Liver biopsy under ultrasound control

Editor,—I read the recent occasional viewpoint by Shah et al (Gut 1999;45:628–629) with much interest. The authors describe their regional practice of mandatory real time ultrasound guidance for percutaneous liver biopsy in all cases of suspected diffuse liver disease. However, the published literature does not convincingly support the universal adoption of such a policy.

The only prospective randomised study cited in support of their protocol, by Lindor and colleagues,1 is open to a number of methodological criticisms. In particular, in an unspecified proportion of the patients randomised to ultrasound guidance, the procedure was not actually performed under direct guidance and was instead immediately preceded by a “biopsy room” ultrasound scan. The net result of this may have been to selectively raise the biopsy scanning rates in the “ultrasound” cohort who were already more likely to have been previously scanned than the “blind” patients (76–78% v 67–68% in the respective groups).

In terms of the reduction in post-biopsy complications claimed by Lindor et al, the major impact was a reduction in hospitalisation due to pain. There was no statistically significant difference in the rates of bleeding or hypotension. The reduction in pain, in a non-blinded study, could have been due to several factors such as the patients’ perceptions of a “safer” guided scan or the potential for the physicians to more readily hospitalise patients with abdominal pain in the “blind” group.

This is considerable published data available regarding the safety of percutaneous liver biopsy without real time ultrasound guidance.2,3 Indeed, the British Society of Gastroenterology’s recent guidelines do not advocate changing from the practice of pre-procedural ultrasound scanning (which will be part of the routine investigation of most patients with suspected hepatic disorders anyway) to biopsies performed exclusively by radiologists under imaging control and it is difficult to see how adopting such a policy nationally could be justified.

Finally, I would urge that too much gravity is not placed on the cited abstract concerning a survey in which 75% of British gastroenterology trainees requested formal training in ultrasonography. The performance of sufficient procedures to be certified competent in this radiological procedure and to remain so throughout a lifetime of clinical practice would have enormous ramifications for the workload of gastroenterology units in this country. I personally suspect that most specialist registrars would ask for training in how to ride a unicycle if they thought it might make them more marketable to potential employers.

R J JASPINALL
Digestive Disorders Foundation Fellow, ICRF Molecular Oncology Unit, Imperial College School Of Medicine, Hammersmith Hospital, London W12 ONN, UK

Informal consent

Editor,—The technique used in the Lindor paper was somewhat of a hybrid between the “X marks the spot” (site usually marked in ultrasound guidance) and the “Y” (site usually marked in the ward for the procedure) and real time ultrasonography performed in the department under continuous visualisation. In their paper, Lindor and colleagues performed an ultrasound guided biopsy after performing the procedure within the department. Using Lindor’s method, the patient may move prior to biopsy, and intrahepatic vessels cannot be avoided. It is therefore an inferior technique compared with using the “real time ultrasound guided biopsy” method recommended by us. Nevertheless, the relevant statistical analyses from their study were as follows: two patients required hospitalisation in the ultrasonography group compared with nine in the blind biopsy group (p=0.04), pain being the reason for admission in seven patients and pain plus hypotension in four. Bleeding occurred in nine patients in the ultrasound group versus 18 in the blind biopsy group (p=0.07). Simply stating that this last finding, which had a twofold difference between the groups was not significant and by implication not important, ignores what might be a very relevant trend, which did not reach the “magical” p<0.05 level due to insufficient numbers (that is, a type II error). As stated in our paper, a similar situation is probably relevant in the failure of studies to show significant differences in mortality due to the large numbers required. Clinical procedures are now the subject of appropriate monitoring. When clinicians fall below standard and imperil the safety of the patient, questions of competence are raised. The current concern about the safety of cardiac surgery has raised public awareness of the need for adequate training in all clinical procedures. The GMC and other professional bodies have emphasised at all aspects of day to day clinical practice and the move towards structured training of junior doctors is part of these developments. Clearly there is a need to train gastroenterologists in endoscopic techniques—the need is no less for the practice of liver biopsy. “See one, do one, teach one” is an aphorism that will not stand up in the 21st century.

Dr Aspinal fails to mention what we consider to be one of the key results in the paper by Lindor et al; one of the patients in the blind biopsy group had to have emergency surgery for a damaged gall bladder. As stated in our paper, this situation can be virtually completely avoided by using real time ultrasonography. In the current climate, patients in whom a blind biopsy has led to perforation of the gall bladder, pleural cavity, or colon will seek legal redress for such blunders. When seeking consent, doctors must explain the details of the procedures and the safety margins associated with them. Failure to mention the added safety of using a guided rather than a blind biopsy could be seen as negligent. We hope that Dr Aspinal never faces this dilemma.

