Who should do thyroid surgery?

Who should do thyroid surgery? The brief and simple answer is 'anyone who has been trained to do it'. In reality the issue is more complicated — too many surgeons might be trained, so that they each have an insufficient number of cases to maintain their skills. At the other extreme, a few experts might achieve a large practice in regional centres, but at the cost of poor access for many of the population.

THYROID SURGERY

Operations on the thyroid are done for three main reasons — for thyrotoxicosis, for possible thyroid cancer and in multinodular goitre, for cosmesis or relief of pressure symptoms. Surgery for thyrotoxicosis has become less common, but still has an important role in patients who have relapsed after medical treatment and where there is concern about radioiodine. Thyroid cancer presents chiefly as a solitary nodule, but only about 10% of these are malignant, representing a small percentage of the total operations. Many multinodular goitres are small and do not require resection.

The requirements for thyroid surgery are appropriate assessment and selection for operation and a skilled operator, to avoid the serious complications of nerve damage and hypoparathyroidism. Biochemistry, diagnostic ultrasound and fine needle aspiration cytology are essential diagnostic aids. Access to indirect laryngoscopy is also needed.

ENDOCRINOLOGY

Thyroid surgery has an important link with medical endocrinology. Patients with thyrotoxicosis and some of those whose symptom is a goitre will generally reach the surgeon by this route and cooperation is facilitated by a joint medical/surgical clinic.

The endocrine physician deals with the whole range of endocrine disease, apart from diabetes mellitus, which is often a separate specialty. It is convenient for patients with other endocrine conditions (except pituitary lesions) requiring surgery to be referred to the same endocrine surgeon, but there are fewer of these operations. There is an obvious technical link with surgery for hyperparathyroidism, the standard dissection for which is identical to the exposure for thyroidectomy. However, now that adrenal lesions can be removed laparoscopically these may require a different surgeon.

THE GENERAL SURGICAL TRADITION

Historically, thyroid operations were part of general surgery, but more recently otolaryngologists have entered the field, under the banner of head and neck surgery. Traditionally, each general surgeon did a few thyroidectomies each year, but increasingly this work has been concentrated in the hands of one or two surgeons in each hospital, usually participating in a joint clinic with a medical endocrinologist. These surgeons generally have another elective interest, often in breast disease.

There are also general surgeons, usually in a university hospital, whose elective work is almost exclusively in endocrine surgery, covering its whole range apart from the pituitary. Three professors in the UK have endocrine surgery as their main interest. A survey among general surgeons in one region showed wide variation in the population incidence of thyroidectomy, ranging from 13 to 35 per 100 000 per annum (Asimakopoulos et al, 1995). This suggests that selection for operation may not be sufficiently careful and supports the contention that thyroid surgery should be concentrated in fewer hands.

Some consider that it should be centralized in regional endocrine units, but this would reduce access for many patients and would undermine the practice of endocrine physicians in district general hospitals. A population of 250 000 will require about 30–40 thyroidectomies per year, which should be sufficient to maintain the expertise of one surgeon, so providing access to treatment locally. The British Association of Endocrine Surgeons, with a membership of over 100, has produced guidelines (British Association of Endocrine Surgeons, 2000) and is setting up a national audit system, to which all thyroid surgeons should contribute.

THYROID SURGERY AMONG OTOLARYNGOLOGISTS

The emphasis among otolaryngologists interested in thyroid surgery is on cancer. To quote one major textbook:

'Most current surgery is performed to remove malignant or potentially malignant tumours' (Silver and Stern, 1993).

More recently Watkinson (1998) stated:

'Surgeons must distinguish between those patients who have malignant thyroid nodules requiring surgical treatment and those with benign nodules who can be safely managed conservatively'.

The interest of otolaryngologists in thyroid work is relatively recent — a review article on thyroid cancer in an otolaryngological publication in 1998 (Shaha, 1998) included 25 references

of which only two, both after 1993, were from otolaryngological journals. The cases referred to otolaryngologists tend to be lumps in the neck, usually unilateral. Few otolaryngologists–head and neck surgeons hold joint clinics with an endocrinologist.

SERVICE PROVISION

Thyroid surgery may be provided either in a comprehensive regional endocrine unit (integrated with endocrine medicine) or, to maximize patient access, by a surgeon in a district general hospital, likewise with a joint medical/surgical clinic. In the latter arrangement, the work should be concentrated in the hands of one appropriately trained surgeon who will then have a sufficient number of cases to maintain expertise and assess his or her results effectively.

General surgeons specializing in thyroid surgery need to meet the current requirements for the management of the cancers, which will be a minority of their cases. Because of the small number of cases, a multidisciplinary team for thyroid cancer may well need to bridge several units related to a cancer centre or be organized regionally. Otolaryngologists–head and neck surgeons doing thyroid work likewise need an adequate caseload, which can only be achieved either in a regional centre or by taking on the whole range of thyroid surgery, in cooperation with an endocrinologist.

It is for purchasers and trusts to decide whether to opt for a regional or a more local service and whether that service is provided by consultants from general surgery or otolaryngology, taking account of the existing pattern of service and patient convenience. The result should be a limited number of surgeons, providing high quality care.

TRAINING

Having determined the service configuration, training must be designed to meet its needs. At present thyroidectomy is in the syllabus for higher surgical training in both general surgery and otolaryngology. In general surgery it is listed under the specialty option of endocrine surgery in the 'essential' column, apart from re-operative surgery which is in the 'advanced' column. In the otolaryngology document partial and total thyroidectomy are listed for second and third year training, indicating that all trainees should do it.

Crofts et al (1997) compared the number of index operations in general surgery carried out in a single region with the perceived number of each operation required for all trainees to achieve competence and found a 38% shortfall — assuming that all cases would be available for training. Against this background it seems profligate to diffuse the available training in thyroid surgery among all trainees. It would be much more efficient to focus this training on the minority who will work in this sub-specialty and so ensure their competence.

KEY POINTS

- Thyroid surgery has an important link with endocrinology.
- Only a small proportion of thyroidectomies are for cancer.
- Thyroidectomy is sufficiently common for a single surgeon in a district general hospital to be able to maintain expertise, so providing good access for patients.
- General surgeons with a subspecialty endocrine interest and otolaryngologists undertake thyroid work. Each trust should decide who is to provide this service.
- The number of surgeons trained to competence in thyroidectomy should be aligned to the demand.

CONCLUSION

In an era of increasing specialization, thyroid surgery should be concentrated. However, it is sufficiently common for an adequate number of cases to accrue in a district general hospital to maintain the expertise of a single surgeon, so retaining good access for patients and surgical support for a medical endocrinologist. Whether that surgeon is drawn from the specialty of general surgery or otolaryngology is a matter for local decision. He or she should participate in national audit and link into the multidisciplinary for thyroid cancer, which is likely to be regionally based.

In view of the limited number of surgeons who will be engaged in thyroid surgery it will be inappropriate to train all general and otolaryngological surgeons to the level of competence in thyroidectomy. For general surgical trainees, endocrine surgery is a subspecialty option but within this there needs to be a group of surgeons competent in thyroid surgery but not trained in all aspects of endocrine work. In otolaryngology, training in thyroid surgery should be focused on the minority who will do it. HM

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