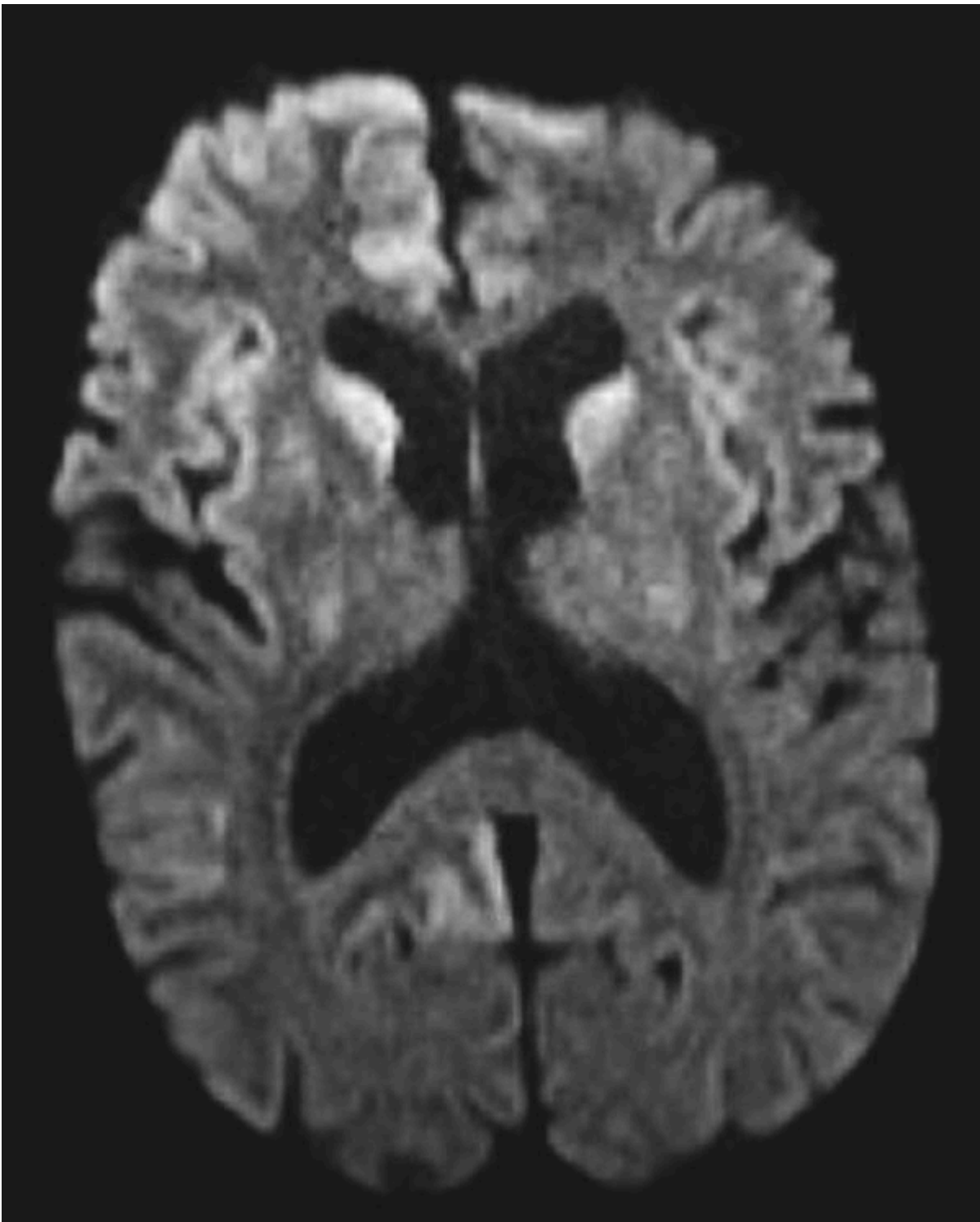
2. Medical History: The patient's oxygen saturation was 92%, and she had diminished breath sounds on the right side, indicating a possible pneumothorax or other pulmonary condition.
3. Imaging Findings: The chest CT revealed a large right-sided pneumothorax and diffuse, intraparenchymal pulmonary cysts, which are characteristic of LAM.
4. Symptoms Correlation: The combination of progressive dyspnea, acute chest pain, and the presence of a pneumothorax aligns with the clinical picture of LAM, a rare lung disease that predominantly affects women of childbearing age.
5. Pathophysiology: LAM is characterized by the proliferation of atypical smooth muscle-like cells (LAM cells) leading to cyst formation and obstruction of airways, blood vessels, and lymphatics.
6. Risk Factors: LAM primarily affects women, typically in their reproductive years, and may be associated with tuberous sclerosis complex (TSC) in some cases.

In conclusion, the combination of clinical symptoms, diminished breath sounds, and characteristic imaging findings strongly support the diagnosis of lymphangioleiomyomatosis.

Your diagnosis:

Task /20

Patient Information:



A 54-year-old man presented with a 3-week history of cognitive deterioration. Neurologic examination revealed disorientation, horizontal gaze-evoked nystagmus, hyperreflexia, startle myoclonus, and ataxia. Brain MRI with diffusion-weighted imaging revealed hyperintensity of the cortical gyri and caudate heads.

AI advice:

The patient is likely suffering from Creutzfeldt-Jakob disease (CJD). This diagnosis is based on several key findings:

1. Clinical Presentation: A 54-year-old man presented with a 3-week history of cognitive deterioration. Neurologic examination revealed disorientation, horizontal gaze-evoked nystagmus, hyperreflexia, startle myoclonus, and ataxia, which are common symptoms of CJD.
2. Imaging Findings: Brain MRI with diffusion-weighted imaging showed hyperintensity of the cortical gyri and caudate heads. These findings are characteristic of CJD, indicating spongiform changes in the brain tissue.
3. Symptoms Correlation: The combination of rapid cognitive decline, myoclonus, and specific MRI findings aligns well with the clinical picture of CJD.
4. Pathophysiology: CJD is a prion disease that causes rapid neurodegeneration due to abnormal folding of prion proteins, leading to spongiform changes in the brain.
5. Risk Factors: Although most cases of CJD are sporadic, it can also be inherited or acquired through exposure to infected tissue during medical procedures.

In conclusion, the combination of acute cognitive deterioration, specific neurologic signs, and characteristic MRI findings strongly supports the diagnosis of Creutzfeldt-Jakob disease.

Your diagnosis:

Task /20

Patient Information:



A 30-year-old man presented with a 15-month history of intermittent discomfort in the right upper quadrant of the abdomen. He lived in a rural area of Morocco and had occasional contact with dogs. The physical examination revealed hepatomegaly with a palpable hepatic mass. Laboratory tests showed a normal white-cell count and a normal absolute eosinophil count. Ultrasonography and computed tomography of the abdomen revealed a large cyst in the right lobe of the liver.

AI advice:

The patient is likely suffering from hepatic echinococcosis (hydatid disease). This diagnosis is based on several key findings:

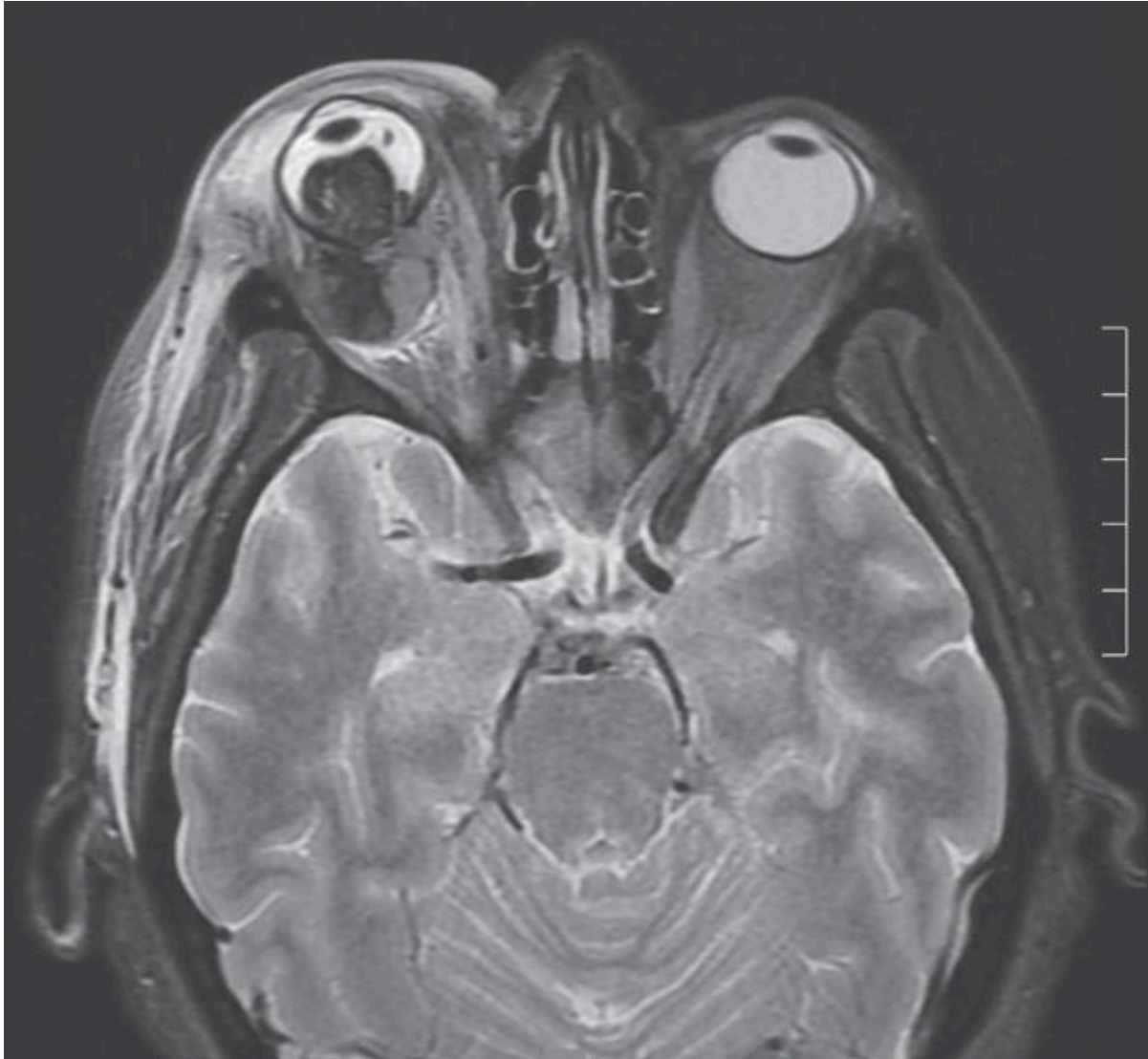
1. Clinical Presentation: A 30-year-old man presented with a 15-month history of intermittent discomfort in the right upper quadrant of the abdomen, which is a common symptom of hydatid disease.
2. Epidemiological History: The patient lived in a rural area of Morocco and had occasional contact with dogs, which are known risk factors for echinococcosis due to the life cycle of *Echinococcus* tapeworms.
3. Physical Examination: The examination revealed hepatomegaly with a palpable hepatic mass, which is consistent with a large liver cyst caused by echinococcosis.
4. Laboratory Tests: The normal white-cell count and normal absolute eosinophil count do not rule out echinococcosis, as these can be normal in many cases.
5. Imaging Findings: Ultrasonography and computed tomography of the abdomen revealed a large cyst in the right lobe of the liver, which is characteristic of hydatid cysts caused by *Echinococcus granulosus*.
6. Symptoms Correlation: The combination of right upper quadrant discomfort, hepatomegaly, and the presence of a large hepatic cyst aligns with the clinical picture of hepatic echinococcosis.

