quantitative esophageal scintigraphy: how reproducible is this test?

TO THE EDITOR: We read with interest the recent article by Ham and piepsz (1) on the feasibility of estimating glomerular filtration rate on children using single-sample adult techniques. The authors concluded that the single-sample adult technique, using plasma concentration prescaled for 1.73 m² body surface area, cannot be used in place of a specific pediatric single-sample method to estimate ⁵¹Cr-EDTA renal clearance in children. The authors also reported that they were not aware of a validation of the technique for a glomerular agent. We would like to comment on both these issues.

The idea of scaling plasma concentrations using body surface area had been introduced by our group (2) somewhat earlier than Bubeck et al. (3), which is cited by the authors as being the first description of the principle. This was applied to the assessment of GFR using ⁹⁹mTc-DTPA. We pointed out that this was not only useful in dealing with adults of different size, but also children, and demonstrated its use in this situation in a small number (n = 7) of pediatric patients for 180-min samples.

We have been using this technique clinically for the past 10 yr. Our own method of choice in children is to collect two blood samples at approximately 2 and 3 hr. If this is not logistically possible, then a single sample at about 3 hr is used. If we obtain both samples, then both the single sample and the two-sample GFR values can be calculated. In technically good studies, our experience shows that the 3-hr single sample and two-sample values agree within the errors specified previously i.e., a s.d. of 5.4 ml/min (2). For two sample measurements, this level of agreement can be used as a quality control measure of the study. Using the injection, for example, can lead to inconsistency between these values. An important practical aspect of using the single-sample technique is that the sample is not usually obtained at the exact times that the single-sample equations are defined. We have a set of equations defined at different times and clearance values at intermediate times are defined from these using linear extrapolation. It is also important to note that empirical equations are only valid over the range of values used in their derivation and should not be applied outside this range.

The equations quoted by Ham and Piepsz (1) have been compared with our own equations. Figure 1 shows the relationship between the apparent volume of distribution at 240 min for adult subjects, assuming a body surface area of 1.73 m². Our own equation, which was derived using ⁹⁹mTc-DTPA, is almost identical to that of Morgan et al. (4) using 40-60 mg daily, and gradually discontinued). The response after cortico-steroids therapy was prompt and excellent, but with withdrawal of therapy, even very gradually, exacerbation of disease with all signs and somatic symptoms was often observed. Thus, corticosteroids had to be given once again and the treatment of subacute thyroiditis was significantly prolonged. The mean time for achieving complete restitution of the thyroid was 3.6 ± 1.0 mo in patients on nonsteroidal therapy versus 6.4 ± 2.7 mo in patients on corticosteroids.

Treatment of subacute thyroiditis should be nonsteroidal analgesics anti-inflammatory drugs, while corticosteroids should not be recommended routinely and should be reserved only for the most seriously ill patients.

REFERENCES

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Feasibility of Estimating Glomerular Filtration Rate on Children Using Single-Sample Adult Technique

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The Therapeutic Approach in Subacute (de Quervain's) Thyroiditis

TO THE EDITOR: In a recent article, Meier and Nagle (1) reported three interesting cases drawing attention to the differential diagnosis of a painful thyroid. The therapeutic approach in subacute thyroiditis may be somewhat misleading to the clinicians. Indeed, Meier and Nagle (1) used corticosteroids to relieve symptoms of subacute thyroiditis (de Quervain's) thyroiditis as there is no specific therapy for the subacute thyroiditis. Almost every review of this subject has recommended employment of corticosteroids in relieving symptoms of disorder (2). Corticosteroids, however, should not be routinely used.

We performed a retrospective review of the clinical course of 318 patients (284 women, 34 men; range 24–76 yr; mean age 44.9 ± 8.9 yr) who had subacute thyroiditis diagnosed between 1970 and 1990. Our purpose was to validate and compare the efficiency of corticosteroid and anti-inflammatory drugs, while corticosteroids should not be recommended routinely and should be reserved only for the most seriously ill patients.

REFERENCES

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Letters to the Editor