Book reviews

GRAM STAIN MODIFIED TO IMPROVE COLOUR CONTRAST

One of the disadvantages of Gram stain is that the final Gram counterstain colours not only the Gram-negative material but also all the other background material in the preparation. A modified technique has been developed to improve colour separation and to eliminate much of the unwanted background Gram-negative stain.

The basis of the modification to be described is Preston and Morrell's (1962) Gram staining method. The procedure is as follows:

- Take the section to water. Take 4 g crystal violet, 40 ml methylated spirit (64 OP), and 160 ml of 1% ammonium oxalate in water, for 30 to 60 seconds for the ammonium oxalate-crystal violet solution. Rinse briefly in water. Apply Lugol's iodine to the section for 30 to 60 seconds. Pour off the iodine solution and wash the section for 30 seconds in iodine-acetone (7 ml liquor iodis fortis and 193 ml acetone) to decolorize. Then counterstain with dilute carbol fuchsin for three minutes. Pour off the excess carbol fuchsin and wash the section in picric acid-cellosolve reagent, from a dropper bottle, for 15 seconds to two minutes to differentiate and counterstain. The picric acid-cellosolve solution, which should be made up freshly at least once a week, is 3 ml 0-6% picric acid to 7 ml cellosolve (2-ethoxy ethanol). After counterstaining blot dry, but do not wash, clear in cedarwood oil (for 10 min), take to xylene in ascending grades of cedarwood oil-xylene, and mount in DPX.

Although this modification of Gram's method was developed specifically to stain infected tooth tissue it is not limited to this one application. The technique described is in one step and is a rapid extension to the standard Gram stain used in many laboratories. Its use can make the microscopic diagnosis of the presence of Gram-negative forms in smears and tissue sections much easier. In such sections the cell nuclei are stained pink and the cytoplasm a pale orange yellow against a colourless or pale yellow background so that Gram-negative bacteria are easily demonstrated.

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GRAM STAIN MODIFIED TO IMPROVE COLOUR CONTRAST—concluded.


References


The causes of death in paraplegia are reviewed as are the causes of renal failure. Dr Silver contributes a chapter on diagnostic tests for urinary tract disease in paraplegia. The bulk of the book is devoted to the pathology of the renal tract, amyloidosis, and hypertension. The section on amyloidosis is of particular value, being based on 65 necropsy cases and a large series of rectal biopsies.

The text is excellently illustrated by more than 50 photographs and photomicrographs, all of high quality, and a large number of tables and diagrams. The style is clear and concise and the book is recommended to all who deal with paraplegia or longstanding renal tract disease.

C. S. PITCHER


The appearance of a new edition of 'Gould' constitutes an important event for all interested in diseases of the heart and blood vessels—and which of us is not? The editor has assembled for this third edition an augmented team of experts in every aspect of the subject. Each author surveys in detail his allotted subject, and with a wealth of photographs and diagrammatic illustration, which is particularly valuable in the chapters on developmental abnormalities. Features added since earlier editions include sections on the conduction system (M. Lev), fine structure in relation to function (D. Spiro, H. Spotnitz, and E. H. Sonnenblick), experimental pathology (Hans Selye and G. Gabbiani), angiography (M. Viamonte and F. A. Hernandez), and histochemistry (J. F. McManus). It is surprising amongst all this detail to find no section devoted to the topic of atherosclerosis: the subject is dealt with in seven brief pages in the section on 'Diseases of noncoronary arteries' by Ira Gore. This is about the coverage that would be expected in a student's textbook and seems curiously inadequate in this context. The subject is further discussed in the chapter on coronary artery disease, but nowhere is an overall survey attempted.

All but one of the 34 contributors to this volume work in the United States, the odd man out being Hans Selye from Montreal. In these circumstances it is not surprising to find some neglect of non-American sources in the references quoted, but even so it comes as a shock to find no mention of the work of Zemplenyi...
and of Adams, both of whom have recently published important monographs on vascular biochemistry.

Since Gould's last edition a British competitor has entered the field in Hudson's monumental two-volume 'Cardiovascular pathology' (reviewed in J. clin Path., 1966, 19, 301) and comparisons are inevitable. In general terms it may be said that Hudson (a single-author production) gives a fuller description of classical cardiovascular pathology and reviews the literature more comprehensively, while the new Gould has fuller accounts of recent advances though its outlook is more parochial. It is superbly illustrated and produced and there is no doubt that the complete pathologist needs both these books on his shelves.

T. CRAWFORD


There is still much misunderstanding about the role of bacteria in chronic bronchitis, the interpretation of sputum examination, and the place of chemotherapy. Studies by Dr May and his colleagues have greatly contributed to a better understanding of these problems.

Dr May emphasizes the difficulty of interpreting findings from single samples of sputum owing to its non-homogeneous nature. Unless this is appreciated, the laboratory may mislead clinicians by reporting the presence and the antibiotic sensitivity of irrelevant organisms, even more than by failing to demonstrate significant ones. The uses and limitations of antibiotics are thoroughly described.

There are short chapters on the bacteriology of other chest diseases, excluding tuberculosis, and on identification of serum precipitins against H. influenzae. The examination of sputum is described as performed in the author's laboratory, where Gram-stained films of sputum are not examined. However justifiable this omission may be in chronic bronchitis, many bacteriologists working in less specialized fields will prefer to examine all purulent sputums by microscopy and culture while bearing in mind the sampling errors in both procedures. But, as Dr May points out, once the bacteriologist is familiar with the problems surrounding sputum examination, details of methods are less important than appreciation of their limitations.

This book, intended primarily for clinicians, contains much of value for clinical pathologists and is strongly recommended to anyone interested in chronic bronchitis.

W. A. GILLESPIE

MAN'S CONCERN WITH DEATH. By Arnold Toynbee and others. (Pp. 280 45s.) London: Hodder and Stoughton Ltd. 1968.

This book arrives at a good moment. Its up-to-date quality has not been merrily achieved by omission of happenings before yesterday. For example, Dr A. K. Mant in an important chapter on today's recognition and definition of death (references up to 1967), gives a fascinating backward look to the publications since 1733, not forgetting two relevant quotations from Shakespeare. History is strongly represented among the eight authors, and the book thereby gains both validity and strength.

The other two medical practitioners have provided articles that are a credit to the spirit of the profession, the late Dr Simon Yudkin's on 'Death and the young', and Professor John Hinton's on 'The dying and the doctor'. The latter is so wise and sensitive that it humbles and yet gives hope of doing better when next in contact with those facing death. It would make a valuable chapter in every textbook on therapeutics.

The historical side is largely influenced by that Nestor, Arnold Toynbee, with his mellow note of rich maturity and still more than able to put things in a freshening way. There is much interesting and clear information on the religions of Europe and the East with their various attitudes to death and the hereafter, and amongst others, two chapters on modern objective study of thought-transference. Altogether a readable book and curiously harmonious despite the diversity of the contributors, held together apparently by one of the publishers who writes an introductory note.

As a doctor and not without experience of ineptitude in dealing with the dying and their relatives, I can say this book is worth possessing even if it had provided nothing more than John Hinton's fine perception.

A. C. LENDRUM

BOOKS RECEIVED