In conclusion, the combination of clinical symptoms, epidemiological history, physical examination findings, and characteristic imaging strongly supports the diagnosis of hepatic echinococcosis.

Your diagnosis:

Task /20

Patient Information:



A 59-year-old woman presented to the emergency department with a 4-day history of inflammation and pain in the right eye. She had been blind in the eye for several years before presentation. Magnetic resonance imaging revealed a right orbital mass. Abdominal and thoracic imaging showed numerous hepatic masses, abdominal and thoracic lymphadenopathy, and vertebral sclerotic osseous disease. The right eye was enucleated for palliative relief and to obtain tissue for diagnosis.

AI advice:

The patient is likely suffering from metastatic cancer, specifically metastatic ocular melanoma. This diagnosis is based on several key findings:

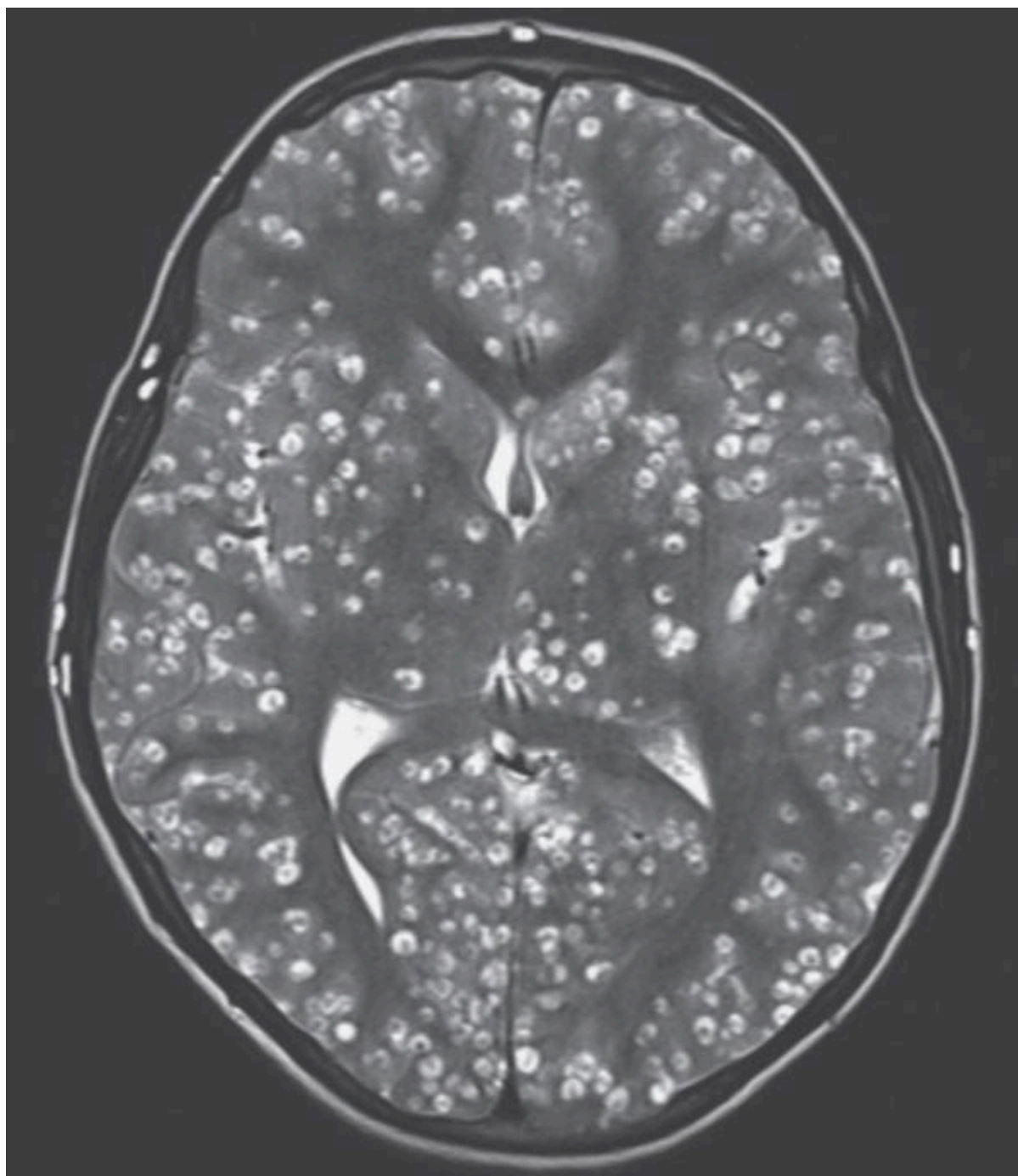
1. Clinical Presentation: A 59-year-old woman presented with a 4-day history of inflammation and pain in the right eye, where she had been blind for several years. The chronic blindness and recent symptoms suggest a long-standing ocular issue that has now become symptomatic.
2. Imaging Findings: Magnetic resonance imaging revealed a right orbital mass, indicating a significant lesion in the affected eye.
3. Systemic Involvement: Abdominal and thoracic imaging showed numerous hepatic masses, abdominal and thoracic lymphadenopathy, and vertebral sclerotic osseous disease, indicating widespread metastatic disease.
4. Ocular History: The fact that the patient had been blind in the eye for several years suggests a long-standing primary ocular condition, such as melanoma, which can metastasize to other organs.
5. Pathological Confirmation: The right eye was enucleated for palliative relief and to obtain tissue for diagnosis. Enucleation is often performed in cases of severe ocular melanoma to control symptoms and obtain a definitive diagnosis.
6. Symptoms Correlation: The combination of an orbital mass, widespread metastatic lesions, and the patient's ocular history strongly suggests metastatic ocular melanoma.

In conclusion, the combination of clinical presentation, imaging findings, and systemic involvement strongly supports the diagnosis of metastatic ocular melanoma.

Your diagnosis:

Task /20

Patient Information:



An 18-year-old man presented to the emergency department with generalized tonic-clonic seizures. On physical examination, the patient was confused. He had swelling over the right eye and tenderness in the right testis. Magnetic resonance imaging of the head showed numerous well-defined cystic lesions throughout the cerebral cortex.

AI advice:

The patient is likely suffering from neurocysticercosis. This diagnosis is based on several key findings:

1. Clinical Presentation: An 18-year-old man presented with generalized tonic-clonic seizures and confusion, which are common neurological manifestations of neurocysticercosis.
2. Physical Examination: The patient had swelling over the right eye and tenderness in the right testis, indicating possible systemic involvement of cysticercosis.
3. Imaging Findings: Magnetic resonance imaging of the head showed numerous well-defined cystic lesions throughout the cerebral cortex, which are characteristic of neurocysticercosis caused by the larvae of the pork tapeworm, *Taenia solium*.
4. Epidemiological Considerations: Although not explicitly mentioned, neurocysticercosis is more common in areas with poor sanitation and where pork consumption is prevalent, suggesting a potential epidemiological link.
5. Symptoms Correlation: The combination of seizures, confusion, and cystic brain lesions aligns with the clinical picture of neurocysticercosis.
6. Systemic Involvement: The presence of swelling and tenderness in other parts of the body indicates that the infection may have spread beyond the central nervous system, which is consistent with disseminated cysticercosis.

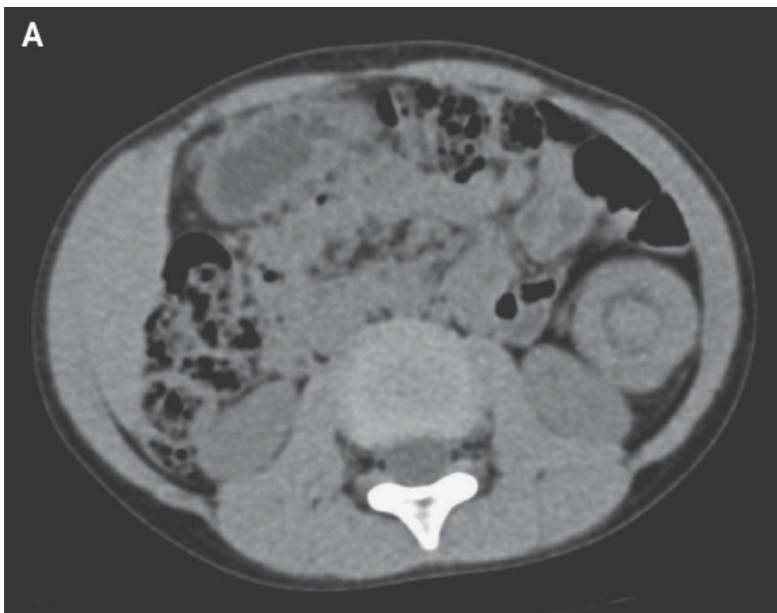
In conclusion, the combination of clinical symptoms, physical examination findings, and characteristic imaging strongly supports the diagnosis of neurocysticercosis.

Your diagnosis:

Main Task with AI – Standard Prompting

Task /20

Patient Information:



A previously healthy 5-year-old boy was brought to the surgery clinic with a 2-day history of intermittent abdominal pain. On palpation of the abdomen there was pain in the periumbilical region, but no rebound or guarding. An ultrasound was normal, and a computed tomography of the abdomen was performed (Panels A,B).

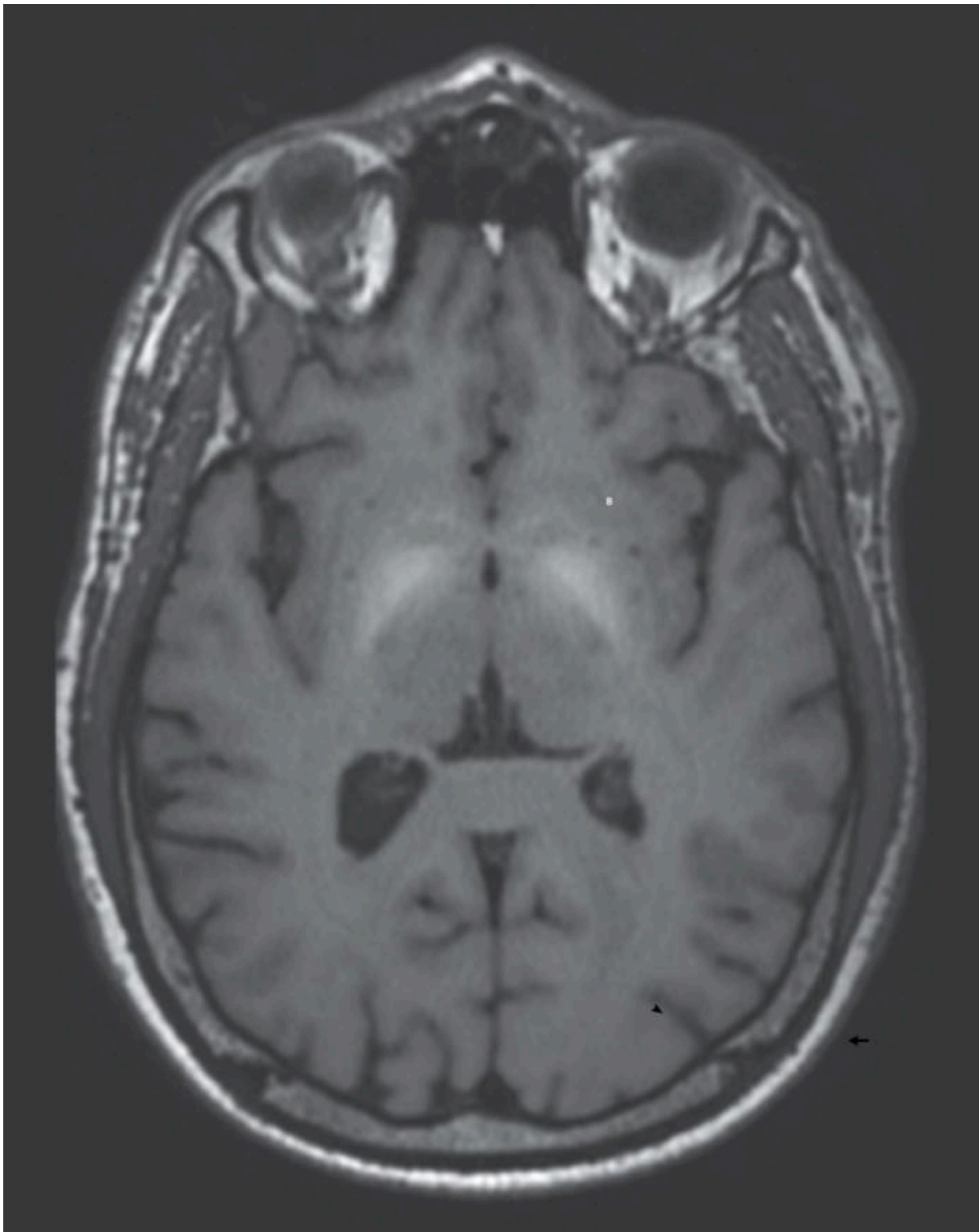
AI advice:

