

Intra-Abdominal and Retroperitoneal Masses

Assumption

The student understands the anatomy (including blood supply) and location, size, and consistency of the abdominal viscera.

Goal

The student will be able to describe diagnosis and management of a patient with organomegaly and other palpable masses.

Objectives

Discuss the diagnosis, management and complications of the following conditions:

Hepatic mass

1. Discuss the causes of diffuse hepatomegaly in the absence of a discrete mass and their management.
2. Discuss the most frequently encountered benign and malignant hepatic tumors and their management.
3. Discuss the role of liver function testing, radionuclide imaging, ultrasound and CT scanning in the evaluation.
4. Discuss the role of liver biopsy in the diagnosis and the available techniques.
5. Discuss the role of Hepatitis B and C, alcohol, and obesity in causing cirrhosis and increasing the risk for hepatocellular carcinoma.

Splenic mass

1. Compare and contrast hypersplenism with an enlarged and normal sized spleen.
2. Discuss the most common signs and symptoms associated with hypersplenism.
3. Discuss the role of splenectomy in the treatment of hypersplenism.
4. Discuss the short and long term infectious complications associated with surgical removal of the spleen and how to mitigate them.

Pancreatic mass

1. Acute and chronic pancreatitis
2. Cystic and solid masses (benign and malignant)

Retroperitoneal mass

1. Discuss the diagnosis, management and complications of the following conditions:
 - a. Lymphomas
 - b. Retroperitoneal sarcomas
 - c. Adrenal tumors

Aortic aneurysm

Problems

1. A 32-year-old woman presents with abdominal pain and a right upper quadrant mass. She is on birth control pills and has a past history of hepatitis B infection.
 - What is the most appropriate diagnostic work-up?
 - How do you differentiate an adenoma of the liver from hepatocellular carcinoma?
 - Does the presence or absence of cirrhosis impact your therapeutic decisions?

Intra-Abdominal and Retroperitoneal Masses (continued)

Problems (continued)

2. A 45-year-old alcoholic man is admitted with one week history of nausea and vomiting. Evaluation reveals a mass in his epigastrium, which is tender. Ultrasound shows a 7 cm cystic mass.
 - What is the differential diagnosis?
 - Does the patient need antibiotic therapy for a pseudocyst? Why or why not?
 - What is the initial management of this patient?
 - How do you decide if he needs operative therapy and when is the appropriate timing?
 - What are the treatment options for drainage of a pseudocyst?

3. An 82-year-old man is brought to the emergency room with hypotension, back pain, and a known history of aortic aneurysm.
 - What are the initial management priorities for this patient?
 - What, if any, diagnostic studies should be performed?
 - What is the expected mortality rate if this represents a rupture of the aneurysm?
 - What are the major complications associated with aneurysm rupture and repair?

Skills

1. Perform a complete abdominal, rectal and pelvic exam.
**Refer to the [ACS/ASE Medical Student Simulation-based Surgical Skills Curriculum \(Year 1 - Modules 1, 4, and 5\)](#)*
2. Interpret abdominal and pelvic CT scans, ultrasound, and other relevant imaging studies.

Teaching Hints

1. Conduct an abdominal examination with normal and abnormal findings.
2. Create a teaching file of interesting CT and ultrasound findings of abdominal masses.
3. Encourage intraoperative palpation of abnormal and normal tissues with and without the abdominal wall in the way.
4. Review the management of sarcomas with students as they are unlikely to see one on most services.

Prevention

1. Discuss the importance of hepatitis B and C prevention, alcohol abstinence, and weight loss in relation to hepatoma.
2. Appropriate screening for aneurysm disease prior to age 60 in patients with a family history of aortic aneurysm.
3. Discuss the short and long term complications associated with surgical removal of the spleen.

Special Considerations

1. Be familiar with most common pediatric abdominal conditions, including:
 - a. Neonatal hepatitis and TORCH
 - b. Pediatric abdominal masses (i.e., nephroblastoma)
2. Describe the tumors most frequently associated with abdominal carcinomatosis and omental metastasis.