

a pressure of less than 4 mm Hg is adequate because only the platysma needs to be lifted. This method is significantly different from those described by other authors who create a working space by lifting both the platysma and the sternohyoid muscle by a neck approach. Because of the small working space and CO<sub>2</sub> insufflation pressure of less than 4 mm Hg, the chance of hypercarbia, respiratory acidosis, subcutaneous emphysema, and air embolism is minimized. The disadvantages of this approach include the time required for surgery and its invasiveness because of the extensive exploration from the axilla to the neck.

## RESULTS

Forty patients (36 women and 4 men; mean age, 42 years) have been treated by endoscopic neck surgery: 15 via the anterior chest approach and 25 via the axillary approach. Follicular tumors were diagnosed preoperatively in 32 patients, and hemithyroidectomy was performed via either the anterior chest approach or the axillary approach. Micropapillary carcinoma was diagnosed in four patients and treated by hemithyroidectomy with prophylactic lymph node dissection of the ipsilateral pre- and paratracheal lymph node group. Four patients underwent subtotal thyroidectomy via an anterior chest approach for Graves' disease. All cases were completed via an anterior chest approach or axillary approach; however, one patient required conversion to a standard open procedure for bleeding from the SCM after the axillary approach. The thyroid capsule was never ruptured, its integrity being necessary for accurate histologic examination. Mean operation time by the anterior chest approach was 175 minutes (range, 98 to 285), compared to 203 minutes (range, 60 to 350) for the axillary approach. For the first two cases, the duration of surgery was 285 for the anterior chest approach and 350 minutes for the axillary approach, but after this initial phase of the learning curve the operating time decreased to approximately 120 and 150 minutes, respectively, for these approaches. Intraoperative blood loss was less than 67 mL. End tidal CO<sub>2</sub> pressure and the PaCO<sub>2</sub> during surgery were maintained under 36 mm Hg in all patients. For the anterior chest wall approach, the mean maximum diameter of the resected thyroid gland with follicular tumors was 52 mm (range, 45 to 60), with a mean weight of 25 g (range, 16 to 34), whereas the corresponding values for the axillary approach were 54 mm (range, 20 to 72) and 26 g (range, 15 to 73), respectively. The mean maximum diameter of the resected thyroid in the four patients with micropapillary carcinoma was 47 mm, with a mean weight of 42 g. The mean weight of the resected thyroid of the four patients with Graves' disease was 67 g.



**Fig. 7.10.** Appearance of the patient 5 days after hemithyroidectomy via an axillary approach. The scar in the axilla is completely covered by the patient's arm in its natural position.