The CT images (Panels A and B) show a characteristic appearance of the "target sign," which is indicative of intussusception, a condition where a part of the intestine telescopes into an adjacent part. The patient's symptoms of intermittent abdominal pain and the imaging findings support this diagnosis. Prompt treatment is essential to prevent complications such as bowel ischemia.

Your diagnosis:

Task /20

Patient Information:



A 55-year-old man presented with 10 years of progressive handwriting impairment and rapid, slurred speech. In his thirties, he had worked as a welder without access to personal protective equipment. Neurologic examination was notable for reduced facial expression, blepharospasm, and cluttered, dysarthric speech. Postural reflexes were mildly impaired. MRI imaging of the head showed a nonenhancing, T1-weighted, hyperintense signal in the basal ganglia on both sides. Ceruloplasmin and iron levels were normal.

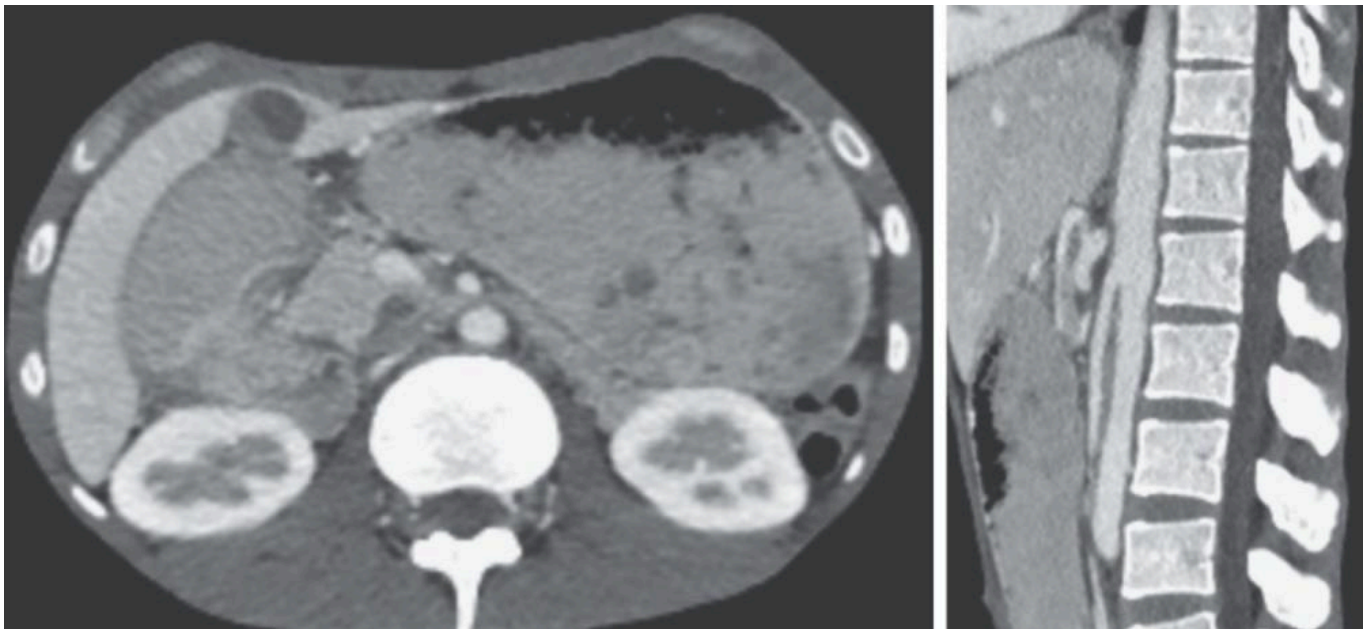
AI advice:

The patient's symptoms of progressive handwriting impairment, slurred speech, and neurologic findings, combined with his history of working as a welder and MRI findings of hyperintense signals in the basal ganglia, suggest manganism. This condition is a type of parkinsonism caused by chronic manganese exposure, which is common in occupations such as welding. The normal ceruloplasmin and iron levels help to rule out other differential diagnoses like Wilson's disease.

Your diagnosis:

Task /20

Patient Information:



26-year-old man from Somalia presented with a 5-month history of dry cough, night sweats, and unintentional weight loss of 18 kg. During this period, epigastric pain and postprandial vomiting had also developed. His BMI was 11. On examination, he was cachectic with abdominal distention and diffuse tenderness to palpation. On the basis of chest imaging and sputum studies, a diagnosis of pulmonary tuberculosis was made, and intravenous antituberculous treatment was initiated. However, he continued to have postprandial vomiting. Contrast-enhanced CT of the abdomen was obtained.

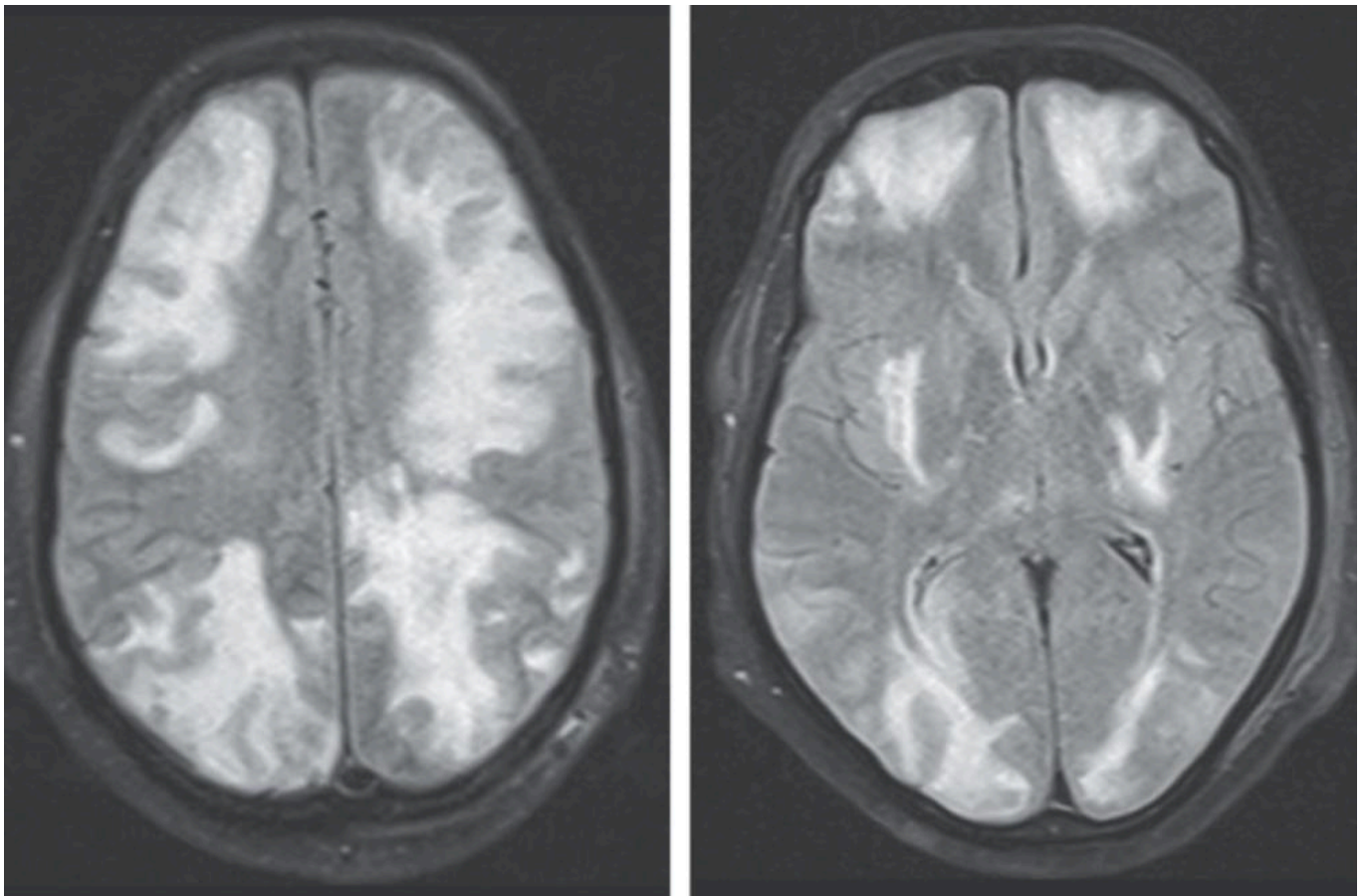
AI advice:

The contrast-enhanced CT of the abdomen shows significant thickening and inflammation around the duodenum, consistent with tuberculosis-related gastrointestinal involvement, specifically tuberculous enteritis. The patient's symptoms of postprandial vomiting, along with his diagnosis of pulmonary tuberculosis and low BMI, suggest that the gastrointestinal tuberculosis has led to a partial obstruction, causing his continued vomiting despite antituberculous treatment.

Your diagnosis:

Task /20

Patient Information:



A 35-year-old man with IgA nephropathy presented with confusion, blurry vision, and seizures. Two weeks before presentation, he had started receiving cyclosporine. Physical examination was notable for a blood pressure of 160/80 mm Hg, drowsiness, and decreased visual acuity. A fundoscopic examination was normal. T2-weighted magnetic resonance imaging (MRI) with fluid-attenuated inversion recovery sequencing of the head was performed.

