UNIT V / Responses to Altered Nutrition

Nursing Implications for Diagnostic Tests

Abdominal Paracentesis

**Preparation of Client**
- Verify presence of an informed consent.
- Weigh prior to paracentesis.
- Assess vital signs for baseline.
- Have client void immediately prior to the test to avoid bladder puncture.
- Position seated, either on the side of the bed or in a chair, with feet supported.

**Client and Family Teaching**
- Describe what to expect during and following paracentesis, blood pressure is monitored during the procedure.
- Following cleansing and local anesthesia, a small incision may be made and a needle or trocar inserted to withdraw fluid. The trocar is connected to tubing and a collection bottle; specimens may be sent to laboratory.
- A small dressing is placed over the puncture site after the needle is withdrawn. There may be some fluid leakage from the site.
- Salt-poor albumin may be given after the procedure to replace lost protein.

Nasal cuff
To esophageal balloon
To suction
To gastric balloon

Figure 22–6 ■ Triple-lumen nasogastric tube (Sengstaken-Blakemore) used to control bleeding esophageal varices.

Bleeding esophageal varices are life threatening and require intensive care management. Restoration of hemodynamic stability is the first priority. A central line is inserted and central venous and pulmonary artery pressures are monitored (see Chapter 30). Blood is given to restore blood volume, and fresh frozen plasma may be administered to restore clotting factors. Somatostatin or octreotide, drugs that constrict blood vessels in the gut, are given intravenously to reduce blood flow in the portal venous system. Vasopressin, a drug that produces generalized vasoconstriction, also may be used.

When the blood pressure and cardiac output have stabilized, upper endoscopy is performed to evaluate and treat the varices. A large nasogastric tube is inserted prior to endoscopy, and gastric lavage (irrigation of the stomach with large quantities of normal saline) is performed to improve visualization. During endoscopy, the varices may be banded or sclerosed to reduce the risk of recurrent bleeding. In banding (variceal ligation), small rubber bands are placed on varices to occlude blood flow. Endoscopic sclerosis involves injecting a sclerosing agent directly into the varices to induce inflammation and clotting. See Chapter 20 for the nursing implications of endoscopy.

Balloon tamponade of bleeding varices may be used if bleeding cannot be controlled through vasoconstriction or if endoscopy is unavailable. A multiple-lumen nasogastric tube (such as a Sengstaken-Blakemore tube or a Minnesota tube) is inserted, and the gastric and esophageal balloons are inflated to apply direct pressure on the bleeding varices (Figure 22–6 ■). Tension is applied to the tube to further compress the varices. Balloon tamponade carries a number of risks, including aspiration, airway obstruction, and tissue ischemia and necrosis. An endotracheal tube is inserted prior to nasogastric intubation to support the airway and reduce the risk of aspiration. This short-term measure is used only until more definitive treatment can be done.

Transjugular intrahepatic portosystemic shunt (TIPS) is used to relieve portal hypertension and its complications of esophageal varices and ascites. A channel is created through the liver tissue using a needle inserted transcutaneously (Figure 22–7 ■). An expandable metal stent is inserted into this channel, to allow blood to flow directly from the portal vein into the hepatic vein, bypassing the cirrhotic liver. The shunt relieves pressure in esophageal varices and allows better control of fluid retention with diuretic therapy. Stenosis and occlusion of the shunt are frequent complications. TIPS also increases the risk of developing hepatic encephalopathy (due to decreased perfusion of the liver and impaired ammonia metabolism) and may reduce long-term survival. It generally is used as a short-term measure until liver transplant is performed.

**Surgery**
Liver transplantation is indicated for some clients with irreversible, progressive cirrhosis. A decline in functional status, increasing bilirubin levels, falling albumin levels, and increasing problems with complications that respond poorly to treatment are indications for liver transplantation. Malignancy, active alcohol or drug abuse, and poor surgical risk are contraindications for the surgery. See page 593 for nursing care for the client having a liver transplant.

**NURSING CARE**

**Health Promotion**
For most clients, high-risk behaviors are the risk factors for cirrhosis. With all clients (including children and young adults), stress the relationship between alcohol and drug abuse and liver disorders. While many clients tolerate alcohol use in