Dr Aspinal’s final paragraph, although amusing, trivialises the serious issue with which training in ultrasonography is currently causing in relationship to European accreditation in gastroenterology. Many European countries consider that a failure to be adequately trained in this technique should prevent the person from being accepted as a trained gastroenterologist. Although Dr Aspinal may not wish to venture outside the UK to practice medicine, many other clinicians do. Finally, one of the specialist registrars at our hospital did learn to ride a unicycle, it did not help his career progression but he was a very popular character.

S SHAH J F MAYBERRY A C B WICKS Y REIS R J PLAYFORD
Leicester General Hospital (approved training centre for European Accreditation in Gastroenterology) Leicester, UK
Email: r.playford@ic.ac.uk

References

Reply

Editor,—I read the recent occasional viewpoint by Shah et al (Gut 1999;45:628–629) with much interest. The authors describe their regional practice of mandatory real time ultrasound guidance for percutaneous liver biopsy in all cases of suspected diffuse liver disease. However, the published literature does not convincingly support the universal adoption of such a policy.

The only prospective randomised study cited in support of their protocol, by Lindor and colleagues, is open to a number of methodological criticisms. In particular, in an unspecified proportion of the patients randomised to ultrasound guidance, the procedure was not actually performed under direct guidance and was instead immediately preceded by a “biopsy room” ultrasound scan. The net result of this may have been to selectively raise the biopsy scanning rates in the “ultrasound” cohort who were already more likely to have been previously scanned than the “blind” patients (76–78% v 67–68% in the respective groups).

In terms of the reduction in post-biopsy complications claimed by Lindor et al, the major impact was a reduction in hospitalisation due to pain. There was no statistically significant difference in the rates of bleeding or hypotension. The reduction in pain, in a non-blinded study, could have been due to several factors such as the patients’ perceptions of a “safer” guided scan or the potential for the physicians to more readily hospitalise patients with abdominal pain in the “blind” group.

This is considerable published data available regarding the safety of percutaneous liver biopsy without real time ultrasound guidance. Indeed, the British Society of Gastroenterology’s recent guidelines do not advocate changing from the practice of pre-procedural ultrasound scanning (which will be part of the routine investigation of most patients with suspected hepatic disorders anyway) to biopsies performed exclusively by radiologists under imaging control and it is difficult to see how adopting such a policy nationally could be justified.

Finally, I would urge that too much gravity is not placed on the cited abstract concerning a survey in which 75% of British gastroenterology trainees requested formal training in ultrasonography. The performance of sufficient procedures to be certified competent in this radiological procedure and to remain so throughout a lifetime of clinical practice would have enormous ramifications for the workload of gastroenterology units in this country. I personally suspect that most specialist registrars would ask for training in how to ride a unicycle if they thought it might make them more marketable to potential employers.

R J JASPINALL
Digestive Disorders Foundation Fellow, ICRF Molecular Oncology Unit, Imperial College School Of Medicine, Hammersmith Hospital, London W12 ONN, UK

References
EDITOR,—Shepherd and colleagues (Gut 2000;46:37–39) offer a timely and thoughtful contribution to the increasingly loud debate within trusts about issues that surround informed consent. As endoscopists, our example is relevant to other services offering invasive open access procedures, especially radiology. Their booklet addresses three problems: (i) that information regarding proposed procedures should be given in circumstances in which patients could not be perceived to be under duress to give consent; (ii) that the information is given, albeit indirectly, by one who is trained to perform the procedure; and (iii) that an explanation is given regarding risks as well as benefits, as is often not the case at present.

Neale’s commentary (Gut 2000;46:5–6) is, as one would expect, in many ways equally perceptive but he fails to take account of an essential aspect of open access services. As he makes clear, such a process of informing consent cannot address the problem of informing choice among available options as the information arrives through the post with an appointment for a particular procedure. However desirable it may be that such a choice should be an integral element of informed consent, the nature of an open access service dictates that the decision regarding the choice of the procedure must have been taken prior to the referral having been made. This raises two further issues: (1) how to decide upon the appropriate judgment is used to decide the choice of the procedure; and (2) how to assess an acceptable level of risk for open access procedures in general and for the particular individual to whom a procedure is offered.