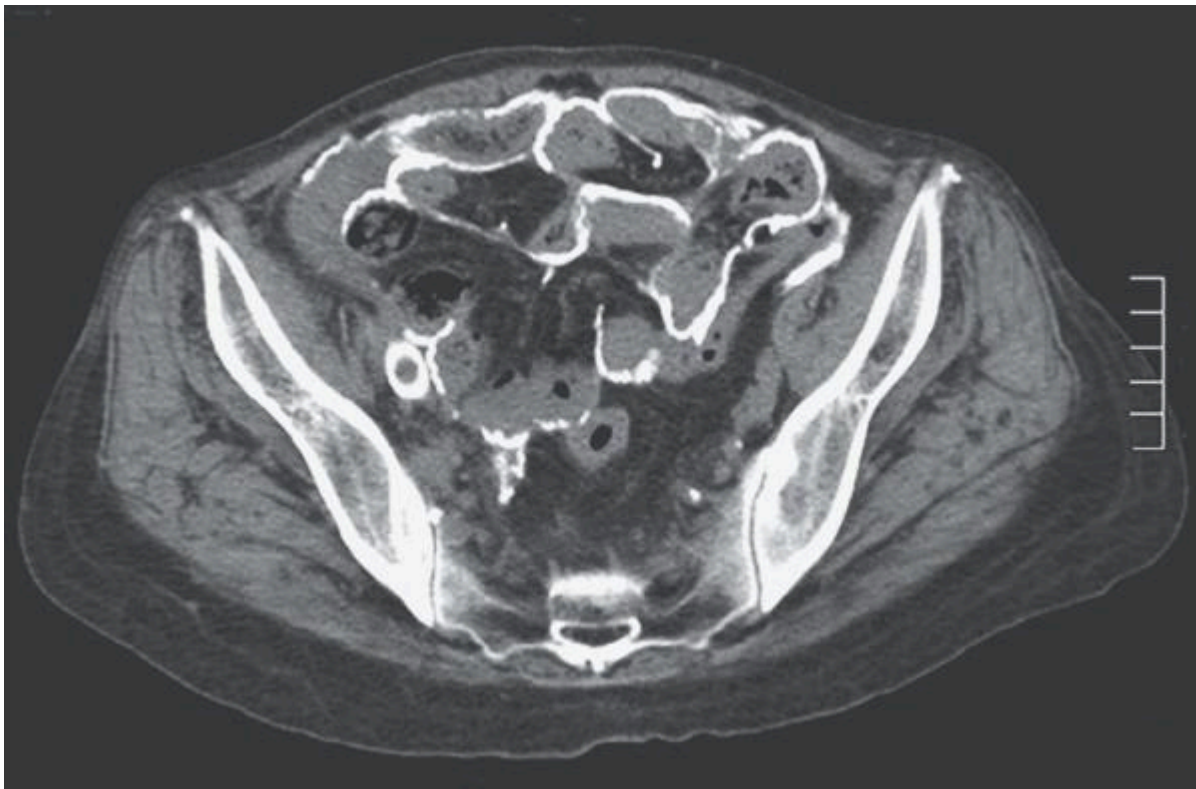
AI advice:

The T2-weighted MRI with fluid-attenuated inversion recovery (FLAIR) sequencing shows hyperintense signals in the posterior regions of the brain, consistent with posterior reversible encephalopathy syndrome (PRES). The patient's symptoms of confusion, blurry vision, seizures, and elevated blood pressure, along with recent initiation of cyclosporine, support this diagnosis. PRES is often associated with hypertension and immunosuppressive therapy.

Your diagnosis:

Task /20

Patient Information:



A 52-year-old woman with end-stage kidney disease that was being managed with peritoneal dialysis presented with a 1-month history of bloody dialysate. She had had 3 episodes of bacterial peritonitis in the past 12 years. Physical examination and laboratory studies were unremarkable. Computed tomography of the abdomen was performed.

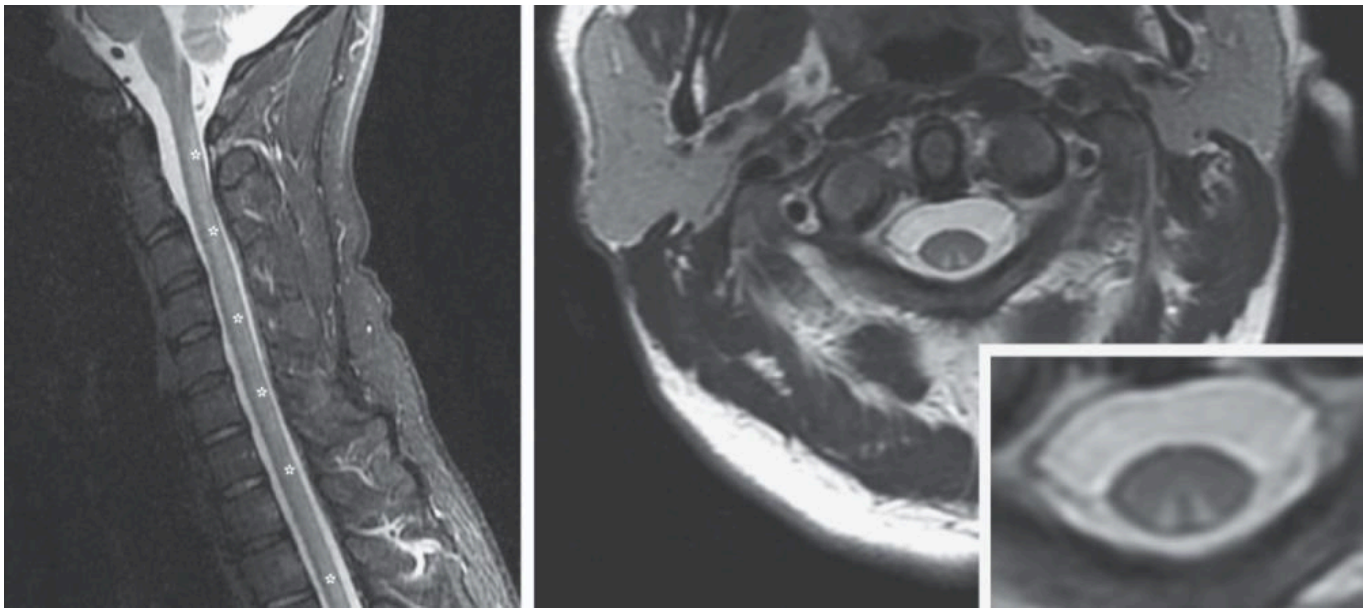
AI advice:

The CT of the abdomen shows diffuse thickening and enhancement of the peritoneal lining, which is consistent with encapsulating peritoneal sclerosis (EPS). EPS is a severe complication of long-term peritoneal dialysis, characterized by a thickened peritoneum that can encapsulate bowel loops. The patient's history of bloody dialysate and previous episodes of bacterial peritonitis further supports this diagnosis.

Your diagnosis:

Task /20

Patient Information:



A 32-year-old man presented with a 6-week history of tingling in his arms and legs and a 2-week history of inability to walk. A positive Romberg test, sensory ataxia, impaired proprioception and vibratory sensation, and preserved nociception were noted. Magnetic resonance imaging of the whole spine showed hyperintensity in the posterior spinal cord from C1 to T12 and hyperintense lesions in the dorsal column on T2-weighted images. A vitamin B12 level was 107 pg per ml (reference value, >231) without macrocytic anemia.

AI advice:

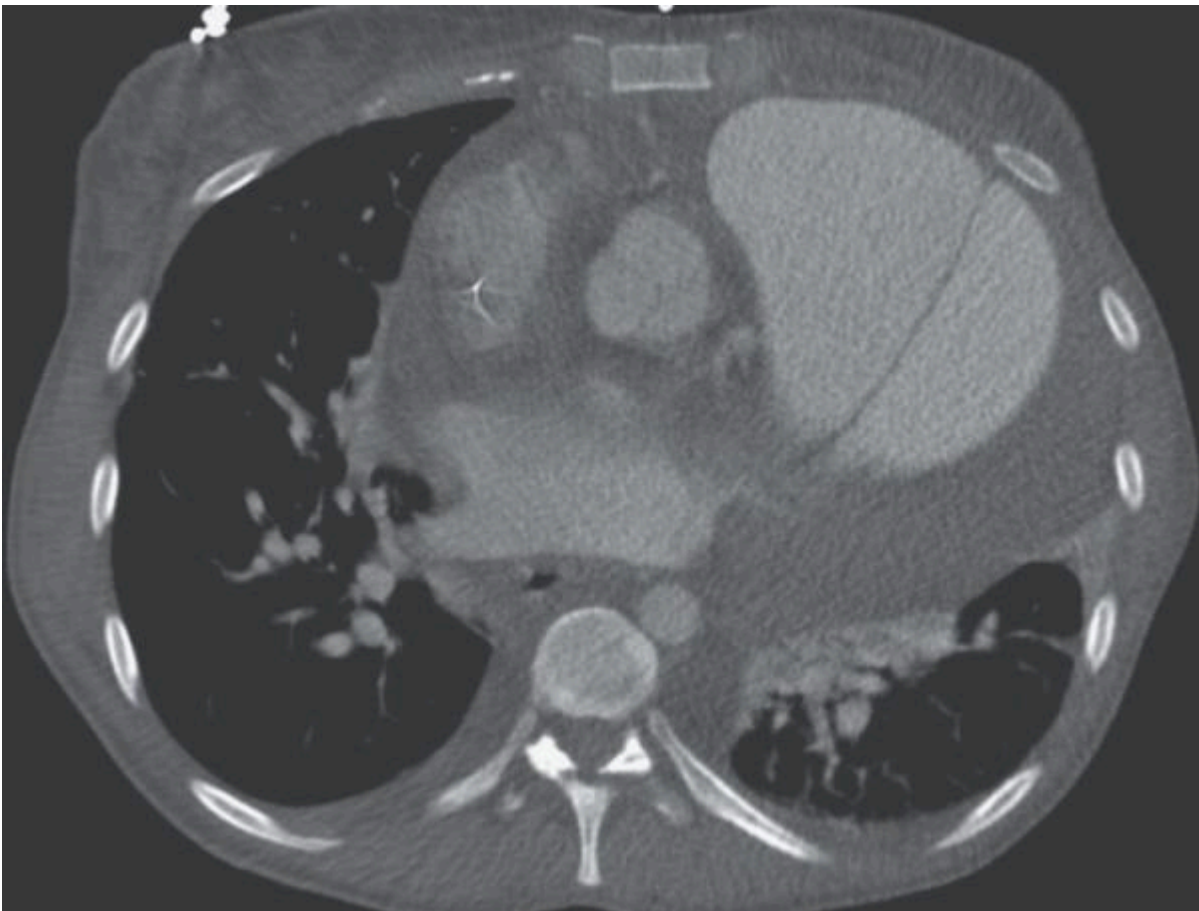
The MRI of the spine shows hyperintensity in the posterior columns from C1 to T12 on T2-weighted images, indicative of subacute combined degeneration (SCD) of the

spinal cord. The patient's low vitamin B12 level, despite the absence of macrocytic anemia, along with symptoms such as tingling, sensory ataxia, and impaired proprioception, further supports this diagnosis. SCD is a neurological complication of vitamin B12 deficiency that affects the dorsal columns and lateral corticospinal tracts of the spinal cord.

Your diagnosis:

Task /20

Patient Information:



A 35-year-old woman with idiopathic pulmonary arterial hypertension and a pulmonary aneurysm presented with chest pain. Computed tomography (CT) of the chest is shown.

AI advice:

The CT of the chest shows a large pericardial effusion, which appears as a crescent-shaped area of fluid around the heart. Given the patient's history of idiopathic pulmonary arterial hypertension and the presence of a pulmonary aneurysm, the pericardial effusion is likely causing her chest pain. This effusion can be a complication of pulmonary hypertension and may necessitate urgent intervention to prevent cardiac tamponade.

