discussion of our paper: "This study has shown that although there is a significant correlation between the turbidimetric clotting technique and radial immunodiffusion for plasma fibrinogen assay, discrimination between hyperlipidaemic patients and a group of healthy control subjects is better by the immunochemical assay."

Our conclusion was that the significance of plasma fibrinogen concentration as a risk factor for vascular disease may be method dependent and that one method could certainly not be used in place of the other to assess cardiovascular risk. As our paper did not use regression analysis or the correlation coefficient to assess agreement between alternative methods of measurement I am unsure as to why our paper was quoted by Doug Altman in the first place.

I would like to state as one who has submitted papers for publication to a number of scientific journals that I have had a more critical eye passed over my work with respect to its scientific and statistical content from referees of the *Journal of Clinical Pathology* than from many other journals to which I have submitted.

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The letter from Douglas Altman highlights a common problem in medical and biological research, namely, a lack of communication between researcher and statistician. Few departments have a resident statistician and most researchers have to rely on books with generic titles like *Statistics for Medical Research*. While these give good details on the calculations of each test, we have yet to find any which give clear information as to when a particular test should be used, its limitations, etc. We would be grateful to know if such a book exists.

Unfortunately, while statisticians use sentences like, "unless there is a negligible real difference between the methods, on average, this method will be less likely to give a significant result the worse the agreement is," their science will remain a deep mystery to most medical researchers.

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Although our paper was not individually mentioned, it was listed in the group of papers where the analysis was stated to be inappropriate. The primary method of analysis we used was regression analysis between the prothrombin time methods. This was chosen because the World Health Organisation's recommended procedure for prothrombin time standardisation is based on orthogonal regression analysis. The use of an alternative system would have been confusing to the reader.

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Dr Altman is concerned about the statistical methods used to evaluate new techniques which compare quantity. We applied the method suggested to the data shown in fig 2 of our paper to which he referred.¹ We calculated the mean of the differences and the standard deviation of the relative intensities (%) values obtained for the individual PGA isozymogens by both methods.

The following results were obtained: PGA5: mean 0.0, SD 2.0; PGA4: mean -0.2, SD 4.0; PGA3: mean -1.4, SD 2.4; PGA2: mean 2.4, SD 6.7. This provides further evidence that PGA patterns obtained by both methods are similar.

PGA phenotypes are determined visually. These limits of agreement are acceptable for this purpose. We feel, therefore, that while Dr Altman's criticism is justified, reanalysis of our data does not affect our conclusions.

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Rectal gelatin coating: a marking tool for pathologists

We describe an economical and user friendly technique for assessing the often forgotten but essential radial excision margin for use in rectal carcinoma. For years pathologists have placed great weight on resection margins distal from colorectal cancer which has only very recently been shown to be of no value.¹ The radial resection margin, sometimes confusingly called the lateral resection margin,² has been studied in academic colorectal units using accurate but elaborate and time consuming drawing and labelling techniques.³ These remain inappropriate for the busy district general hospital pathologist. Despite this, with advances in surgical technique in the rectum, their surgeons will want to know about the radial margin of excision.⁴

Marking the resection margin is not new, but marking with India ink is messy, allows only one colour, and has a habit of spreading all over the specimen, failing to confine itself to the true margins, and it takes a long time to dry. Our gelatin solution, originally devised for breast marking,⁵ dries instantly on contact with the tissue, does not run down tissue planes, is easily recognised microscopically, and permits differential colouring of the anterior, posterior, and the two lateral margins.

We receive all rectal specimens fresh from theatre in polyethylene bags. Bottles of plain gelatin solution and bottles of gelatin admixed with turmeric, India ink, and Bismark brown are melted under a running tap, and gelatin is applied to four margins with an artist's brush. Plain gelatin is eosinophilic. This is used to mark the anterior margin. Gelatin mixed with India ink is used for the posterior margin, gelatin containing Bismark brown is brushed on the right lateral margin, and turmeric in gelatin on the left lateral margin. The opened rectum is then pinned to a cork board and fixed in formalin for 24 hours. It is then unpinned and floated in formalin for a further 24 hours. The tumour is then sliced at 2 mm intervals and the points of maximum penetration are sampled to include the radial margin. Complex drawings are not necessary and we are then able to tell the surgeon how far the tumour is from which point on the radial margin by the colour or particulate nature of the gelatin pigments under the microscope.⁶

Our method costs £0.07 per case, is simple and rapid, and adds less than five minutes to the cut up time. It is therefore eminently suitable for both the academic unit and the hardpressed district general hospital pathologist, who wish to provide their increasingly sophisticated surgical colleagues with useful rectal cancer reports.

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BOOK REVIEWS

All titles reviewed here are available from the BMJ Bookshop, PO Box 295, London WC1H 9TE. Prices include postage in the United Kingdom and for members of the British Forces Overseas, but overseas customers should add £2 per item for postage and packing. Payment can be made by cheque in sterling drawn on a United Kingdom bank, or by credit card (Mastercard, Visa or American Express) stating card number, expiry date, and your full name.

Functional Endocrine Pathology. Vols 1 & 2. Ed K Kovacs, SL Asa. (Pp 1013; £149.50.) Blackwells. 1990. ISBN 0-86542-061-0

This kilopage book has 42 chapters, over 700 figures, 21 in colour and over 7,000 references. There are 75 contributors, most from the USA (31) and Canada (18 including the editors) as well as Belgium (2), France (5), Hungary (4), Israel (2), Japan (5), Sweden (5), Switzerland (2) and the United Kingdom (1). The editors see the scope of endocrine pathology essentially enlarged by modern developments in cell biology, hence the size of the book and the numerous expert contributors.

