A questionnaire survey concerning the most favourable treatment for Graves’ disease in children and adolescents

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Abstract

Graves’ disease (GD) is the most common cause of juvenile thyrotoxicosis in children and adolescents (1, 2). Three treatment modalities are now available for the treatment of Graves’ thyrotoxicosis in childhood: antithyroid drugs (ATD), surgery and radioactive iodine (RAI). However, none of these treatments has been shown to be ideal or clearly superior to the others. Physicians in different countries have different approaches concerning the optimal treatment of juvenile GD.

In a European questionnaire study (3), which was conducted by the European Thyroid Association in 1993 and in which 99 individuals or groups from 22 countries participated, it was found that 22 out of 99 physicians from nine countries would consider RAI treatment as the treatment of choice for children with recurrent thyrotoxicosis after surgery, or with recurrent thyrotoxicosis 2 years after ATD. However, RAI is preferred by only a small percentage of physicians for this group of patients in Europe. Hardly any of the respondents chose RAI for the patients with a toxic adenoma or a multinodular toxic goiter (3). On the other hand, in view of the difficulties with medical therapy in children and adolescents, including poor compliance, a high rate of relapse, drug toxicity and continued thyroid enlargement, some eminent American physicians emphasize the safety, simplicity and economic advantages of 131I ablation which should be considered more commonly in children (4, 5).

We had the opportunity to conduct a similar study during a pediatric thyroidology symposium, which was organized by Professors Buyugkebiz and Laron in Izmir (Smyrna) Turkey from 30 October to 1 November 2003. During the congress a questionnaire with the following four questions was circulated among the 120 participants from eight countries who were mainly paediatric endocrinologists. Most of them were from Turkey and the rest, except for one who came from the USA, were Europeans. Sixty-one out of the 120 physicians responded.

The questions were as follows.

**Question 1.** What treatment would you suggest for a patient of 7 years of age suffering from severe GD (free thyroxine > 20 (normal range: 7–18 pg/ml); thyroid gland about 30 g): (a) ATD as the first treatment? If yes, for how long? In the case of relapse what you should suggest: RAI or surgery, (b) RAI, (c) surgery or (d) others?

**Answer.** All 61 preferred to try ATD at first for a period of 6–36 months. In the case of relapse, 45 preferred surgery, 13 RAI and 3 surgery or RAI.

**Question 2.** How would you treat the same patient at the age of 15 years?

**Answer.** Forty-seven preferred ATD and eight RAI.

**Question 3.** How would you treat a patient aged 15 with a toxic nodule or toxic multinodular goiter: (a) surgery, (b) RAI, (c) ATD or (d) others?

**Answer.** Forty-six preferred surgery, seven ATD and eight RAI.

**Question 4.** What would you do with a 15-year-old patient with active ophthalmopathy: (a) wait and see, (b) corticosteroid treatment, (c) somatostatin analogue treatment alone or in combination with corticosteroid treatment or (d) others?

**Answer.** Eleven preferred the ‘wait and see’ policy, 17 were in favour of corticosteroids and 29 were in favour of somatostatin analogues, alone or in combination with corticosteroids. Three physicians recommended referring the patient to an expert ophthalmologist.

The inference of this survey is that a decade after the publication of the European questionnaire study (3) the attitude of European physicians regarding the treatment of juvenile GD has not changed much. Although there is increasing interest in the use of RAI in the USA, European physicians and parents continue to shy away...
from this therapy in young children until safe long-term data are available.

References

5 Rivkees SA. The management of hyperthyroidism in children with emphasis on the use of radioactive iodine. Pediatric Endocrinology Reviews 2003 1 (Suppl 2) 212–222.

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