Your diagnosis:

Task /20

Patient Information:



A 38-year-old man presented to the otolaryngology clinic with chronic difficulty breathing through his right nostril. Physical examination showed nasal septal deviation, calcified septal spurs, and a 2-cm perforation in the posterior septum. On rhinoscopy, a hard, nontender, white mass was observed in the floor of the right nostril. CT of the paranasal sinuses showed a well-defined, radiodense mass.

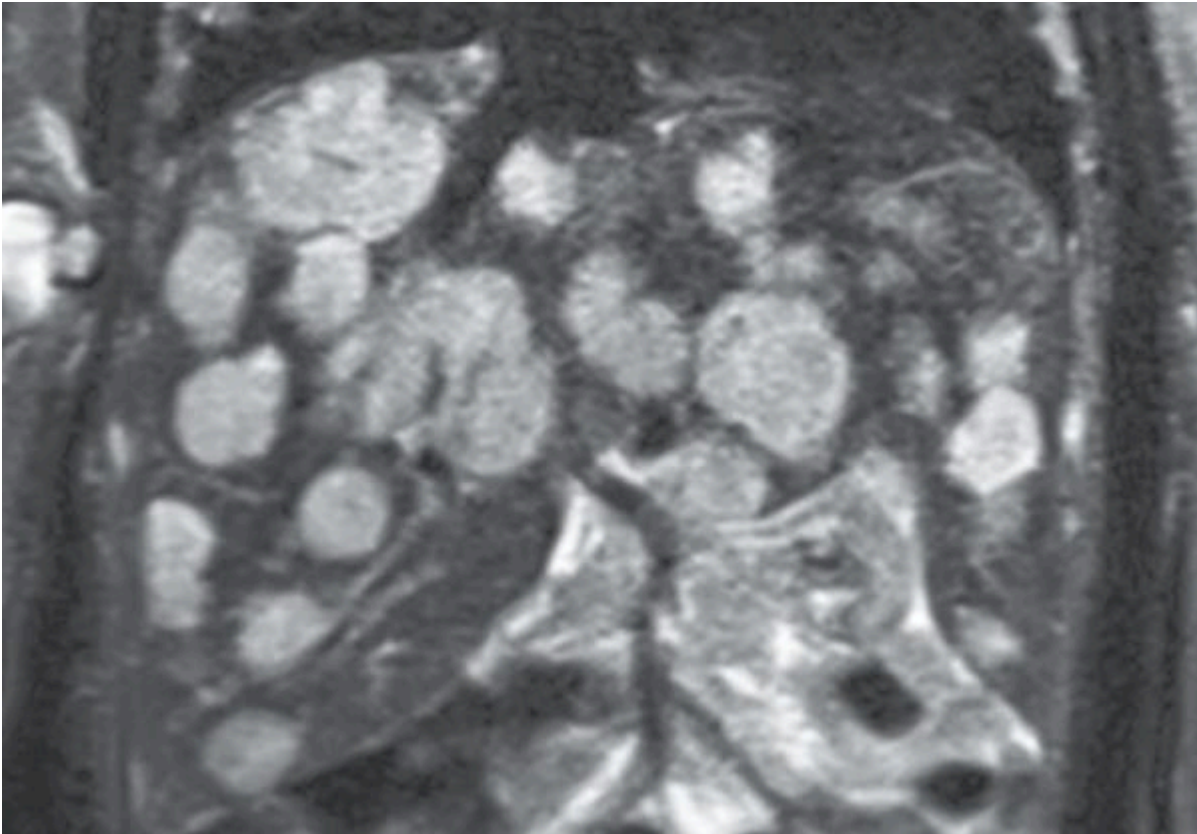
AI advice:

The CT of the paranasal sinuses shows a well-defined, radiodense mass in the floor of the right nostril. This finding, along with the physical examination revealing a hard, nontender, white mass, is consistent with a rhinolith. Rhinoliths are calcified masses that form around a central core of endogenous or exogenous material and can cause chronic nasal obstruction and other symptoms.

Your diagnosis:

Task /20

Patient Information:



A 16-day-old girl was brought to the emergency department with lethargy. Physical exam showed tachypnea and marked hepatomegaly, as well as small hemangiomas on the skin. TSH was elevated. MRI showed numerous hepatic lesions and cardiomegaly.

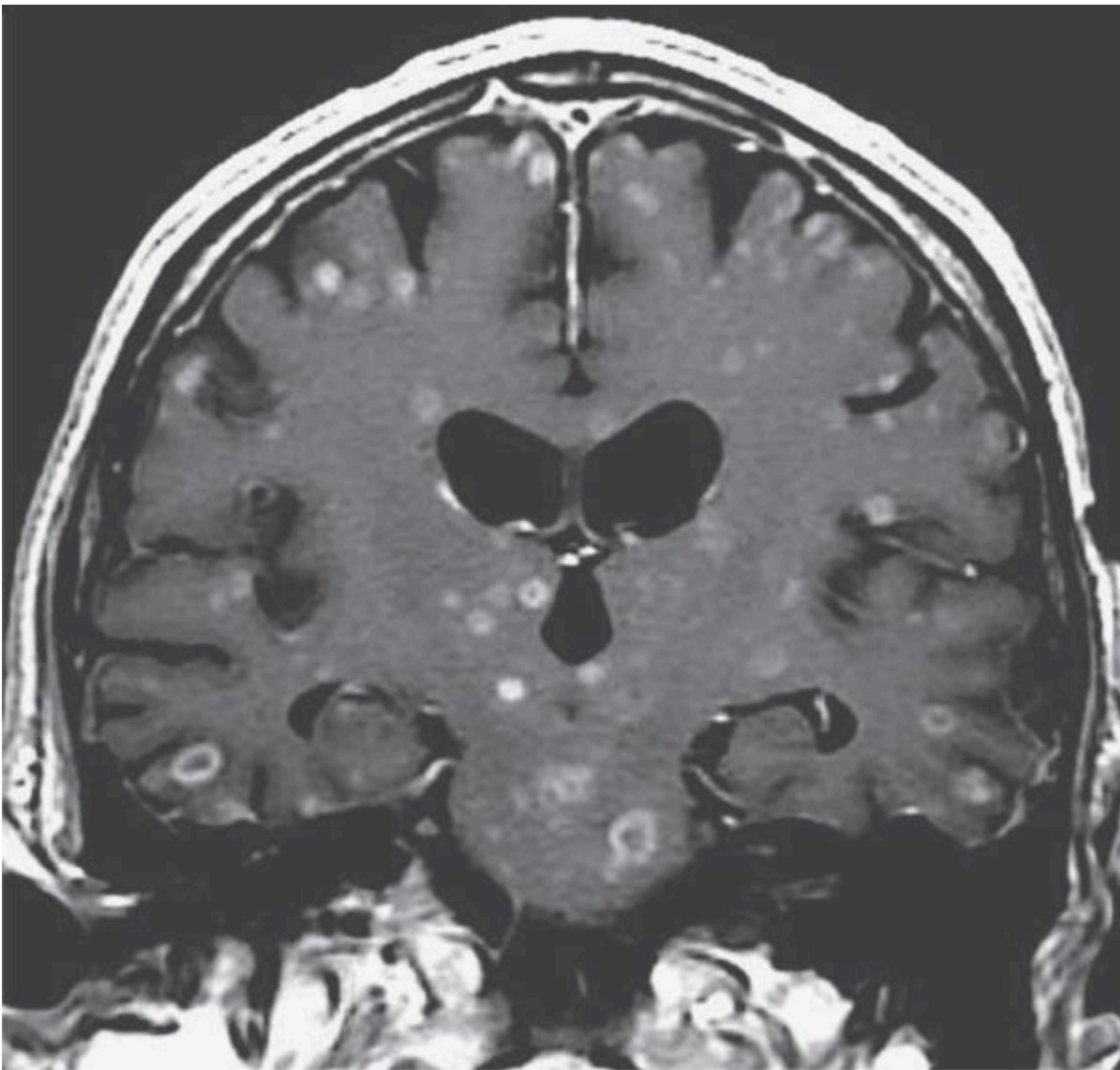
AI advice:

The MRI of the abdomen shows numerous hepatic lesions, which, along with the clinical presentation of tachypnea, marked hepatomegaly, small hemangiomas on the skin, and elevated TSH, suggest a diagnosis of neonatal hemangiomatosis. This condition is characterized by multiple hemangiomas in the liver, skin, and other organs, leading to complications such as high-output cardiac failure (as indicated by cardiomegaly) and hypothyroidism. The hepatic lesions seen on MRI are consistent with hemangiomas, which are common in this condition.

Your diagnosis:

Task /20

Patient Information:



A 71-year-old man was hospitalized with altered mental status progressing over the preceding 3 weeks. The patient had a recent diagnosis of adenocarcinoma of the colon with known metastatic lesions in the lung and bones. A gadolinium-enhanced magnetic resonance image of the brain was performed and is shown.

AI advice:

The gadolinium-enhanced MRI of the brain shows multiple enhancing lesions scattered throughout the brain parenchyma. Given the patient's history of adenocarcinoma of the colon with known metastases to the lung and bones, these findings are consistent with metastatic lesions to the brain. Brain metastases are

common in advanced cancers and can cause a range of neurological symptoms, including altered mental status, as seen in this patient.

Your diagnosis:

Task /20

Patient Information:



A 29-year-old man with perinatally acquired human immunodeficiency virus (HIV) infection and intermittent adherence to antiretroviral therapy presented to the hospital with abdominal pain and drenching night sweats. On presentation, his CD4 count was 18 cells per cubic millimeter (reference range, 500 to 1500), and the HIV viral load was undetectable. Physical exam showed severe abdominal distention, splenomegaly, and diffuse abdominal tenderness to palpation. Computed tomography of the abdomen confirmed massive splenomegaly with multifocal infarction of the splenic parenchyma.