After an historical perspective there is a series of seven brief chapters on investigative techniques: biochemical tests, imaging procedures, cytopathology, morphological methods, in vitro culture techniques, molecular biology and cytogenetics all in relation to endocrinology. This is followed by 23 chapters on endocrine anatomic pathology. In addition to the endocrine organs and the diffuse neuroendocrine system, these include chapters on the brain and lungs as endocrine organs and endocrine aspects of the breast, placenta, integumentary system, articular skeletal system and muscle, cardiovascular system, kidney, hepatobiliary system and the endocrine thymus. Chapter 32 is on clinicopathological correlations. The final 10 chapters on mechanisms and pathogenesis include applications to endocrine pathology of heredity, receptors, oncogenes, functional aspects of endocrine neoplasms, mechanisms of cell injury, toxicology, autoimmunity, growth factors, neurohormonal-immune interaction and pathogenesis of endocrine tumours.

In general the chapters vary between useful treatises for the surgical pathologist, as for example, the hypothalamus and neurohypophysis, the thyroid gland, the parathyroid glands, the endocrine pancreas and essays, each consisting of a condensed introduction to the subject in general followed by a brief application to its role in endocrine diseases. This entails repetition of aspects already detailed in *Endocrine Anatomic Pathology*, but it is sometimes convenient and instructive to find disparate facts housed under one cover. Most of the essays give the outsider a clear view of the subject. A few are too condensed or hypertechical for reasonable readability.

This is a beautifully published and illustrated book. The problem in this type of multisubject work is the question of the readership. I'm afraid that the busy surgical pathologist is likely to skip most of the essays and that the enquiring clinician will refer only to the large tomes devoted to clinical endocrinology. On the other hand, anyone carrying out endocrine research, documenting case reports, searching for a reference, or teaching the subject will benefit and derive pleasure from these two volumes. They should be made available in every medical library.

I DONIACH

Clinical Urinalysis. The Principles and Practice of Urine Testing in the Hospital and Community. Ed RG Newall with R Howell. (Pp 136; soft cover £6.50.) Ames Division, Bayer Diagnostics UK Ltd, Stoke Poges, Slough, Berks. 1990. 0-9505887.

This publication is coincident with the government initiatives in general practice to establish contractual arrangements to provide health promotion and screening as well as to re-evaluate the relationship between general practitioners and laboratory services. There is a danger that indiscriminate testing may ensue to the despair of the laboratories and no doubt the delight of the test strip manufacturers (Mant & Fowler, *Br Med J* 1990;1053-5).

The book is divided into three sections: (1) The introduction gives an outline of the history and relevance of localised urine testing, followed by a simple but comprehensive chapter on the formation and physical characteristics of urine. (2) Disease related—a trip down a urine multitest stick looking at the use of sticks or local tests for the detection of glycosuria, ketonuria, haematuria, proteinuria, microalbuminuria, urinary tract infection and bile pigments. (3) Practice related—a comprehensive coverage of views from specialists in several fields of clinical and community practice.

The book should be useful to anyone involved in clinical care, either in hospital or community, with even school testing and toxicological application being covered. Credit should be given for inclusion of emphasis on adequate training and interpretation. The chapters are concise and include useful margin highlights and many clear tables for quick reference, but the lack of an index is regrettable. There is good coverage of false positive and negative situations, usually in clear tabular form, although sensitivity and specificity of tests could be emphasised further.

Although some advice is given on further laboratory based investigations, an overall impression may be gained that management

of patients can be achieved by side-room tests and knowledge of epidemiology alone. This particularly applies to the microbiological section where laboratory services are described as slow and more expensive than stick tests. There is some contradiction found in this approach applied to the measurement of urine protein concentration, where on opposite pages one finds the statements: "Random samples . . . (implied to be measured by stick) . . . can be used to evaluate proteinuria" and "All patients with positive urines warrant a 24-hour protein estimation."

Throughout the book one is reminded of other interests of the publishers because every chapter only includes reference to Ames products which are presented in upper case lettering, as if only those tests are available.

In summary, the book contains much useful and concise information and deserves a place near any near-patient testing, but may leave the user with a somewhat misguided impression of the extent of their analytical prowess.

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Fungal Infection in the Compromised Patient. 2nd ed. Ed DW Warnock, MD Richardson. (£47.50.) John Wiley & Sons Limited. 1991. ISBN 4-7192-841-0.

Invasive fungal infections remain a serious problem in hospital practice, especially in the immunocompromised, where they continue to be a leading cause of morbidity and mortality. The advent of AIDS has meant that many more hospitals in the United Kingdom are now coming face to face with such problems—accurate diagnosis, effective treatment, and prophylaxis. Despite the improvement in diagnostic techniques and the emergence of new antifungal drugs, serious fungal infections continue to pose important questions—an ever increasing variety found in immunocompromised patients, re-emergence of classic infections in modified form, and our continued reliance on amphotericin for the treatment of invasive aspergillus, to name a few.

Because of such therapeutic difficulties the editors have brought out an updated second edition of their monograph which first appeared in 1982, just after the AIDS story broke. Their intention is to gather in a single volume the immunological, mycological, clinical and therapeutic viewpoints of the different fungal infections found in such patients. The first two chapters are devoted to pathogenesis and the predisposing factors of infection, followed by another seven devoted to the more common fungal pathogens. One describes rarer infections such as "hyalohyphomycoses" and a new contribution is on the clinical manifestations and management of superficial fungal infections in compromised hosts. The final chapter reviews the different approaches used for the serodiagnosis of the principal mycoses.

As a clinical microbiologist actively involved in the care of such patients and their infective episodes, have the editors been successful in their stated aims? The answer must be an unqualified yes. This volume needs to be within easy reach of all clinicians involved in the multidisciplinary approach now adopted in the management of infected immunosuppressed patients.

RC SPENCER