Neale’s example of ERCP, although not generally an open access procedure, serves to focus thinking about these unanswered questions but does not diminish the contribution of Shepherd and colleagues in enhancing the quality of information given to patients. The ratio of manpower to demand means that, for the foreseeable future, much as endoscopists may wish “to speak with their patients about...(this) would impose unacceptable delays in management.”


Increased prevalence of methylenetetrahydrofolate reductase C677T variant in patients with IBD

EDITOR,—We read with interest the paper by Mahmud et al (Gut 1999;45:389–394). The study showed an increased prevalence of methylenetetrahydrofolate reductase (MTHFR) C677T variant in patients with inflammatory bowel disease (IBD). The C677T polymorphism is a known genetic cause of mild hyperhomocysteinaemia (hyper-hCys) and may be associated with a variable degree of risk for thromboembolic disease in patients with IBD.2 To confirm a higher prevalence of the C677T polymorphism, we investigated 99 patients with established IBD for this polymorphism compared with 1084 unselected newborns. DNA samples were genotyped for the MTHFR (C677T) mutation. Patients were categorised as homozygous for the thermolabile variant (TT), heterozygous for the wild-type variant (CT), or homozygous for the wild-type (CC). Difference in prevalence between IBD patients and controls was compared using the χ2 test. Differences in onset of disease between patients with Crohn’s disease (CD)
and those with ulcerative colitis (UC) were compared using the Mann-Whitney test. A total of 16.2% (16/99) of IBD patients were homozygous for the C677T variant compared with 8.3% (90/1084) in the control group. This difference was statistically significant (p=0.009). When patients were stratified according to CD and UC, we found that homozygosity for the MTHFR C677T variant (TT) was present in 14.0% (7/50) of patients with CD and 18.4% (9/49) of those with UC. Both results were independently significantly higher than in the background population.

Onset of disease in carriers of the (TT) variant in CD and UC patients was 33.8 and 40.6, respectively, compared with 34.4 and 43.3 in non-carriers. This difference was not statistically significant. There was no correlation between disease activity indices of the IBD patients (Crohn's disease activity index for CD and clinic activity index for UC) and carriers of the (TT) variants. Also, C reactive protein levels in IBD patients was independent of MTHFR gene prevalence.

Genome wide linkage screen of a large population of IBD patients found evidence of linkage of IBD to the short arm of chromosome 1 in all families investigated. It is interesting that the MTHFR gene is located on chromosome 1 (1p36.3). Additional loci on chromosomes 3, 7, and 16 are linked to IBD. 'The genetic basis of IBD is non Mendelian in nature' and very complex. Unrecognised factors may therefore be important in the genesis of IBD. Further investigation of other factors is being carried out in our laboratory at present.

J N Nielsen
B Larsen
I Fredholm
IBS Epidemiology Group
Department of Clinical Medicine
Aarhus University Hospital
Aarhus, Denmark

P Munkholm
Department of Gastroenterology
Hvidovre Hospital
2800 Hvidovre,
University of Copenhagen, Copenhagen Denmark

H Hey
Department of Gastroenterology
Vejle County Hospital
7100 Vejle,
University of Southern Denmark, Denmark

Correspondence to: JN Nielsen.
(E-mail: JNN@vv.vejleamt.dk)


Pediatric gastroenterology, and our knowledge about diseases of the small intestine in children, has grown rapidly over the last few years, owing to advances in the basic sciences, such as molecular genetics and, particularly, gut immunology. The purpose of this book is to provide the consultant paediatrician, as well as the trainee, with a review of the diseases of the small intestine in children. There are two major sections in the book: the first, more general, is focused on structure and function of the small intestine, while the second, more specific, is in which attention is given to the commoner and more important specific disease entities. This fourth edition of a book published in the past by John Walker Smith, and now-authored by Simon Murch, reflects the long clinical experience of the first author. At the same time, it offers a thorough review of the most recent literature. The long clinical experience of the senior author, which is particularly evident in the chapters dedicated to infectious gastroenteritis, is now integrated by the strong clinical and research interest of Dr Murch in mucosal immunology.

