TO THE EDITOR: We read with interest the article by Tatsch et al (1). This article reports the diagnostic performance of optimized esophageal scintigraphy using the multiple swallow technique, which was shown to be close to that of manometry, and supports previous findings of this group (2, 3). The method clearly discriminates between normal and pathologic function with a sensitivity of 95% and a specificity of 98%.

Unfortunately, in all reports concerning this method, no data are provided on the reproducibility of the test, either in patients or healthy individuals. As long as these data are not available, this technique cannot be recommended to be used in clinical practice, especially not for monitoring progression or therapeutic effects on esophageal dysmotility. We therefore kindly ask Tatsch and colleagues to provide us with data on reproducibility of this test.

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F.H.J. van den Hoogen
W.C.A.M. Buijs
A.M.T. Boerbooms
L.B.A. van de Putte
F.H.M. Corstens
University Hospital
Nijmegen, The Netherlands

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

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 ⁵¹⁴Cr-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 technologically 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. Tissuing of 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

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