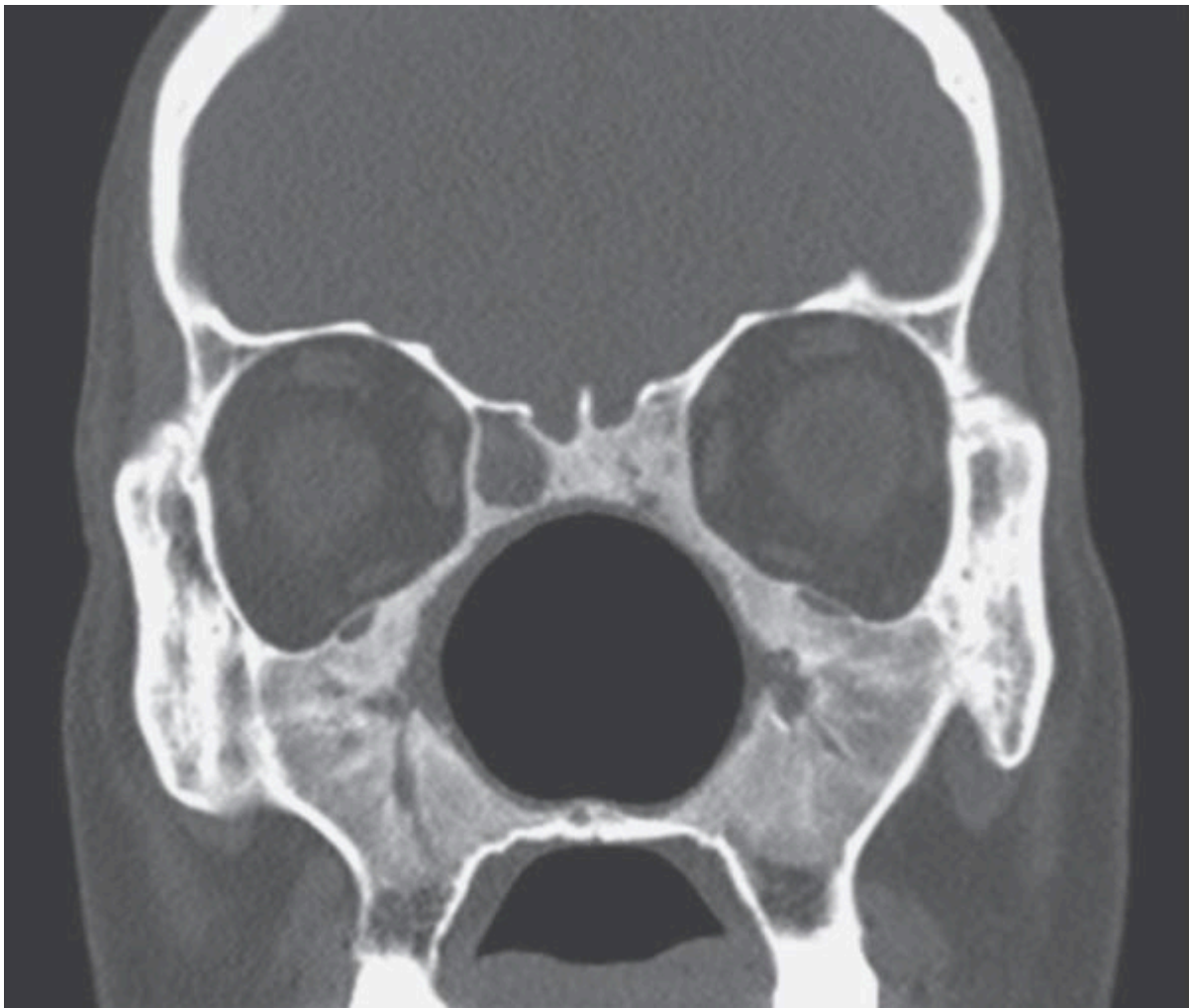
AI advice:

The CT scan of the abdomen shows massive splenomegaly with areas suggestive of splenic infarction. Given the patient's history of perinatally acquired HIV infection, low CD4 count, and symptoms such as abdominal pain and drenching night sweats, the findings are highly indicative of a diagnosis of HIV-associated lymphoma. HIV-infected patients, especially those with very low CD4 counts, are at increased risk for developing non-Hodgkin's lymphoma, which can present with splenomegaly and systemic symptoms. The splenic infarctions could be secondary to the rapid growth of splenic lymphoma tissue.

Your diagnosis:

Task /20

Patient Information:



A 42-year-old man presented to the clinic with a 3-month history of worsening cough, shortness of breath, and fever. Physical examination showed inflamed nasal mucosa and nasal crusting. Wheezes and rales were heard on auscultation. A computed tomographic scan of the face showed extensive destruction of the structural bones of the midface, resulting in a large nasal cavity.

AI advice:

The CT scan shows extensive destruction of the midfacial bones, resulting in a large nasal cavity. The clinical presentation of worsening cough, shortness of breath, fever, inflamed nasal mucosa, nasal crusting, and the imaging findings suggest a diagnosis of granulomatosis with polyangiitis (GPA), formerly known as Wegener's granulomatosis. GPA is a vasculitis that commonly affects the respiratory tract and

kidneys, leading to granulomatous inflammation and necrosis, which can explain the observed destruction of the nasal structures.

Your diagnosis:

Task /20

Patient Information:



A 63-year-old man presented to the emergency department with a 3-day history of abdominal pain that had started in the periumbilical area and subsequently shifted to the left lower quadrant. Initial laboratory tests showed a white-cell count of 12,000 per cubic millimeter (reference range, 4000 to 10,000) and a lactate level of 1.8 mmol per

liter (normal value, <1.9). Contrast-enhanced computed tomography of the abdomen revealed edema of the sigmoid colon with thumbprinting.

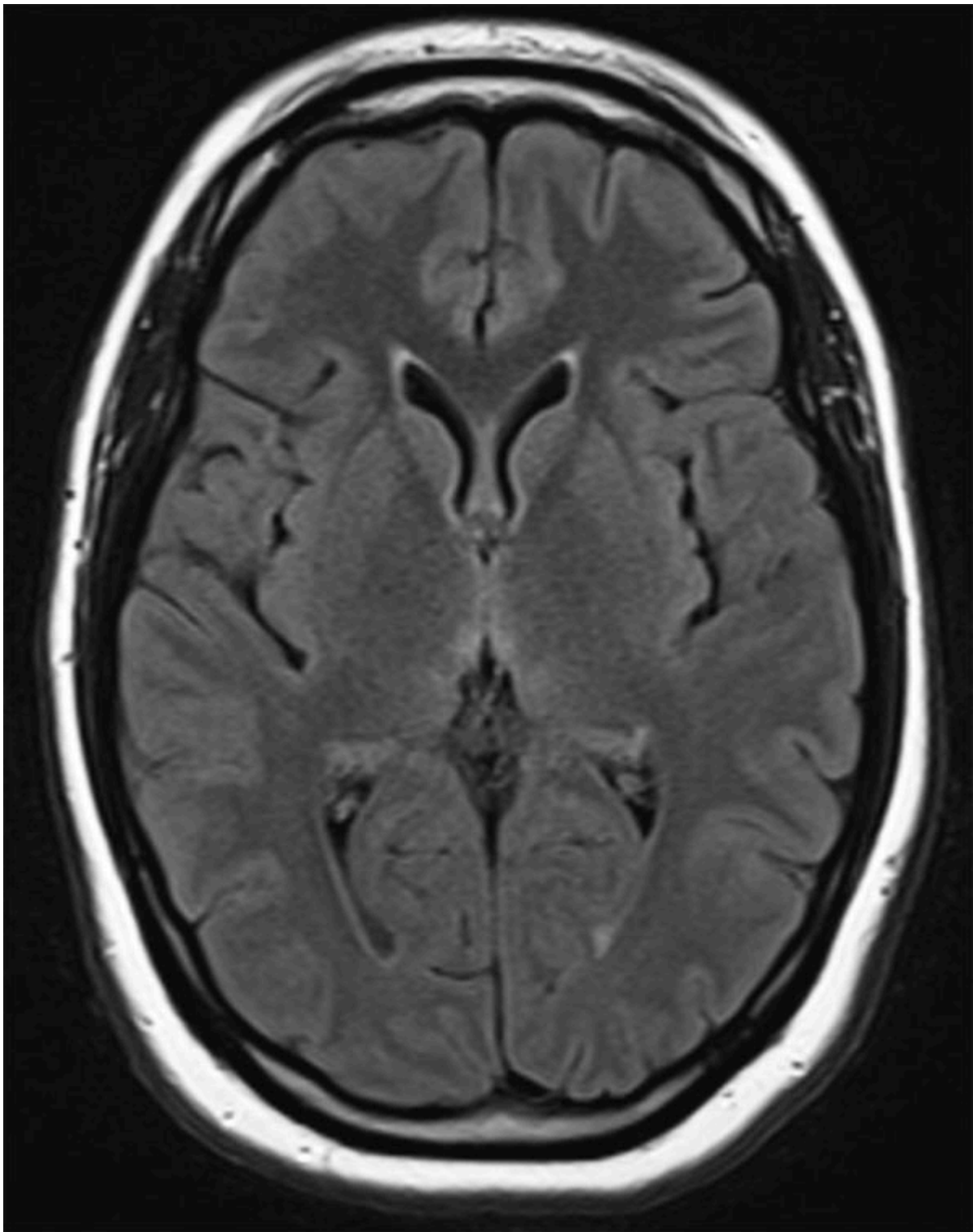
AI advice:

The patient's symptoms, elevated white-cell count, and CT findings of sigmoid colon edema with thumbprinting suggest acute diverticulitis. The thumbprinting seen on the CT scan is indicative of bowel wall thickening and edema, which are characteristic of this condition.

Your diagnosis:

Task /20

Patient Information:



A 28-year-old woman with vertigo, confusion, and falls 2 weeks after a surgical abortion at 11 weeks of gestation presents to the emergency department. Examination revealed spontaneous upbeat nystagmus, gaze-evoked nystagmus, and gait ataxia.

AI advice:

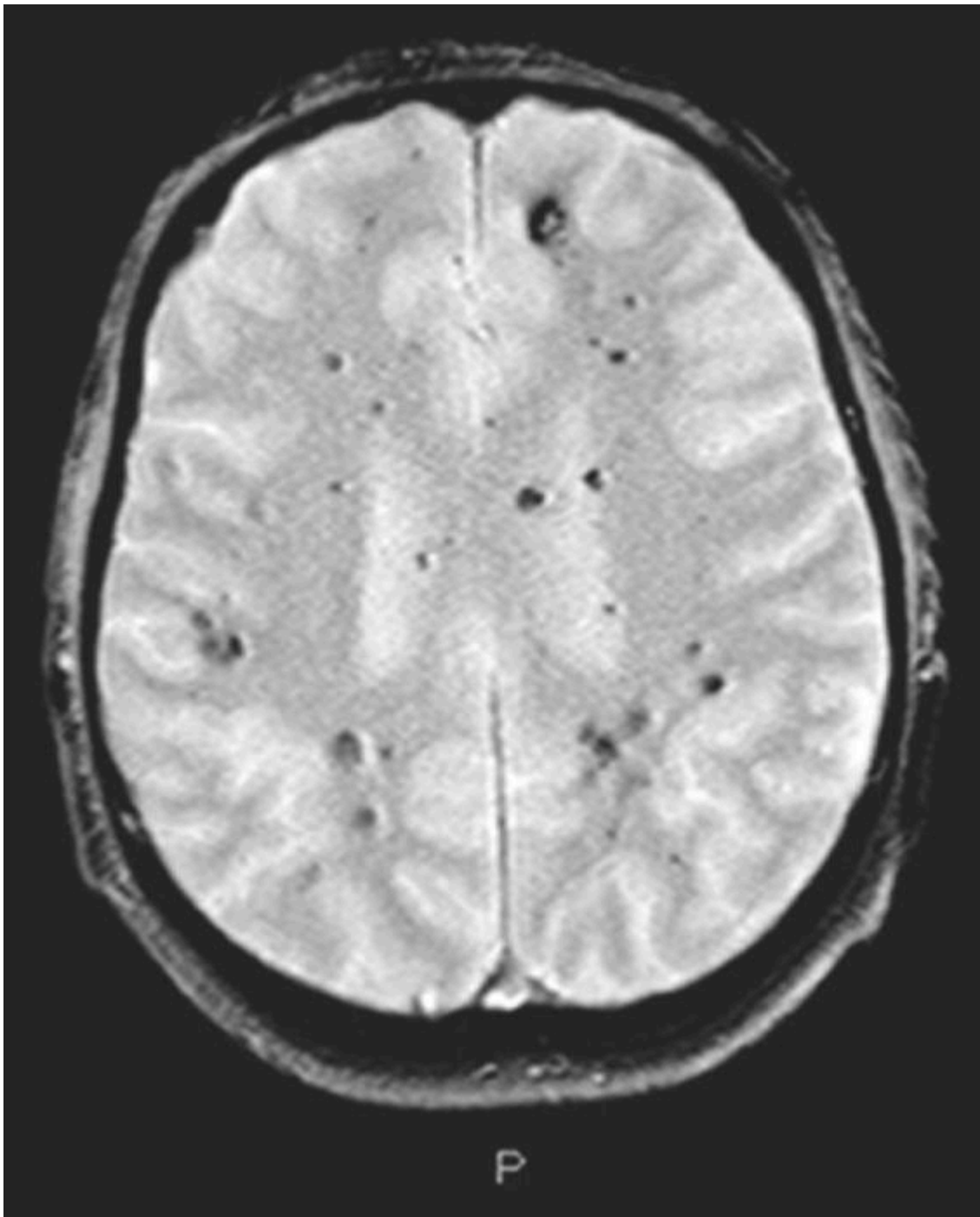
The patient's symptoms of vertigo, confusion, falls, spontaneous upbeat nystagmus,

gaze-evoked nystagmus, and gait ataxia after a surgical abortion, along with the MRI findings of hyperintensities in the bilateral thalami, suggest a diagnosis of Wernicke encephalopathy. This condition can occur due to thiamine deficiency, which may be precipitated by hyperemesis gravidarum or malnutrition associated with pregnancy.

