Other correspondence

correct protein-bound B₁₂ malabsorption to normal, even in pernicious anaemia.³⁻⁵ Isolated protein-bound B₁₂ malabsorption is associated with achlorhydria⁵⁻⁷ and probably detects a lesser degree of gastric atrophy than that found in pernicious anaemia and in patients with atrophic gastritis with an abnormal Schilling test result.⁸ In the test B₁₂ is bound to an avid but artificial binder such as chicken serum. It is likely that the binder has to undergo peptic digestion before B₁₂ can be released and absorbed. Food B₁₂ is attached to an intracellular binder but is unavailable for absorption until the surrounding cellular elements have been digested. In this way protein-bound absorption tests mimic food B₁₂ absorption and approximate more closely to the physiological state than standard absorption tests in which B₁₂ is presented in a freely available form.

Chanarin questions the clinical value of these tests. We have found them of value in investigating patients with B₁₂ deficiency of no apparent cause who have a normal diet and a normal Schilling test result. We have identified 15 such patients, some with megaloblastic anaemia, and others have described patients with anaemia^{9,10} and neuropathy.^{4,9} These patients are presumably unable to produce enough acid/pepsin to release bound B₁₂ but are able to produce sufficient intrinsic factor to give a normal Schilling test result.

D W DAWSON
D I GOZZARD
M J LEWIS

Department of Haematology,
North Manchester General Hospital,
Crumpsall,
Manchester M8 6RB

References

- Chanarin I. Megaloblastic anaemia, cobalamin and folate. *J Clin Pathol* 1987;40:978-84.
- Doscherholmen A, Swain WR. Impaired assimilation of egg ⁵⁷Co vitamin B₁₂ in patients with hypochlorhydria and achlorhydria and after gastric resection. *Gastroenterology* 1973;64:913-19.
- Doscherholmen A, Silvius S, McMahon J. Dual isotope Schilling test for measuring absorption of food-bound and free B₁₂ simultaneously. *Am J Clin Pathol* 1983;80:490-5.
- King CE, Leibach J, Toskes PP. Clinically significant vitamin B₁₂ deficiency secondary to malabsorption of protein-bound vitamin B₁₂. *Dig Dis Sci* 1979;24:397-402.
- Cattan D, Belaiche J, Zittoun J, Yvart J, Chagnon J-P, Nurit Y. Role de la carence en facteur intrinsèque dans la malabsorption de la vitamine B₁₂ liée aux protéines, dans les achlorhydries. *Gastroenterol Clin Biol* 1982;6:570-5.
- Dawson DW, Sawers AH, Sharma RK. Malabsorption of protein-bound vitamin B₁₂. *Br Med J* 1984;288:675-8.
- Doscherholmen A, McMahon J, Ripley D. Inhibitory effect of eggs on vitamin B₁₂ absorption: description of a simple ovalbumin ⁵⁷Co-B₁₂ absorption test. *Br J Haematol* 1976;33:261-72.
- Ardeaman S, Chanarin I. Intrinsic factor secretion in gastric atrophy. *Gut* 1966;7:99-101.
- Carmel R. Subtle cobalamin malabsorption in a vegan patient: evolution into classical pernicious anaemia with anti-IF antibody. *Arch Intern Med* 1982;142:2206-7.
- Streeter AM, Shum HY, Duncombe VM, Hewson JW, Thorpe MEC. Vitamin B₁₂ malabsorption associated with a normal Schilling test result. *Med J Aust* 1976;1:54-5.

Dr Chanarin comments:

The purpose of a new test is to provide new information of value in either a clinical or research context. It does not seem to me that this has yet been achieved with B₁₂ bound to chick serum. Binding to chick serum seems to make B₁₂ poorly available to controls as well as to patients. Evaluation of such a test requires in-depth assessment of patients in whom it is being performed. It is not enough to *presume* that there is not enough acid/pepsin; these and other factors that might influence a result need to be measured if the results of such a test are to be interpreted in a meaningful way. Nor is it enough to suggest that the chick bound B₁₂ test *probably* detects a lesser degree of gastric atrophy than that found in pernicious anaemia etc; demonstration of such a claim is a not inconsiderable undertaking.

I CHANARIN
Northwick Park Hospital,
Watford Road,
Harrow
Middlesex HA1 3KJ

Book reviews

Blood Transfusion in Clinical Medicine. 8th ed. PL Mollison, CP Engelfriet, M Contreras. (Pp 1033; £49.50.) Blackwell Scientific Publications. 1987. ISBN 0 632 01649 3.

Publishers are not charities. Any book that reaches its eighth edition must be a success in financial terms and therefore popular. At the same time there is always a risk of laurel resting with only the need to maintain rather than create a readership, so it is important that any new edition should be compared with its contemporary competitors as well as its earlier versions.

The eighth quinquennial "Mollison", as before, is a comprehensive treatise on the transfusion of blood and blood products; the theory, the practice, and the complications. The original author has been joined by three others; two transfusion service consultants

and an anaesthetist. Areas now covered in more detail include plasma exchange, marrow transplantation, and leucocyte antigens. There is a whole chapter about the transmission of infection.

The book is up to date and includes references as late as 1987, and, generally, sets the same high standard as previous editions. There are occasional exceptions and omissions; the section on indications for marrow transplantation, for example, is a little stilted, but is perhaps not relevant to this book anyway. There are a dismissive two pages on the practice of autologous transfusion saying it is "rarely used", a claim that may no longer be true, and which perhaps reflects the understandably reactionary view that blood transfusion services rather than events have overtaken the authors.

