PostScript

LETTERS

Getting our journal to developing countries

What a marvellous and generous move to provide free access to BMJ journals and especially to *Gut* for doctors working in poor countries in the third world. The main problem is the subscription rate. The annual personal subscription for *Gut* is \$199 which is more than one month's salary for a professor in the Sudan.

We have tried several means of obtaining journals, the most useful of which was our friends from the UK sending us their journals after they had read them. They do reach us, but usually in the form of a big parcel of six months' worth of the *BMJ* or *Lancet*, which is not easy to get through with the overwhelming clinical duties of most doctors working in developing countries.

Now with the rapid advances in telecommunications, most provincial hospitals have access to the Internet. In our hospital, all doctors have free access to the Internet through a dedicated computer, which has proved to be very helpful.

It is a genuine and very helpful step from *Gut* and we hope that other journals (for example, *Gastroenterology*) or other organisations such as the Cochrane Collaboration and Embase.com will follow your golden footsteps.

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CT colonography and colorectal screening

In the July 2000 issue of *Gut*, Dr Pescatore and colleagues published their experience with virtual colonoscopy and concluded that "VC does not appear to be suitable for colorectal cancer or polyp screening".¹ We commend the authors for pursuing this important topic, particularly as we anticipate virtual colonoscopy to be applied in a clinical setting. It is particularly important since their work seems to demonstrate the limitations of their technique.

(1) *Bias in patient selection*: most of the patients included in the study (43 out of 50) are not screening subjects but selected patients with a positive history of previous polyp/tumour, anemia, positive fecal blood test, pain, etc.

(2) *Insufficient technique*: patients were scanned only in supine position. Better results are achieved²⁻⁵ by scanning patients in both supine and prone positions, allowing increased sensitivity (detection of lesions obscured by retained fluid, different distribution of air between supine and prone positions) and specificity (stool shifts to a dependant position).

(3) *Initial inexperience*: the authors found a significant difference in sensitivity between the first half of their patient group and the second. Interpretation of virtual colonoscopy requires a significant learning process, comparable to mammography, and furthermore half the observers were not radiologists and probably do not have a comparable experience in reading axial images. A training period before starting such a study is certainly required.

(4) *Statistics*: the study comprises a small sample (50 patients) with only 11 lesions >1 cm. Given that there were two teams reading the study composed each of a gastroenterologist and a radiologist, it is also unclear if the cited interobserver agreement was between each team or each reader.

(5) *Equipment*: the authors used surface rendering software which is inferior to volume rendering. They cite a 1996 reference article⁶ stating that the latter technique is much more time consuming, but software has significantly progressed since and several companies now offer very fast and user-friendly 3D volume rendering systems.⁷

It seems therefore that based on their initial experience and technique, that though the authors conclude that "VC does not appear to be suitable for colorectal cancer or polyp screening", they have room for improvement in performing virtual colonoscopy.

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Author's reply

We thank Dr Chaoui and Dr Blake for their comments. In our paper we clearly pointed out that this was an initial study and our initial experience. CT colonography is observer dependent. We noticed an improvement of our results during the course of this study, mainly in relation to increased experience of observers. In the discussion, we pointed out the different factors that should be improved in further studies, such as data acquisition in supine and prone position, as well as initial evaluation of 2D data sets, followed by interpretation of 3D data sets.

Concerning the issues raised by Chaoui and Blake, we would like to make the following points:

(1) Patients in our study were mostly selected subjects according to their history or symptoms. We did not state that we were dealing with a screening study.

(2) We discussed the technical improvements and changes and pointed out that patients should be screened in supine and prone position.

(3) We intended to demonstrate the evidence of a learning process in comparing two groups of patients. Our results show that CT colonography is an observer and experience dependent technique. For the first time, we thus documented the necessity of thorough training.

(4) Interobserver agreement was assessed between 2 teams. Non-radiologists of each team assisted the senior radiologist in the interpretation, and the final judgment was consensual.

(5) We agree with the comment regarding the use of volume rendering rather than surface rendering algorithms.

We recently performed a second study, applying the technical modifications mentioned above. Results indicate a major improvement of sensitivity and specificity per patient.²

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