PACREATITIS 2

Recognizing patients with severe acute pancreatitis as soon as possible is critical for achieving optimal outcomes. Management depends largely on severity. Medical treatment of mild acute pancreatitis is relatively straightforward. Treatment of severe acute pancreatitis involves intensive care. Surgical intervention (open or minimally invasive) is indicated in selected cases.

Signs and symptoms

Symptoms of acute pancreatitis include the following:

* Abdominal pain (cardinal symptom): Characteristically dull, boring, and steady; usually sudden in onset and gradually becoming more severe until reaching a constant ache; most often located in the upper abdomen and may radiate directly through to the back
* Nausea and vomiting, sometimes with anorexia
* Diarrhea

Patients may have a history of the following:

* Recent operative or other invasive procedures
* Family history of hypertriglyceridemia
* Previous biliary colic and binge alcohol consumption (major causes of acute pancreatitis)

The following physical findings may be noted, varying with the severity of the disease:

* Fever (76%) and tachycardia (65%); hypotension
* Abdominal tenderness, muscular guarding (68%), and distention (65%); diminished or absent bowel sounds
* Jaundice (28%)
* Dyspnea (10%); tachypnea; basilar rales, especially in the left lung
* In severe cases, hemodynamic instability (10%) and hematemesis or melena (5%); pale, diaphoretic, and listless appearance

Occasionally, extremity muscular spasms secondary to hypocalcemiaThe following uncommon physical findings are associated with severe necrotizing pancreatitis:

* Cullen sign (bluish discoloration around the umbilicus resulting from hemoperitoneum)
* Grey-Turner sign (reddish-brown discoloration along the flanks resulting from retroperitoneal blood dissecting along tissue planes); more commonly, patients may have a ruddy erythema in the flanks secondary to extravasated pancreatic exudate

## Erythematous skin nodules, usually no larger than 1 cm and typically located on extensor skin surfaces; polyarthritisHistory

The cardinal symptom of acute pancreatitis is abdominal pain, which is characteristically dull, boring, and steady. Usually, the pain is sudden in onset and gradually intensifies in severity until reaching a constant ache. Most often, it is located in the upper abdomen, usually in the epigastric region, but it may be perceived more on the left or right side, depending on which portion of the pancreas is involved. The pain radiates directly through the abdomen to the back in approximately one half of cases.

Nausea and vomiting are often present, along with accompanying anorexia. Diarrhea can also occur. Positioning can be important, because the discomfort frequently improves with the patient sitting up and bending forward. However, this improvement is usually temporary. The duration of pain varies but typically lasts more than a day. It is the intensity and persistence of the pain that usually causes patients to seek medical attention.

Ask the patient about recent operative or other invasive procedures (eg, endoscopic retrograde cholangiopancreatography [ERCP]) or family history of hypertriglyceridemia. Patients frequently have a history of previous biliary colic and binge alcohol consumption, the major causes of acute pancreatitis.

## Physical Examination

The following physical examination findings may be noted, varying with the severity of the disease:

* Fever (76%) and tachycardia (65%) are common abnormal vital signs; hypotension may be noted
* Abdominal tenderness, muscular guarding (68%), and distention (65%) are observed in most patients; bowel sounds are often diminished or absent because of gastric and transverse colonic ileus; guarding tends to be more pronounced in the upper abdomen
* A minority of patients exhibit jaundice (28%)
* Some patients experience dyspnea (10%), which may be caused by irritation of the diaphragm (resulting from inflammation), pleural effusion, or a more serious condition, such as acute respiratory distress syndrome (ARDS); tachypnea may occur; lung auscultation may reveal basilar rales, especially in the left lung
* In severe cases, hemodynamic instability is evident (10%) and hematemesis or melena sometimes develops (5%); in addition, patients with severe acute pancreatitis are often pale, diaphoretic, and listless
* Occasionally, in the extremities, muscular spasm may be noted secondary to hypocalcemia

A few uncommon physical findings are associated with severe necrotizing pancreatitis:

* The Cullen sign is a bluish discoloration around the umbilicus resulting from hemoperitoneum
* The Grey-Turner sign is a reddish-brown discoloration along the flanks resulting from retroperitoneal blood dissecting along tissue planes; more commonly, patients may have a ruddy erythema in the flanks secondary to extravasated pancreatic exudate
* Erythematous skin nodules may result from focal subcutaneous fat necrosis; these are usually not more than 1 cm in size and are typically located on extensor skin surfaces; in addition, polyarthritis is occasionally seen

Rarely, abnormalities on funduscopic examination may be seen in severe pancreatitis. Termed Purtscher retinopathy, this ischemic injury to the retina appears to be caused by activation of complement and agglutination of blood cells within the retinal vessels. It may cause temporary or permanent blindness.