because radioactive iodine crosses the placenta and can have negative effects on the developing fetal thyroid gland. Because the amount of gland destroyed is not readily controllable, the client may become hypothyroid and require life-long TH replacement.

**Surgery**

Some hyperthyroid clients have such enlarged thyroid glands that pressure on the esophagus or trachea causes breathing or swallowing problems. In these cases, removal of all or part of the gland is indicated. A subtotal thyroidectomy is usually performed. This procedure leaves enough of the gland in place to produce an adequate amount of TH. A total thyroidectomy is performed to treat cancer of the thyroid; the client then requires lifelong hormone replacement.

Before surgery, the client should be in as nearly a euthyroid state as possible. The client may be given antithyroid drugs to reduce hormone levels and iodine preparations to decrease the vascularity and size of the gland (which also reduces the risk of hemorrhage during and after surgery). Nursing care of the client having a subtotal thyroidectomy is discussed in Box 17–2.

### NURSING CARE

**THE CLIENT HAVING A SUBTOTAL THYROIDECTOMY**

#### PREOPERATIVE CARE

- Administer ordered antithyroid medications and iodine preparations, and monitor their effects. Antithyroid drugs are given before surgery to promote a euthyroid state. Iodine preparations are given to the client before surgery to decrease vascularity of the gland, thereby decreasing the risk of hemorrhage.

- Teach the client to support the neck by placing both hands behind the neck when sitting up in bed, while moving about, and while coughing. Placing the hands behind the neck provides support for the suture line.

- Answer questions, and allow time for the client to verbalize concerns. Because the incision is made at the base of the throat, clients (especially women) are often concerned about their appearance after surgery. Explain that the scar will eventually be only a thin line and that jewelry or scarves may be used to cover the scar.

#### POSTOPERATIVE CARE

- Provide comfort measures: Administer analgesic pain medications as ordered, and monitor their effectiveness; place the client in a semi-Fowler’s position after recovery from anesthesia; support head and neck with pillows. Analgesic medications reduce the perception of pain and reduce physical stress during the postoperative period. Positioning the client in a semi-Fowler’s position and supporting the head and neck decrease strain on the suture line.

- Perform focused assessments to monitor for complications:
  
  a. **Hemorrhage.** Assess dressing (if present) and the area under the client’s neck and shoulders for drainage. Monitor blood pressure and pulse for symptoms of hypovolemic shock. Assess tightness of dressing (if present). The vascularity of the gland increases the risk of hemorrhage. The location of the incision and the position of the client may cause the drainage to run back and under the client. The danger of hemorrhage is greatest in the first 12 to 24 hours after surgery.

  b. **Respiratory distress.** Assess respiratory rate, rhythm, depth, and effort. Maintain humidification as ordered. Assist the client with coughing and deep breathing. Have suction equipment, oxygen, and a tracheostomy set available for immediate use. Respiratory distress may result from hemorrhage and edema, which may compress the trachea; from tetany and laryngeal spasms resulting from decreased hormones due to removal or damage to the parathyroid glands; and from damage to the laryngeal nerve, causing spasms of the vocal cords. Equipment must be immediately available if the client experiences respiratory distress that requires interventions and treatment.

  c. **Laryngeal nerve damage.** Assess for the ability to speak aloud, noting quality and tone of voice. The location of the laryngeal nerve increases the risk of damage during thyroid surgery. Although hoarseness may be due to edema or the endotracheal tube used during surgery and will subside, permanent hoarseness or loss of vocal volume is a potential danger.

  d. **Tetany.** Assess for signs of calcium deficiency, including tingling of toes, fingers, and lips; muscular twitches; positive Chvostek’s and Trousseau’s signs; and decreased serum calcium levels. Keep calcium gluconate or calcium chloride available for immediate intravenous use, if necessary. The parathyroid glands are located in and near the thyroid gland; surgery of the thyroid gland may injure or remove parathyroid glands, resulting in hypocalcemia and tetany. Tetany may occur in 1 to 7 days after thyroidectomy.

**Health Promotion**

Although hyperthyroidism is not preventable, it is important to teach clients the importance of regular health care provider visits and medication intake.

**Assessment**

The following data are collected through the health history and physical examination (see Chapter 16). Further focused assessments are described with nursing interventions below.

- **Health history:** other diseases, family history of thyroid disease, when symptoms began, severity of symptoms, intake of thyroid medications, menstrual history, changes in weight, bowel elimination

- **Physical assessment:** muscle strength, tremors, vital signs, cardiovascular and peripheral vascular systems, integument, size of thyroid, presence of bruit over thyroid, eyes and vision