Ultrasound urease test

EDITOR.—We read the description of the urease test published in Gut 1991; 32: 467–9 and tried to reproduce the test, but without success. The solution as described in the article, used 0·5 ml of a 10% urea solution, adjusted to pH 6·8, it was stated that upon the addition of one to two drops of 1% phenol red solution, a colour change from yellow to pink should occur within the colour change. We found that even after extensive stirring, we have no difficulty in obtaining a 1% aqueous solution of sodium hydroxide, solution in units was added. A 1% solution of sodium salt of sodium hydroxide is unsuitable because it has a pH of 6·6 and causes the urea solution to turn orange-red even before urease is added.

The method described in the article states that 1% phenol red (free acid) solution is used. A 1% solution of sodium salt of sodium hydroxide is unsuitable because it has a pH of 6·6 and causes the urea solution to turn orange-red even before urease is added. The only indicator we found suitable for the test was based upon a 1% phenol red solution, and therefore is unsuitable as the indicator solution has a pH of 6·6 and causes urea solution to turn red again, before the addition of urease.

Based on our experience, the red color change is due to the presence of urease which is released after hydrolysis of urea to ammonia and carbon dioxide. It is difficult to quantify the amount of urease released by the addition of the test solution.

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BOOK REVIEW

Gastrointestinal radiology. By I Farman. (Pp 200; illustrated; £59.95.)

True to its title, this annotated atlas restricts itself to imaging of the gastrointestinal tract that requires radiation, namely plain and barium radiography, and computed tomography.

The author is Professor of Radiology at the Columbia Presbyterian Medical Center, New York. He has created a 190 page glossy tome of uniformly excellent images which cover the familiar territory between the oesophagus and anus, with the biliary tract (two DISIDA scans) included. The text is minimal, and supplemented by generous case histories, simple line drawings, and many fine images liberally adorned with red arrowheads.

Medical students and junior hospital doctors would benefit most, seeing many examples of oesophageal carcinoma, duodenal ulcer and, in what is the best section of the book, a great variety of afflictions besetting the small bowel. Despite the inclusion of a few rarities, such as metastases to the duodenal lumen or the gallbladder, it is well worth reading the work that could not be gained from the average x ray film museum of a university department or teaching hospital. It is, therefore, not a serious contender for the book-money in the pocket of a gastroenterologist or radiologist. R DICK

Nuclear medicine in gastroenterology. Edited by Hans J Biersack and Peter H Cox. (Pp 250; illustrated; £64.00.) Dordrecht: Kluwer Academic, 1991

This 250 page publication is largely based upon contributions from English and German authors, and spans the full range of nuclear medicine techniques which are currently used in gastroenterology. It is divided into three sections, dealing with liver and bile, stomach and intestines, and miscellaneous techniques.

The liver section, in particular, gives a comprehensive, detailed account of the various nuclear medicine techniques for imaging liver function, including descriptions of the various quantitative techniques now available. This will be of particular interest to nuclear medicine specialists, and gastroenterologists with a particular research interest in the hepatobiliary field. Unfortunately, as the authors correctly observe in a number of cases, the need for liver scintigraphy, particularly in the diagnosis of metastases, and in the differential diagnosis of jaundice, has been largely superseded by developments in ultrasound, although the sections on the evaluation of liver grafts and the differential diagnosis of liver tumours continue to be of special importance.

I was less impressed by the section dealing with the stomach and intestinal tract. The chapter dealing with the diagnosis of ulcers using nuclear medicine is well written, and describes the current best practice in nuclear medicine technique which has largely become discredited. Conversely, the chapter dealing with the diagnosis of inflammatory bowel disease (six pages) is insufficiently comprehensive to describe one of the newest and most exciting developments in nuclear gastroenterology, and concentrates almost exclusively on the use of Indium labelled white cells, with virtually no mention of HMIPAO labelling, which many departments are now using. In addition, absence detection hardly receives any consideration. This is a serious defect in a book of this type, and will deter many potential purchasers.

In the final section there is a good account of radioimmunoscintigraphy, using labelled antibodies to diagnose and stage the presence and extent of tumours, and here the length of the chapter is more commensurate with the growing importance of this particular technique. This type, and will deter many potential purchasers.

In summary, there is much in this book that will interest the nuclear medicine specialist and gastroenterologist with a strong research interest in nuclear medicine. The general clinician, with an interest in gastroenterology, may be less impressed. It is unfortunate that the readability of a number of the German contributions is less than optimal. Sentences such as ‘Is the tumour delineated without doubt, one has to reflect on the question, is this..."