Your diagnosis:

Task /20

Patient Information:



A 59-year-old previously healthy man presented with progressively worsening headaches and bluish nodular skin lesions. Fast-field echo MRI image of the brain showed this finding.

AI advice:

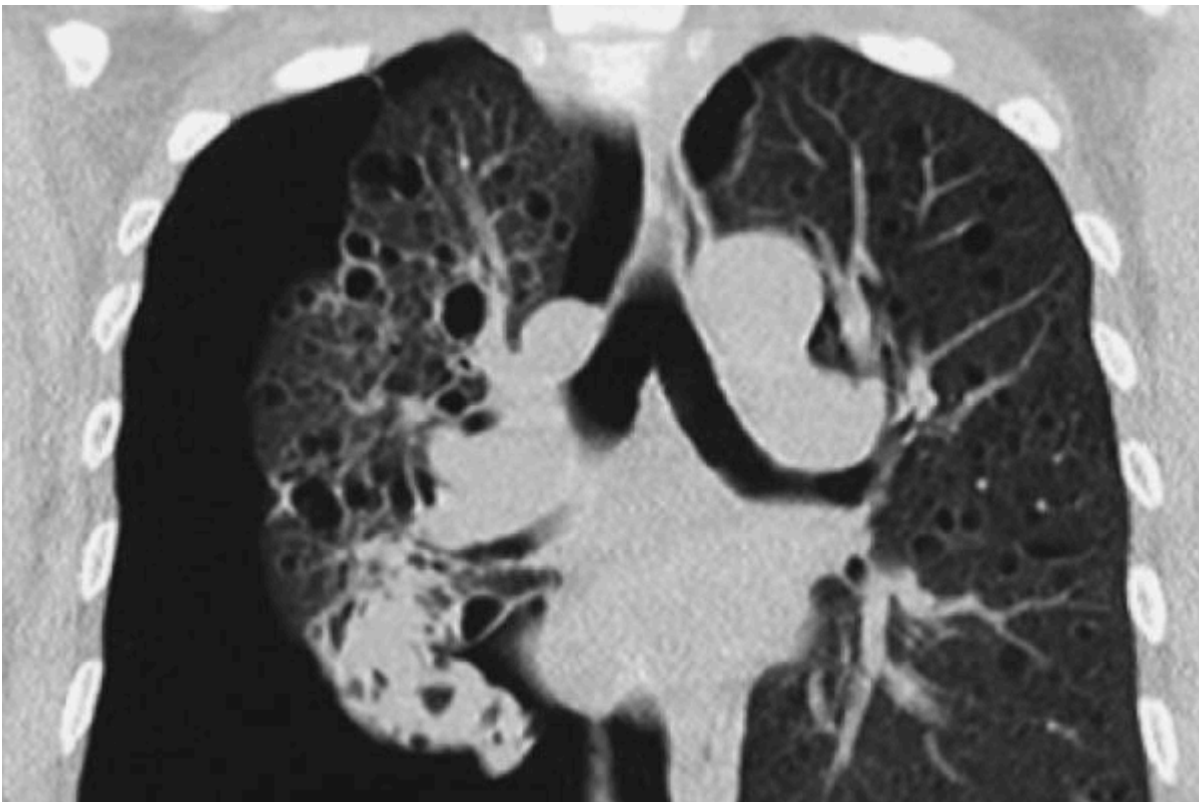
The MRI image of the brain shows multiple hypointense lesions, which are indicative of cerebral cavernous malformations (CCMs). The presence of progressively worsening

headaches and bluish nodular skin lesions supports this diagnosis, as CCMs can present with neurological symptoms and cutaneous vascular anomalies.

Your diagnosis:

Task /20

Patient Information:



A 44-year-old woman presented to the emergency department with acute chest pain after several months of progressive dyspnea. Her oxygen saturation was 92%, and she had diminished breath sounds on the right side. Chest CT revealed a large right-sided pneumothorax and diffuse, intraparenchymal pulmonary cysts.

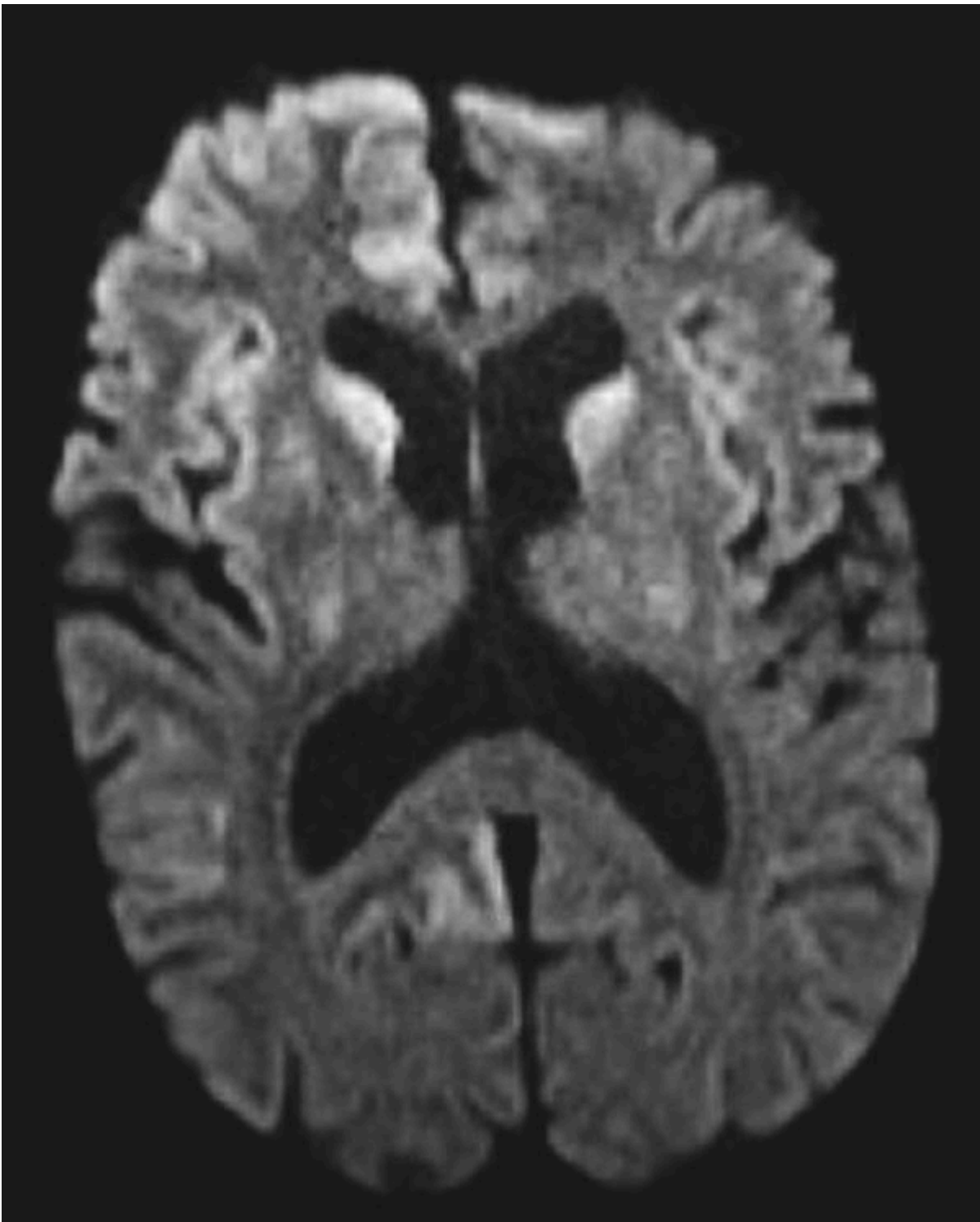
AI advice:

The chest CT image shows multiple thin-walled cysts scattered throughout the lung parenchyma, consistent with lymphangioleiomyomatosis (LAM). This diagnosis is supported by the patient's presentation of progressive dyspnea, acute chest pain, and the presence of a pneumothorax, which are common clinical features of LAM.

Your diagnosis:

Task /20

Patient Information:



A 54-year-old man presented with a 3-week history of cognitive deterioration. Neurologic examination revealed disorientation, horizontal gaze-evoked nystagmus, hyperreflexia, startle myoclonus, and ataxia. Brain MRI with diffusion-weighted imaging revealed hyperintensity of the cortical gyri and caudate heads.

AI advice:

The brain MRI with diffusion-weighted imaging shows hyperintensity in the cortical gyri and caudate heads, which is suggestive of Creutzfeldt-Jakob disease (CJD). The patient's symptoms of cognitive deterioration, disorientation, gaze-evoked nystagmus, hyperreflexia, startle myoclonus, and ataxia, along with the MRI findings, are consistent with this rapidly progressive neurodegenerative disorder.

Your diagnosis:

Task /20

Patient Information:



A 30-year-old man presented with a 15-month history of intermittent discomfort in the right upper quadrant of the abdomen. He lived in a rural area of Morocco and had occasional contact with dogs. The physical examination revealed hepatomegaly with a palpable hepatic mass. Laboratory tests showed a normal white-cell count and a normal absolute eosinophil count. Ultrasonography and computed tomography of the abdomen revealed a large cyst in the right lobe of the liver.

