

Correspondence

Scintigraphic assessment of oesophageal motility

SIR.—We read with great interest the recent paper by Mughal *et al* (*Gut* 1986; 27: 946–53). We are, however, worried about the validity of their conclusions for a number of reasons.

The upper limit of their normal range of radionuclide transit of the oesophagus (RT) was 17 seconds, but in the literature this figure is usually significantly lower.^{1–3} We found in a reference group of normal subjects the upper limit to be 11.2 seconds. A value of 17 seconds may suggest inherent technical problems, which, in case, would affect both asymptomatic and symptomatic patients. Alternatively, some of the 'asymptomatic patients' (who were not characterised in the paper) might suffer from various kinds of oesophageal dysfunction.

The authors explain that they only made a single RT measurement in each patient, because other groups found the method to be highly reproducible. On the other hand they argue that RT probably has a significantly false positive rate because of (1) technical reasons and (2) 10–50% failure to generate propagated peristalsis in 22% of asymptomatic patients.

In contrast, they have no reservations about the reliability of manometry as the golden standard in all kinds of disturbed oesophageal function, despite the fact that it requires 'Considerable experience and expertise in its performance and interpretation', and that 'the interpretation is controversial'.

It is certainly well known that RT may be normal in cases of diffuse oesophageal spasm, currently only demonstrable by manometry. Accordingly RT must sometimes be falsely negative in oesophageal disorders. On the other hand if a normal range is well established, then patients with abnormal RT values by definition do have some kind of (oesophageal) dysfunction, even if manometry is normal. Whether such patients have clinically oesophageal disease, remains to be established.

Being a 'rapid, single and non-invasive test . . . easily done in any hospital with standard gamma camera equipment', RT certainly deserves to be more carefully tested against all possible sources for reaching the diagnoses.

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References

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Reply

SIR.—In reply to the comments by Jørgensen *et al*, we are well aware of the difficulties and limitations of oesophageal manometry and we have addressed this problem in a manuscript to be published in the *British Journal of Surgery*. So, when four years ago we embarked on a study of radionuclide transit (RT), we did so with hope and enthusiasm. Sadly, after 300 studies (twice the number in our paper), we came to the conclusion that RT was of limited value in clinical practice. We would rather perform manometry (an invasive test requiring considerable expertise) than RT because despite its limitations, manometry gives us information on which we are prepared to take decisions regarding management.

We obtained a value of 17 seconds for the upper limit of normal RT from a study of 58 asymptomatic subjects – to the best of our knowledge the largest control group in any study of RT published at the time we submitted our manuscript. Contrary to what Jørgensen *et al* imply, we did characterise the control group – ' . . . 58 asymptomatic subjects (37 men, 21 women; mean age 31 years)' – on the first page of our paper. In fact, the value of 11.2 seconds obtained by Jørgensen *et al* is no more in line with the upper limit of normal in other published studies than is our figure of 17 seconds. Depending on which study is cited, the upper limit of normal varies between 15 seconds^{1,2} and 9 seconds.³ What is more, if the data of two of the groups^{1,2} who use a threshold of 15 seconds are reanalysed by changing the threshold to our figure of 17 seconds, it makes virtually no difference to their results. This is in keeping with our impression that when RT is abnormal, it is very abnormal; in our study of 300 patients, 95% of the RT values were either less than 15 seconds, or more than 20 seconds.

Two RT studies were carried out in five asymptomatic subjects (as stated in our paper). In two cases one test was abnormal while the other was normal, indicating the variation in the transit of liquid from