Reply

Sir,—We agree that a purely radiological diagnosis of abdominal tuberculosis is inadequate. In the appropriate clinical setting; a young immigrant with fever and pain and compatible radiology, we suggest in our paper that a clinical trial of specific chemotherapy is indicated. The response is almost invariably satisfyingly dramatic. The only realistic diagnostic alternative in this context is Crohn’s disease and a two week delay in starting corticosteroid therapy is a relatively small price to pay for avoiding laparotomy. We agree, and stated in our paper, that caecal carcinoma is a further alternative diagnosis and we believe that colonoscopy should be used on a routine basis to exclude this possibility and to confirm the presence of tuberculosis. Nevertheless there are patients in whom a laparotomy is necessary to confirm the diagnosis of abdominal tuberculosis.

Many patients in our series underwent laparotomy for acute abdomen. In the majority of cases this was both a diagnostic as well as therapeutic procedure as our awareness of abdominal tuberculosis was less in previous years than it is now. We agree that in subacute intestinal obstruction a more reasonable approach is that of chemotherapy. Nevertheless caecal perforation did occur in our series and we believe the possibility of abdominal tuberculosis should not deter the surgeon from carrying out a laparotomy in a patient with an acute abdomen. The series from India do indeed show a high mortality when laparotomy was done for acute tuberculous disease but it likely that much of the mortality in those series was related to the poor general health and malnutrition of those subjects. These problems tend to be far less in western practice. In our paper only five patients died; two presented extremely late with miliary tuberculosis and they did not undergo laparotomy, the others were postoperative deaths but only one of these operations was performed because of acute intestinal obstruction, the others were diagnostic procedures. In some other cases laparotomy was life saving.

Unlike Dr Sharma’s group we did not experience complications of chemotherapy in patients with intestinal tuberculosis; in particular perforations nor post therapy strictures developed. The frequency with which intestinal strictures occurs is unclear because this complication was initially reported at a time when the chemotherapy was possibly inadequate.

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Transcutaneous Doppler ultrasound measurement of blood flow

Sir,—I was very interested in the recent article by Qamar et al.1 The authors rather boldly assert that they have measured blood flow in the superior mesenteric artery using transcutaneous Doppler ultrasound but give no validation or calibration of their method. The authors state they are satisfied with their solutions to the well known difficulties of the technique but provide no data to support this comfortable conclusion.

The authors show their estimates are statistically comparable with measurements provided by other different techniques, but this does not establish the accuracy of their method because the scatter of their results is very wide (517±159 ml/min, mean±SD). Nor does quoting other calibration papers help; Allen et al2 used a multigated system placed directly on the vessel at a fixed angle and measured the diameter electronically.

There are several typographical errors in the article. The most egregious is the Doppler equation.

Calibration of the method is undeniably a difficult task but it behoves the authors to provide some indication of the tolerance of their estimates before claiming to measure absolute blood flow. The transcutaneous Doppler technique is promising but I fear it may not realise its potential if reputable authors fail to apply a rigorously scientific approach to its application.

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References

Reply

Sir,—Thank you for giving us the opportunity to reply to the letter from Malcolm F Anderson who rightly pointed out that our paper did not provide data concerning the accuracy of the transcutaneous Doppler ultrasound method. Surprisingly, in his letter, there has been no mention of the reproducibility of the method, a sine qua non for any reliable method, which has been shown over both short and
long terms. The method was also reproducible in measuring coeliac axis blood flow.\(^1\) Furthermore, using the method changes in mesenteric blood flow after various physiological stimuli such as feeding, exercise etc were detected.\(^2\) In a later study the in vitro accuracy of the method was assessed.\(^3\) In vitro calibration of the method was carried out using a hydraulic system under conditions simulating mesenteric artery blood flow and allowing simultaneous comparative Doppler ultrasound and electromagnetic measurements flow in a latex tube. Comparative flow measurements were performed for flows of 150 ml/min to 1000 ml/min. The coefficient of correlation was 0.98, the slope of regression was 1.008 with an intercept of 15.9 ml/min. The Doppler method over estimated by an average of 4%.

These results indicate an acceptable accuracy of the method, sustain our previous work and also are in accord with the results of similar reported studies. In an in vitro comparative study, Greene et al\(^4\) calibrated a duplex scanner (ATL mark V) and reported a remarkable correlation \((r=0.98)\) between direct flow measurements and calculated flow from the duplex scanner. Avasthi et al\(^5\) confirmed these results and also reported a good correlation between measurements of canine renal blood flow measured simultaneously by the duplex scanner and an electromagnetic flowmeter. The wide range of our results is fully discussed in the article and the reference of Allen et al was in a general context. For example, we referred to Payen et al\(^6\) who also used the velocity profile measurements. Doppler equations can be expressed in different forms and one feels free to use any form.

M I QAMAR AND A E READ

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**References**


**Books**

**Complications of surgery of the lower gastrointestinal tract** By J A R Smith and Irving Taylor. (Pp. 277; illustrated; £19.50.) Eastbourne, East Sussex: Baillière Tindall/W B Saunders, 1985. This is a gem of a little book, full of surgical wisdom; clearly written by experienced surgeons who have encountered most of the complications that they describe. The approach throughout is practical and commonsense. The sections on ileostomy and colostomy, and intra-abdominal abscesses are particularly useful. It is so good that it certainly ought to continue in several future editions. Therefore I feel justified in offering the authors some advice and what I hope is constructive criticism.

The literary style does not make for easy reading particularly for someone for whom English is not their native tongue. Some of the sentences are dauntingly long and careful critical English editing would improve the next edition.

What is particularly striking in this book is the high quality of the clear line drawings, some of which are almost cartoons; this is an excellent way of communicating ideas visually. It is a pity that the authors did not acknowledge the excellent medical artist. In contrast to the clear line drawings are the poor photographs. There is a singularly poor reproduction of a radiograph in Figure 2.5, purporting to show an incomplete staple ring, whereas all that can be seen against the large black background is part of the lumbar spine and bony pelvis and a huge safety pin. Another bad illustration is a black and white photograph through a colonoscope (Fig. 2.9) to which the legend says ‘note the presence of an ulcer around suture material’. One is hard pressed to see the ulcer! If the publishers are going to economise by poor quality paper for radiograph reproduction and will not provide funds for colour photographs of colonoscopic pictures then these attempts at photographic reproduction should have been abandoned. Some more line drawings would have been much clearer.

It is the authors fault that some of the illustrations are ridiculously inappropriate. They cannot justify using nearly two pages to show six poor photographs.