The value of the chapters dedicated to matrix (a topic to which Dr Murch has significantly contributed in his own research), and to the immune system of the small intestine in the first section of the book, and to coeliac disease and Crohn's disease in the second one, is a proof of this special competence. Also very good is the chapter on laboratory analysis, although less convincing is the part of the same chapter that describes the chief symptoms of the child with gastrointestinal problems (diarrhea, vomiting). The appendix on special milks is especially useful. Overall, the editorial quality of the book is high.

In conclusion, this book is a very valuable reference not only for paediatric gastroenterologists, but also for general practitioners, medical students, and dieticians.

R Troncone


I enjoyed looking at this book. The editors' intention is that "at a moment when any surgeon may open it and consult an authority on a particular topic related to IBD surgery". They have assembled an international group of contributors and there are excellent sections on history, surgical pathology, pouches, and Crohn's surgery. There are some surprising omissions, however. A chapter on revision surgery for pouches that have gone wrong would have been timely, and a more thorough review of balloon dilatation and stents would have provided a look to the future. I think the sections on septic complications of pouches and Crohn's disease should have been kept separate.

I was irritated by the lack of uniformity in the illustrations and drawings of procedures, and in places the text is very dense, for example, in the section on ileostomy.

A final point: there is only one chapter on medical management just when there is an explosion of new medical therapy. Joint physician/surgeon management is seen by many as the ideal, and surgical treatment cannot be viewed in isolation. Therefore, this is a comprehensive and well illustrated book that will be a welcome addition to the shelves of specialists in IBD surgery.

N Mortensen


This is a substantial book edited by Dr Michael Wolfe with six of his colleagues acting as section editors. Many of the hundred or so contributors are members of the Boston home team. The others are from the key centres in North America with a smattering of contributors from Canada, Europe, Israel, and South America. This is in effect a GI textbook, but stripped largely of pathogenesis, pathophysiology, diagnosis, and differential diagnosis. Five main sections consider treatment of oesophageal, gastroduodenal, pancreatic or biliary, hepatic, and intestinal diseases.

The two column black and white presentation is relieved by good summary tables, with small clear diagrams and figures within the two column format. No flashy colour or bullet points here, but good solid information.

Clear instructions to the contributors and careful editing has produced consistent and well balanced chapters. In some example, the excellent contribution from Stephen Hanauer deals briefly with an approach to history taking, physical examination, diagnostic studies, and laboratory investigation in patients with inflammatory bowel disease. This is followed by an overview of individual patient
management and then the “meat” of the chapter reviews therapeutic options for ulcerative colitis and Crohn’s disease. The approaches to treatment in North America and in Europe were remarkably similar. International journals and meetings have narrowed the Atlantic Ocean to a trickle.

The chapter on non-variceal GI bleeding by Lichtenstein also provides remarkably consistent intercontinental advice, which is practical and appropriate and wherever possible evidence based. The detail is remarkable—for example, he has researched the history of iced saline lavage and concludes that water at room temperature is preferable.

I particularly liked the section on therapeutic endoscopy, which is a model of clarity and brevity. Whichever chapter is selected, the information is consistent, reliable, and well researched. The chapter by Nicholas La Russo on primary sclerosing cholangitis opens with an excellent and brief review of the genetics, pathogenesis, clinical features, diagnosis, and natural history, and then considers potential therapy of cupruresis, immunosuppressant agents, antifibrogenesis, cholestatic agents, surgery, and transplantation.

Even in complex areas such as the contribution by John Del Valle, concerned with the treatment of neuro endocrine tumours, for each specific syndrome there is a crisp, clear summary of recommended treatment. In summary, this is a remarkable, formidable achievement with consistent structure and advice, which is reliable and well based. Inevitably for a book of this size, the turnaround time results in the latest references running back to 1997, so computer based systems will be needed to bring the reader up to date.

What of the next edition? This would be an ideal CD-ROM based book with regular updating. Many of the older references could be stripped out to make way for the new, and if we are still buying textbooks then layout and presentation will need improvement.

If you need a guiding hand and expert advice for the treatment of any digestive disorder, this is the book for you.

R N Allan


Kurt Isselbacher’s foreword to this volume indicates that it was not written for the medical specialist, but rather for the family practitioner and general internist. True, this is not YAMADA. Nevertheless, despite being un referenced and weighing in at only one quarter of the size of this gold standard text, I believe he is inappropriately modest on behalf of the editors and authors. Although a specialist readership may not have been the primary target, those involved in the daily care of alimentary tract and hepatic diseases will find this book an invaluable addition to the departmental shelves.

