Pancreatic Adenocarcinoma Diagnosis and Treatment

PLAY PICMONIC

Diagnosis

CA 19-9

California-199 highway sign

CA 19-9, which stands for Carbohydrate Antigen 19-9, is a tumor marker that may be used in the diagnosis and prognosis of pancreatic adenocarcinoma. Its reported sensitivity and specificity are 70-92% and 68-92% respectively. It is not a perfect test, as CA 19-9 levels are correlated with tumor size and therefore not as sensitive in patients with small tumors and may also be elevated in other conditions involving the biliary tract as well as in other non-pancreatic cancers. For this reason it is not used as a screening test, but rather as a prognosticator, as degree of elevation has been shown to correlate with long-term prognosis and the presence of occult metastases.

Liver Function Tests for Cholestasis

Liver-test-tubes with monitor by coal-stop sign

Part of the diagnostic workup for pancreatic adenocarcinoma should include liver function tests, or LFTs, to assess for the presence of cholestasis, which may need to be addressed if present. LFT's should include AST, ALT, alkaline phosphatase, and bilirubin.

Serum Lipase

Lips-blasting-fat

A serum lipase may also be obtained as part of the workup for pancreatic adenocarcinoma to assess for acute pancreatitis as a complication or comorbid condition.

Ultrasound if Cholestasis Suspected

Ultrasound-machine by coal-stop sign

An ultrasound of the abdomen is often obtained early as part of the diagnostic workup for pancreatic adenocarcinoma if the patient presents with signs and symptoms consistent with cholestasis. This is because abdominal ultrasound is useful at showing dilation of the biliary tree, as well as assessing for the presence of a pancreatic mass. Presence of a pancreatic mass on ultrasound would then need to be followed up with a CT.

CT Abdomen

Cat

A CT of the abdomen may be obtained in patients with suspected pancreatic adenocarcinoma. If the findings on CT show a resectable tumor that is consistent with pancreatic adenocarcinoma, the next step in therapy may be surgical resection. Tissue histology is still needed for definitive diagnosis, but this can be obtained from tissue samples collected intraoperatively, rather than having the patient undergo a separate biopsy procedure.

FNA Biopsy if Diagnosis or Resectability Uncertain

Uncertain-surgeon with diagnosis-chart and biopsy-needle

While patients who have imaging that is highly characteristic of pancreatic adenocarcinoma and shows a resectable tumor can go straigh to surgery, a fine needle aspiration or FNA biopsy should be performed for patients in whom there is diagnostic uncertainty or it is uncertain if the tumor can be resected, as the results could aid in guiding non-surgical management.

Treatment

Whipple if Resectable

Surgeon-whip

For patients whose pancreatic adenocarcinoma is deemed to be resectable, the conventional procedure performed is a pancreaticoduodenectomy, more commonly called a Whipple procedure. This procedure involves removal of the pancreatic head, duodenum, proximal 15cm of jejunum, gallbladder, common bile duct, and part of the stomach. Resection is currently the only known curative intervention for pancreatic adenocarcinoma, as radiation and chemotherapy provide only palliative relief.

Palliative Care if Not Resectable

Palliative-pail by no-surgeon sign

For patients with unresectable pancreatic adenocarcinoma, the main line of treatment is palliative care to relieve symptoms according to patient preference, as there are no curative options for a non-resectable tumor.