

but this would, on the presented evidence, appear to be a subjective rather than an objective assessment.

### References

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5. Winter L, Hardy BE, Alton DJ, et al: Acquired renal scars in children. *J Urol* 129: 1190-1194, 1983
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**REPLY:** It seems that despite the many uncertainties surrounding vesicoureteric reflux and its management, Drs. Pollet, Sharp, and Smith are convinced of the accuracy of the indirect technique of radionuclide cystography.

Our comparison was designed to be part of an introduction of the direct technique to our hospital's department and included both tests done in close proximity with the same equipment. Although as we said (and Pollet et al. describe statistically) there was good agreement generally between the two tests, we were anxious about the 11 ureters discordant for reflux presence out of a total of only 24 positive for either test.

Although not convinced by any means of the absolute accuracy of a direct cystogram, we feel (somewhat subjectively) that the direct study does have less equivocal results and gives more confidence about the result.

The correspondents' original report (their Ref.6) appropriately enough avoided any statistical analysis in describing the correlation between indirect reflux result and abnormality of the ureteric orifice seen at cystoscopy. The expanded series reported later (their Ref.2) used the McNemar test to show that their 53 refluxing ureters seen on indirect study were statistically more than the 32 seen on voiding (x-ray) cystogram. While this is undoubtedly true, many clinicians share our concern about the validity of the excess and its clinical relevance.

The disturbing lack of correlation between cystoscopic appearances of ureters draining kidneys which developed pro-

gressive radiologic scarring in the Toronto Hospital for Sick Children's series (their Ref.5) is just one reason for our urologists being reluctant to submit children to this procedure despite Pollet et al. hailing it as a "gold standard" for reflux.

Perhaps the correspondents or some other well-equipped center will undertake a trial of direct versus indirect radionuclide studies using a dual-isotope method to evaluate the same episode of micturition. We were unable to do this for technical reasons and also recognize the loss of the filling phase in the direct cystogram available for such a comparison.

We would reassure others that in a Children's Hospital setting with experience, patience, and explanation most children can be catheterized for cystogram without undue physical or psychological trauma.

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### Emotional Stress and Iodine-131 Therapy for Graves' Disease

**TO THE EDITOR:** In the June, 1985 edition of the *Journal of Nuclear Medicine*, Stewart, Rochon, Lenfestey, et al. correlated emotional stress with earlier onset of hypothyroidism following the use of iodine-131 ( $^{131}\text{I}$ ) therapy for the treatment of Graves' disease. It has been my impression that the increased sensitivity of the Graves' gland to  $^{131}\text{I}$  treatment correlates best with shorter duration of illness. If the patient's history suggests that the illness began only a few months before the diagnosis was confirmed, I would give the patient 1 mCi less of the standard protocol dose of  $^{131}\text{I}$ . If the illness was years old (especially if antithyroid drugs had been used), the patient would receive 1 mCi more than our standard protocol.

Stewart et al. accept the documentation of the stress factor only if it occurred within the previous 12 mo. They thereby slanted the stressed group to those patients whose disease had started more recently. This study would confirm my impression that duration of the disease determines the thyroid gland's sensitivity to irradiation. The presence of stress may be irrelevant.

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**REPLY:** Dr. Feigenson suggests that our data was slanted to those patients with stress whose disease started more recently. In the Materials and Methods section of the paper (1) we clearly stated that stress identified in the 12 mo or less before the onset of symptoms would be scored as positive. However, in the results section it was stated that "individuals exposed to stress in the 12 mo prior to treatment have a significantly deleterious survival experience." This was an error and confusing and should read "in the 12 mo before the onset of

symptoms." We did not compare the duration of symptoms to the time of treatment with radioiodine in the two groups, stress and nonstress, nor did we look at the incidence and duration of pretreatment of patients with antithyroid drugs, propylthiouracil, and tapazole. We now present an analysis of this data.

#### Duration of symptoms

All 81 patients with stress were able to identify the date of onset of their disease. Of the 212 nonstress patients, eight (3.8%) were unable to identify the date of onset. Four were middle-aged cardiac patients where the diagnosis was made on screening for thyroid function, two were women of dull intelligence age 23 and 50, and two were asymptomatic, a 31-yr-old female with T<sub>3</sub> thyrotoxicosis and a 24-yr-old woman with habitual abortion.

No. of patients			
Duration of symptoms in mo		Stress	Nonstress
Mean ± s.d.		81	204
Z = 0.88	p = 0.20	19.2 ± 19.9	21.9 ± 30.1

#### Pretreatment with antithyroid drugs

In the stress group 15 received these drugs—18.5%. In the nonstress group 42 received these drugs—19.8%.

Duration of pretreatment			
No. of patients			
Months of treatment		Stress	Nonstress
Mean ± s.d.		15	42
Z = 1.02	p = 0.15	20.3 ± 20.7	14.3 ± 15.9

Thus, in this series no significant difference is seen between the two groups in terms of duration of symptoms before radioiodine therapy and the incidence and duration of pretreatment with antithyroid drugs. Clinical impressions are important if they prompt analysis of recorded data. We are grateful to Dr. Feigenson for drawing our attention to two other possible factors influencing the outcome of radioiodine therapy in Graves' disease. Because the analysis shows no significant difference between the stress and nonstress group of patients we feel it very unlikely that the reported difference in survival of thyroid function was influenced by these two variables. This is in marked contrast to the effect of stress.

#### References

1. Stewart THM, Rochon J, Lenfestey R, et al: Correlation of

stress with outcome of radioiodine therapy for Graves' disease. *J Nucl Med* 26:592-599, 1985

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#### Mislabeling of Figure

**TO THE EDITOR:** Much to my regret I noticed when reading the August issue of the *Journal* that I overlooked an essential error in the proofreading of our article de Bruine, et al: *J Nucl Med* 26:925-930, 1985.

In Fig. 3 the open circles represent the [<sup>201</sup>Tl]DDC curve while the [<sup>123</sup>I]IMP is represented by closed circles. The [<sup>201</sup>Tl]DDC uptake is considerably faster and more instantaneous and therefore in our opinion, a better flow marker.

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#### Error in Figure Caption

**TO THE EDITOR:** I would like to bring to your readers' attention a typographical error (mine) in my article "Simultaneous Dual Isotope Studies in the Diagnosis of Infection" published in the *J Nucl Med* 26:722-725, 1985. In the caption for Fig. 2 the word "non-congruent" should have been used instead of "congruent," as was indicated in the text immediately prior to the Discussion section and as is obvious from visual inspection of Figs. 2A and B.

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#### Correction: Error in Text

In the article by Weiner, Schreiber, Hoffer, et al., "Compounds Which Mediate Gallium-67 Transfer from Lactoferrin to Ferritin," *J Nucl Med* 26:908-916, 1985, on p. 913, column two, lines 14 and 15, "Ga(OH)<sup>-</sup>" should read "Ga(OH)<sub>4</sub><sup>-</sup>".