

Source: Diseases

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(A Nurses Manual)

#### DIAGNOSING CIRRHOSIS & TREATMENT

A thorough workup consisting of diagnostic and laboratory tests is required to confirm the diagnosis, establish the type of cirrhosis, and pinpoint complications.

\* LIVER BIOPSY. The definitive test for cirrhosis, biopsy detects hepatic tissue destruction and fibrosis.

\* ABDOMINAL X-RAYS. Films show liver size and cysts or gas within the biliary tract or liver; liver calcification and massive ascites.

\* COMPUTED TOMOGRAPHY AND LIVER SCANS. These studies determine liver size, identify liver masses, and visualize hepatic blood flow and obstruction.

\* ESOPHAGOGASTRODUODENOSCOPY. This study reveals bleeding esophageal varices, stomach irritation or ulceration, or duodenal bleeding and irritation.

\* BLOOD STUDIES. Liver enzymes (alanine aminotransferase {formerly SGPT},

aspartate aminotransferase {formerly SGOT}, total serum bilirubin, and indirect bilirubin levels are elevated. Total serum albumin and protein levels decrease; prothrombin time is prolonged. Hemoglobin, hematocrit, and serum electrolyte levels decrease. Vitamins A, C, and K are deficient.

\* URINE AND STOOL STUDIES. Urine levels of bilirubin and urobilinogen increased; fecal urobilinogen levels fall.

Therapy aims to remove or alleviate the underlying cause of cirrhosis, prevent further liver damage, and prevent or treat complications. Vitamins and nutritional supplements promote healing of damaged hepatic cells and improve the patients's nutritional status. Sodium consumption is usually restricted to 500 mg/day and liquid intake is limited to 1,500 ml/day to help manage ascites and edema.

Drug therapy requires special caution because the cirrhotic liver can't detoxify harmful substances efficiently. Antacids may be prescribed to reduce gastric distress and decrease the potential for GI bleeding.

Potassium-sparing diuretics, such as furosemide, may be used to reduce ascites and edema. However, diuretics require careful monitoring because fluid and electrolyte imbalance may precipitate hepatic encephalopathy.

Vasopressin may be indicated for esophageal varices. Alcohol is prohibited and sedatives should be avoided.

In patients with ascites, paracentesis may be used as a palliative

treatment to relieve abdominal pressure. However, surgical intervention may be required to divert ascites into venous circulation; if so, a peritoneovenous shunt is used. Shunt insertion results in weight loss, decreased abdominal girth, increased sodium excretion from the kidneys, and improved urine output.

To control bleeding from esophageal varices or other GI hemorrhage, nonsurgical measures are attempted first. These include gastric intubation and esophageal balloon tamponade. In gastric intubation, a tube is inserted and the stomach is lavaged until the contents are clear. If the bleeding is assessed as a gastric ulcer, antacids and histamine antagonists are administered.

In esophageal balloon tamponade, bleeding vessels are compressed to stanch blood loss from esophageal varices. Several forms of balloon tamponade are available, including the Sengstaken-Blakemore method, the esophagogastic tube method, and the Minnesota tube method.

Sclerotherapy is performed if the patient continues to experience repeated hemorrhagic episodes despite conservative treatment. A sclerosing agent is injected into the oozing vessels. This agent traumatizes epithelial tissue, which caused thrombosis and leads to sclerosis. If bleeding from the varices

does not stop within 2 to 5 minutes, a second injection is given below the bleeding site. Sclerotherapy also may be performed prophylactically on nonbleeding varices.

As a last resort, portal-systemic shunts may be used for patients with bleeding esophageal varices and portal hypertension. Surgical shunting procedures decrease portal hypertension by diverting a portion of the portal vein blood flow away from the liver. These procedures are seldom performed because they can result in bleeding, infection, and shunt thrombosis.

Massive hemorrhage requires blood transfusion. To maintain blood pressure,

crystalloid or colloid volume expanders are administered until the blood is available.