Such minor disappointments are only worth mentioning because they are like squeaks and rattles in a Rolls Royce. Certainly the book still offers a rich source of

reference for serological queries, as it always did, and so maintains its unique place as a ward round and seminar argument settler. But competition is very fierce. The authors should bear this in mind as they work on the ninth edition which is doubtless already in preparation.

JS LILLEYMAN

The Patient and Decentralized Testing. Ed JP Ashby. (Pp 128; £25.) MTP Press Limited. 1987. ISBN 0 746 20036 6.

This small volume records the proceedings of a two day seminar, organized by ECCLS in Copenhagen in August 1986, which considered the problems posed by the technological advances that have made it possible to carry out an increasing variety of analyses beyond the confines of the conventional pathology laboratory. Included are overlap-

ping contributions from a wide spectrum of interested parties—a patient, a general practitioner, a physician, a nurse, a manufacturer of diagnostic products, and a health department official—as well as pathologists, biochemists, and technologists. The subject matter is divided into sections dealing with the need for decentralised testing, what industry is providing for this purpose, the changed responsibility and cost implications of decentralised testing, and the role of ECCLS in setting standards for good practice.

This publication provides an easily readable and up to date account of a subject of great topical interest in all concerned with the provision of the pathology services. It conveys several important messages, notably that decentralised costing requires an active laboratory role and that it will increase the costs of laboratory services in larger hospitals. I commend it particularly to pathologists, but it could also be read with benefit by clinicians and planners.

FO FLYNN

The Year Book of Pathology and Clinical Pathology 1987. Ed KM Brinkhous. (Pp 462; \$38.50.) Wolfe Medical Publications Limited. 1987. ISBN 0-8151-1242-4.

This year book covers literature in pathology and clinical pathology to August 1986. The format is a model for this type of monograph. Each article selected for each topic is well summarised and is followed by a short, well informed critical commentary usually containing a small number of further important references. Although the subjects are weighted considerably towards histopathology, any pathologist reading this book will have his thirst wetted to explore further some of the topics. The production of this volume is good and the printing is very clear.

MG RIUSLER

Immunology. A Short Course. E Benjamani, S Leskowitz. (Pp 412; \$22.95.) Alan R Liss Inc. 1987. ISBN 0-8451-4228-3

You could be forgiven for asking why anyone would write another textbook of immunology when so many excellent ones are available already. The authors argue that most immunology books "overshoot the mark", overburdening and boring the student. I sympathise with this view and welcome any book that can capture the

essence of immunology and stimulate the reader. There are no surprises in the structure of this book. Twenty chapters cover the traditional areas of basic immunology: each chapter has a concluding summary followed by a series of multiple choice questions and answers which serve as revision. There are five to six key references in each chapter, mostly dated 1986 or earlier.

There are no unique features that will make this book a leader in the field: but it is well written, clearly illustrated, and competitively priced. As such, it is a useful addition to the literature for all students of immunology, undergraduate and postgraduate.

MR HAENEY

Tumor Cell Differentiation. Biology and Pharmacology. Ed J Aarbakke, PK Chiang, HP Koeffler. (Pp 374; \$64.50.) The Humana Press Inc. 1987. ISBN 0-89603-134-9.

This book is one volume of a series on experimental biology and medicine, it contains part of the proceedings of an international symposium held in July 1986, and papers included are a series of up to date mini reviews predominantly related to physiological and pharmacological reagents that affect differentiation and growth of leukaemic and normal haematopoietic cells. The volume is divided into four sections, the first of which starts with an overview by Leo Sacks on the interrelationship of growth and differentiation. Later articles cover recent advances in the identification of growth factors and their target cell populations together with papers which address the potential therapeutic approach of reversing malignancy by inducing differentiation. There follows a series of articles, drawing on both in vitro and in vivo data, on the role of various controlling factors, including vitamin derivatives in myeloid differentiation and proliferation. The third section deals with the role of nucleosides and methylation as controlling elements in differentiation with examples drawn from work on leukaemia and the 3T3-L1 adipocyte system. The last section considers cellular interactions as they affect differentiation, including an article by Stanbridge on differentiation as a mechanism for controlling malignancy in human cell hybrids. In general the book is well written with articles by international authorities. It is, however, of specialist interest and likely to be primarily purchased by libraries as a reference source.

BA GUSTERSON

Notices

Leeds Course in Clinical Nutrition

6-9 September 1988

Both participants and exhibitors should apply for further particulars to:

Mrs H L Helme
Department of Adult and Continuing Education, The University, Leeds LS2 9JT

Tel: (0532) 435036
(0532) 333233 (from summer term)

Association of Clinical Pathologists

Junior Membership

Junior membership of the Association of Clinical Pathologists is available to trainees in all branches of pathology for up to six years or until they attain consultant status. The annual subscription is only £18.00, which may be claimed against tax.

All junior members receive monthly copies of the *Journal of Clinical Pathology*. Other benefits include membership of the Junior members' group and a regular junior members' newsletter, the ACP Newsletter, and all the documents regularly sent to full members of the Association. These include the twice yearly summary of pathology courses included in the ACP Postgraduate Education Programme.

For Junior Membership apply to: Dr J D Davies, Education Secretary, University Department of Pathology, Bristol Royal Infirmary, Bristol BS2 8HW.

ACP Locum Bureau

The Association of Clinical Pathologists runs a locum bureau for consultant pathologists.

Applicants with the MRC Path who would like to do locums and anyone requiring a locum should contact Dr David Melcher, Histopathology Department, Sussex County Hospital, Eastern Road, Brighton BN2 5BE.