

Lack of consensus in Europe in the management of nontoxic multinodular goitre

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Goitre is extremely common, affecting up to 15% of the population in iodine replete areas (Tunbridge *et al.*, 1977) and probably more in areas of iodine deficiency. In contrast, thyroid cancer is rare, determining that the vast majority of thyroid swellings could (and arguably should) be managed conservatively. The challenge facing the clinician is therefore to identify the small proportion of patients who require therapeutic intervention, either because they have thyroid cancer or because they have symptoms from compression of upper airways or other structures in the neck by a benign swelling.

In this issue of *Clinical Endocrinology* Bonnema *et al.* (2000) have investigated the management strategy adopted by clinically active members of the European Thyroid Association when referred a 42-year-old patient with a moderately sized irregular goitre with no specific features suggestive of malignancy. This questionnaire-based survey has produced similar results to the survey published in *Clinical Endocrinology* in 1999 (Bennedbaek *et al.*, 1999), documenting preferred strategies across Europe for management of solitary nodules of the thyroid. Both have highlighted enormous discrepancies between centres and countries in terms of the preferred approach to investigation and to treatment. In this era of evidence-based medicine, such discrepancies must be of concern.

Despite the marked prevalence of nontoxic goitre, there is relatively little published literature informing strategies for investigation and treatment of goitre and thyroid nodules, although several important studies and critical reviews have been published in recent years (see Hermus & Huysams, 1998). Much practice is perhaps based on tradition and local opinion; the frequency with which management of euthyroid goitre is a topic for symposium discussion at national and international endocrine meetings is probably a reflection of the general lack of consensus. In the first instance, the present survey highlights the fact that thyroid specialists across Europe do not agree on the number or type of blood tests to be performed on a typical

patient presenting with nodular thyroid disease, the median number of tests requested for the index case being four, with more than a third of clinicians requesting six or more. A reassuring finding is that fine needle aspiration cytology is employed by 93.3% (although often only when prompted by the presence of a 'cold' area on radionuclide scanning), this being regarded as the gold-standard test with a sensitivity and specificity for the diagnosis of thyroid cancer of up to 97% in experienced hands (Mazzaferri, 1993). Some form of imaging (either ultrasound or radionuclide) is performed by more than 90%, with marked differences between countries in terms of preference for different imaging modalities. This is despite evidence that the positive predictive value for thyroid cancer for a hypofunctioning area on a radionuclide image is less than 10% (Rojeski & Gharib, 1985), and that thyroid ultrasonography is equally poorly specific and sensitive in the diagnosis of thyroid cancer (Ortiz *et al.*, 1998). The European practice for investigation illustrated by the present survey (Bonnema *et al.*, 2000) is therefore not in agreement with the published guidelines of the American Thyroid Association (Singer *et al.*, 1996) or the American Association of Clinical Endocrinologists (Feld *et al.*, 1996).

In the absence of a consensus about investigation, it is perhaps not surprising that there is also a lack of consensus about treatment of the patient with nontoxic multinodular goitre. While some differences (especially preference for iodine supplementation) clearly reflect differences in iodine status across Europe, others are more surprising. More than half of respondents recommend T4 therapy, and more than half of these aim to suppress serum TSH to below normal and to continue treatment long-term. This is despite a lack of clear evidence for efficacy of T4 treatment in the context of nodular goitre (Hermus & Huysams, 1998), and despite increasing concerns for adverse effects on bone and heart (Faber & Galloe, 1994; Sawin *et al.*, 1994) of subclinical hyperthyroidism, evidence which presumably determines the preference (expressed by nearly 50% of respondents) for radioiodine treatment of the index case if that index case presents with a TSH value less than 0.4 mU/l. Radioiodine and surgery are both clearly effective in the treatment of nodular goitre, but again a lack of consensus is evident in terms of the need for therapy *vs.* adoption of a conservative approach (the practice of most respondents in the UK).

Although the results of the survey of European Thyroid Association members need to be viewed with caution because of the relatively small numbers of respondents compared with

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the large number of clinicians involved in the management of goitre and thyroid nodules across Europe, they serve to highlight the need for a greater evidence base for methods of investigation and treatment of subjects with nodular goitres, as well as a critical review and application of the evidence already available. Differences in practice across Europe may to some extent reflect differences in the delivery and funding of health care. In the US, it is clear that costs of what are perceived as unnecessary investigations and unnecessary treatment in patients with thyroid nodules are now being examined (Ortiz *et al.*, 1998); cost-benefit analysis is likely to become increasingly relevant to health care delivery in the UK and continental Europe too.

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