The format is that now commonly adopted for digestive disease textbooks—that is, an initial section dealing with presenting clinical features followed by organ based accounts of specific diseases and syndromes. The final chapters are more broadly based, covering systemic aspects of drug therapy, and nutritional support. The emphasis is on presenting the current aetiopathogenic concepts of hepatic, pancreatic, and gastrointestinal diseases and their management, whilst historical and epidemiological perspectives are dealt with more briefly.

The editorship is in the hands of five very eminent continental Europeans, and only 15 of the 103 authors are from the British Isles. Euro sceptics might be concerned that with a list of authors resembling a Chelsea transfer sheet, the resulting product might be an uncomfortable read with limited relevance to British practice. Nothing could be further from the truth. The text flows easily, which is a great credit to those authors not writing in their first language. The chapters have a remarkable uniformity of structure, perhaps not surprisingly as this can be readily imposed by the editors, but also of quality, which is predictable in light of the distinguished authorship, and of style. The last of these can have been achieved only by diligent editorial skills, and, I suspect, extensive rewriting. Although the authors are predominantly European, the spelling and approved drug names are from the opposite side of the Atlantic—a concession one assumes to the major potential market.

Mercifully, guidelines and patient care pathways are not favoured, whilst algorithms are sparingly dispersed. By contrast, the text is regularly punctuated with summarising tables and figures. These will be of particular interest to junior staff preparing their Power Point presentations. Hard pressed consultants will be no less enthusiastic, as the book provides a resource for rapid but comprehensive “revision” prior to a training session with the junior staff.

The chapters covering large bowel polyps and colorectal cancer will be of special value and interest to non-surgeons who have failed to keep abreast of the last decade’s developments in the classification and management of these tumours. Recommendations for endoscopic surveillance are discussed, though the authors admit that not all of these are fully supported by adequate evidence yet. Similarly, non-specialists requiring a review of liver transplantation and its place in the final year of the millennium, will be grateful to Ringe and his colleagues for their adroit contribution. The account of ulcerative colitis is a medicosurgical collaboration, which is a feature of many chapters. Medical therapeutic options are fully discussed, but one gain that the surgeon may be able to make is a lower threshold for elective surgery in German centres than in the United Kingdom. This, however, is a rare example of the possible divergence between British and continental practice. Neville and Axon offer a balanced account of non-ulcer dyspepsia, but, regrettably, the editors have not taken the opportunity of giving this confusing termology the red card. My men of the match are the Oxford trio for their chapter covering Crohn's disease. I doubt there is a better succinct account currently in print.

A minor criticism is the rarity of specula tion about future developments. It surely would have been timely to have made a few forays into the new millennium.

Although this book may not be in the champions’ league class, it is a thoroughly prestigious performance by a team that constantly has its eye on the ball.

M J Lancaster Smith


The last dinosaur disappeared from Earth over 66 million years ago, wiped out in some cataclysm that changed the world and its climate forever.

Mankind gradually evolved, competing in a hostile environment, winning because of brain and hands. Knowledge and writing gave power; mankind strode on, erect, dignified. The pinnacle of hand-eye coordination, thoughtful and wise, stepped forth the surgeon.

Evolution continued, specialising, improving, learning, until from the chrysalis emerged the ultimate epiphany, a colorectal surgeon. Hungry, not to learn, to understand the background, the proud evolution, the way of the tribe.

How to learn? Vast, illuminated, biblical scroll, or virtual, instant, ephemeral quantum technology the red card. My men of the match are satisfied, reveals new comprehension. But taut skin, restless energy, young ambition seeks flickering screen, a virtual world. A conundrum.

I am old, and thinning; a user of computers, but no bedfellow. At the frontier, I use journals and the library; for reading, smaller books, concise, portable, incisive. However, for reference, to support an opinion, pursue a prejudice, grud an axe, to gainsay, then a large, lovingly written, luxuriously arranged book—a book and a half (indeed, two books); beautiful, admired, essential—just such books as these.

But I feel a Gulf. I sit on the written side of that gulf, but close by I see a new generation, turning away, evolving further. Will they want such a book? There is no CD-ROM. Will they use other ways?

Although science changes rapidly, society and culture take much longer to adjust. Reading and book owning are as much cultural as they are efficient means of imparting knowledge, pleasantly, favourably, to be admired also on the shelf. I am confident they will read, they will own books, big books, books such as these books—fascinating, informative, a congratulation, and not the last dinosaur.

Robin Phillips