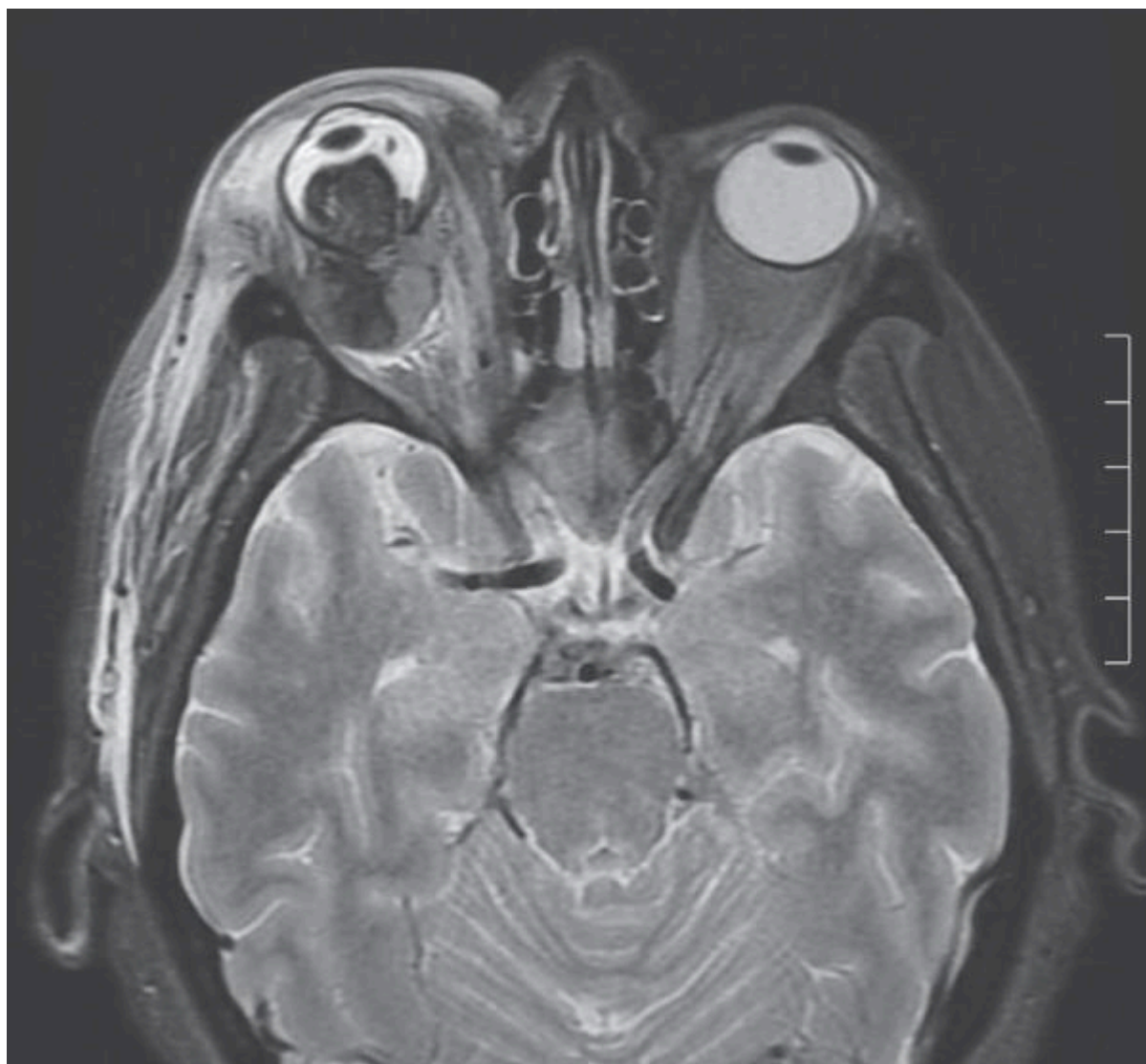
AI advice:

The CT image of the abdomen shows a large cystic lesion in the right lobe of the liver, which is consistent with a diagnosis of hepatic hydatid cyst, caused by *Echinococcus granulosus*. The patient's history of living in a rural area with occasional contact with dogs, combined with the clinical presentation of hepatomegaly and a palpable hepatic mass, supports this diagnosis.

Your diagnosis:

Task /20

Patient Information:



A 59-year-old woman presented to the emergency department with a 4-day history of inflammation and pain in the right eye. She had been blind in the eye for several years before presentation. Magnetic resonance imaging revealed a right orbital mass.

Abdominal and thoracic imaging showed numerous hepatic masses, abdominal and thoracic lymphadenopathy, and vertebral sclerotic osseous disease. The right eye was enucleated for palliative relief and to obtain tissue for diagnosis.

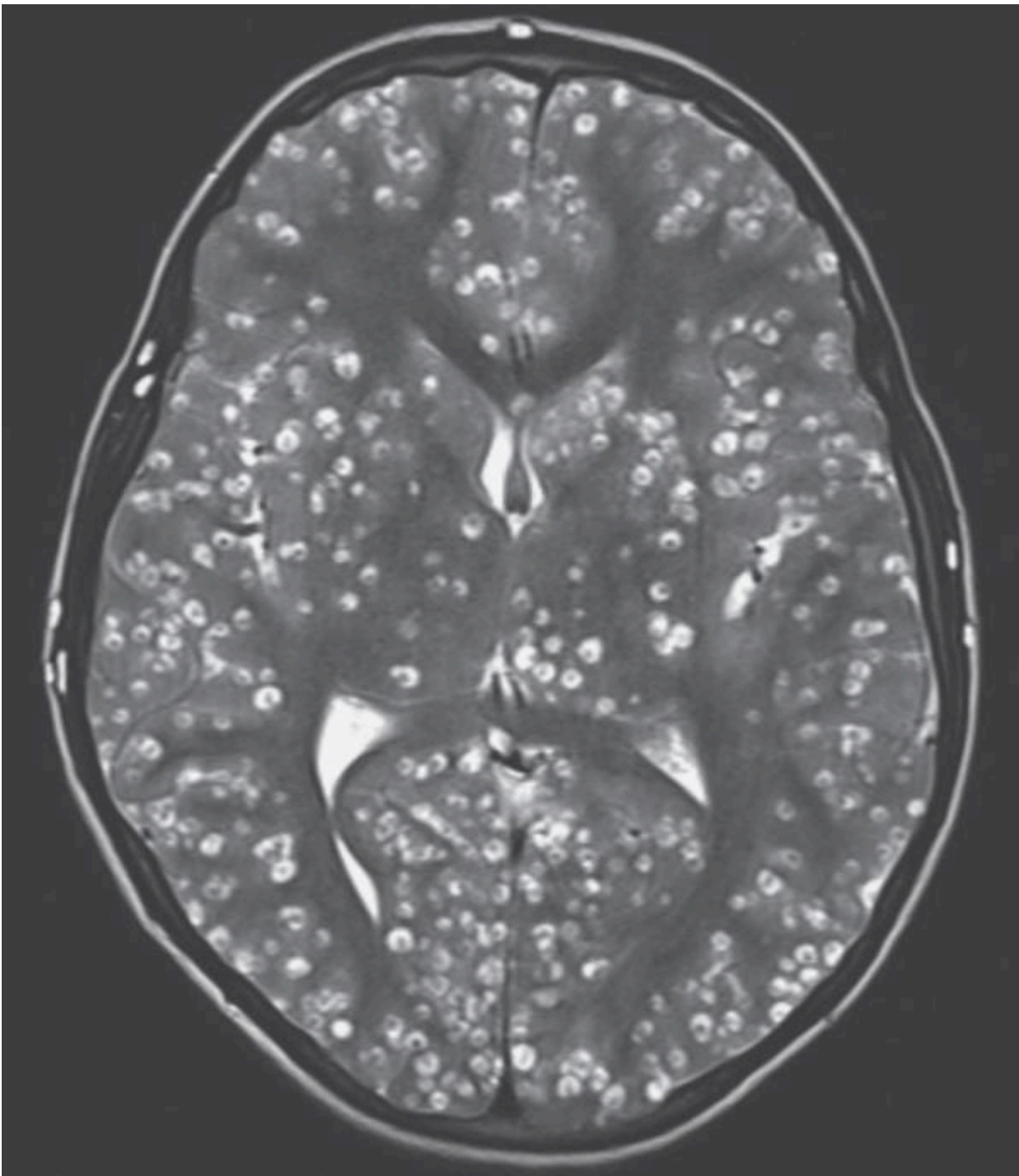
AI advice:

The MRI of the orbit shows a significant mass in the right eye, which, along with the patient's history of eye inflammation and blindness, suggests an intraocular tumor. The presence of numerous hepatic masses, lymphadenopathy, and vertebral sclerotic osseous lesions on abdominal and thoracic imaging indicates metastatic disease. The findings are consistent with a diagnosis of metastatic cancer, with the primary site likely being the right eye, possibly from a choroidal melanoma.

Your diagnosis:

Task /20

Patient Information:



An 18-year-old man presented to the emergency department with generalized tonic-clonic seizures. On physical examination, the patient was confused. He had swelling over the right eye and tenderness in the right testis. Magnetic resonance imaging of the head showed numerous well-defined cystic lesions throughout the cerebral cortex.

AI advice:

The MRI of the brain shows numerous well-defined cystic lesions scattered throughout the cerebral cortex, which is characteristic of neurocysticercosis. This diagnosis is

supported by the patient's presentation with generalized tonic-clonic seizures and confusion, as well as the presence of cystic lesions in the brain, which are caused by the larval stage of the tapeworm *Taenia solium*. The swelling over the right eye and tenderness in the right testis may suggest additional sites of involvement or secondary effects.

Your diagnosis:

| |
|--|
| |
|--|

Questionnaire

Questionnaire

Now we will ask some general questions about yourself.

How **helpful** were the **explanations**?

Very
little

Little

Fairly
little

Some

Fairly
much

Much

Very
much



○

How do you rate your **expertise** in using **Generative AI** like ChatGPT?

| | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very low | Low | Fairly low | Neutral | Fairly high | High | Very high |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How can we make the AI advice more helpful for diagnosing patients?

What is your **specialization** in medicine?

☐ General Physician (GP)

☐ Radiology

☐ Other:

Which **area** do you specialize in?

☐ General Radiology

- ☐ Other

| |
|--|
| |
|--|

Very low Low Fairly low Neutral Fairly high High Very high

○ ○ ○ ○ ○ ○ ○

How many **hours per week** do you spend on visual inspections?

| | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| < 30h | 30–35h | 35–40h | 40–45h | 45–50h | 50–55h | >55h |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How strong would you consider your **IT skills**?

| | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Beginner | Novice | Basic | Good | Very Good | Advanced | Expert |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How much **experience** do you have in working with **medical AI systems**?

| | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | Little | Fairly little | Some | Fairly much | Much | Very much |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please estimate the percentage (0–100%) of diagnoses that **you** made correctly.

Please estimate the percentage (0-100%) of diagnoses that the **AI system** made correctly.

How well did the AI system perform **in comparison to your expectations?**

| | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very poor | Poor | Fairly poor | Neutral | Fairly good | Good | Very good |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How likely is the AI system to make a **bad estimate?**

| | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very unlikely | Unlikely | Fairly unlikely | Neutral | Fairly likely | Likely | Vey likely |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How **successful** were you in accomplishing what you were asked to do?

| | | | | | | |
|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very unseccessful | Unseccessful | Fairly unseccessful | Neutral | Fairly successful | Successful | Very successf |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



Cognitive load

| | | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | Very low | Low | Fairly Low | Neutral | Fairly high | High | Very high |
| How mentally demanding was the task? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How physically demanding was the task? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How hurried or rushed was the pace of the task? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How hard did you have to work to accomplish your level of performance? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How insecure, discouraged, irritated, stressed, and annoyed were you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Usefulness

Ease of use

| | Extremely unlikely | Quite unlikely | Slightly unlikely | Neither | Slightly likely | Quite likely | Extremely likely |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Learning to operate the AI system would be easy for me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I would find it easy to get the AI system to do what I want it to do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My interaction with the AI system would be clear and understandable. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I would find the AI system to be flexible to interact with. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| It would be easy for me to become skillful at using the AI system. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I would find the AI system easy to use. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Trust in AI systems

| | Strongly disagree | Disagree | Somewhat disagree | Neutral | Somewhat agree | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| The AI system is deceptive. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am suspicious of the AI system's intent, action, or outputs. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The AI system's actions will have a harmful outcome. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am confident in the AI system. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The AI system is reliable. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I can trust the AI system. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Have you used any **assistive** technology/tools (internet research, books, colleagues, etc.) in filling out this survey?

- ☐ Yes
- ☐ No

In case you clicked "yes", **which** assistive technology/tools did you use?

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