
In view of the increasing importance of staphylococcal infections in hospitals, it is not surprising that the accent in this book is on those. Nevertheless, in spite of this preponderance, the general principles of dealing with hospital infection are well exemplified in all their aspects. The book is divided into parts dealing with infections occurring in all types of wards, where, for example, the infectious diseases are separately dealt with, and nursing precautions for all of them are clearly described. Very short passages on such subjects as venereal disease and diphtheria could well have been omitted but help to make the book complete. The best parts are those dealing with the administrative control of hospital infection, which show clearly the duties which would be expected of a control of infectious disease officer, together with the local public health authorities. In fact the book is clearly written with the idea of hospital officers, through their bacteriologists, calling in the public health authorities and the public health laboratory services, who would act as epidemiological officers in tracing infections. This is in fact a little idealistic inasmuch as most hospital bacteriologists could, or should, be able to deal with their local infections with their available resources, using the public health laboratories as reference laboratories. The book is authoritative and up to date on all questions dealing with resistant staphylococcal infections in hospitals. It clearly shows where the difficulties have arisen, and makes great use of the present grave situation as regards staphylococci to suggest better use of the known and well-tried aseptic techniques, which still should have been in use in operating theatres and wards. These chapters trace sources of infection in theatres with wrongly designed ventilation, in wards with irresponsible techniques, and in fact lay down a series of guides to hospital officers for steps which should be taken in outbreaks of single cases or epidemics of staphylococcal infections. It is also clear that the authors do not place much reliance on the paraphernalia that go with the usual type of hospital infection control. The reader, be he pathologist or clinician, can find representative examples of infections or epidemics, and the authors are each quoted throughout the book in their several experiences in ward and theatre infection. In the last chapters there is a wealth of information on technical methods of sterilization; the autoclave is dealt with in a most satisfactory way, but this section would certainly not be understood by the majority of the nurses or porters who have to deal with the instrument, as it is written more for the scientific worker, and underlines the fact that the person in charge of the autoclave has to be knowledgeable about bacteriology and the physics of the instrument. A very short section deals with sterilization by dry heat, describing the faults of the ordinary hot air oven, and all too brief paragraphs mention the infrared tunnel and the future sterilization by gamma-radiation. The chapter on practical sterilization and disinfection is excellent. This is the sort of chapter which can be read by any nurse who really needs to know how to sterilize individual things like sputum mugs, urinals, or even the skin of surgical attendants! On the whole, therefore, this book can be strongly recommended to all hospital infection committees and their members, who have at this moment to face the troublesome, persistent, and recurring epidemics of staphylococcal infections, and can certainly learn from this book how to deal with outbreaks in their own hospitals.

A. GORDON SIGNY

RECENT ADVANCES IN CLINICAL PATHOLOGY, Series III.

The publication of this volume was delayed for a number of reasons which the senior editor explains in his preface. In fact nine years have elapsed since the last Recent Advances in Clinical Pathology appeared and these years have seen a tremendous development, both qualitative and quantitative, in the subject. In fact, the four main divisions in pathology have shown signs of growing apart in this period, and their practitioners have become more and more specialized. Each year too sees the incorporation into the accepted routine examinations done in a hospital laboratory of many new investigations, which were a short time before regarded as purely research tools. The choice of subjects therefore for a book purporting to be 'recent' must be a difficult decision for the editor. In the past he has felt that discussions of accepted procedures in investigational medicine were all that was required, but in this number it is clear that the aim has been to acquaint and bring up to date the clinical pathologist with the urgent newer techniques which he will be asked to provide by his clinical colleagues. Thus he can learn how to control staphylococcal infections in hospitals, to diagnose toxoplasmosis, and to talk intelligently with the virologist. In the chemical pathology section the aim has been to describe the newer work on four separate metabolic disorders and these chapters are excellent, although the terminology is occasionally very difficult because of the numerous abbreviations which have crept into the nomenclature. A more technical chapter on paper electrophoresis is relieved by an all too brief survey of the clinical applications.

The histopathological section sets a very high standard in photomicrography, of which the photographs of glomeruli obtained by needle biopsy are quite outstanding. There is an excellent description of the technique of this biopsy and no doubt many pathologists will be tempted to attempt such biopsies hoping to obtain as good diagnostic results. The chapter on fungous
infections also deserves special mention, especially for the excellence of the illustrations.

It is strange to find a chapter on rheumatism and connective tissue diseases amongst the more orthodox haematological subjects, but this is the penalty of having sections in such a volume. In fact the haemoglobinopathies, could, for example, well be called chemical pathology, the fungal infections could be included in the bacteriological section, and it appears that even this book may well encourage those who regard the four main branches of pathology as four quite divorced disciplines. Yet this is obviously not the intention of the General Editor.

The General Editor points out that this new series does not mean all that the earlier editions are now out of date and superseded by this edition. On the contrary, entirely new subjects have deliberately been chosen for inclusion. It becomes therefore even more imperative that there should not be a delay of anything like nine years before the fourth series appears. In fact the hospital pathologist will be demanding a regular flow of such excellent surveys to enable him to carry out the functions so well described by the General Editor in his preface.

A. Gordon Signy


The current number of the British Medical Bulletin, dealing with insulin, is no exception to the extremely high standard of the various special numbers.

After introductory historical surveys by Young and by Best, an excellent review by Sanger of his brilliant work on the chemistry and structure of insulin is followed by an account of oxytocin, vasopressin, corticotrophin and melanotrophin, polypeptide pituitary hormones, the structures of which have been elucidated by methods applied by Sanger. Methods of insulin assay are described by Stewart: the extension of these to the investigation of plasma insulin and its antibodies and other antagonists has been critically discussed by Randle and Taylor, by Valance-Owen, and by P. H. Wright. If anything, in this work there is perhaps an overemphasis on and preoccupation with methods employing the rat diaphragm.

The critical reviews of the action of insulin on carbohydrate metabolism and on fatty acid metabolism by Fisher and by Folley and Greenbaum respectively are the most stimulating of all the contributions. Fisher discusses critically the hexokinase hypothesis of the action of insulin and the possible role of insulin in increasing the permeability of cells to sugar, a possibility later considered by Randle and Young. Fisher tritely remarks that ‘if it is true that the major action of insulin in relation to carbohydrate metabolism is to regulate access of glucose to peripheral cells, then in the biochemical sense it may have no action at all on carbohydrate metabolism’.

Folley and Greenbaum make it clear that there are two defects in insulin deficiency, first in the conversion of extracellular glucose to intracellular glucose-6-phosphate and a second defect at the level of conversion of acetyl coenzyme A to the 4-carbon stage of the synthesis of fatty acids. Considering work on the liver, mammary gland, and adipose tissue, they discuss the possibility that the primary action of insulin might be to facilitate glucose oxidation and so provide TPNH via the pentose phosphate pathway and thus secondarily stimulate fatty acid synthesis in contrast to primarily stimulating the synthesis of fatty acids and by oxidizing TPNH to TPN provide a stimulus to carbohydrate metabolism.

Korner and Manchester have discussed the relationship of insulin to protein metabolism and describe the work in this field leading up to their own observations that insulin in vivo can affect the ability of microsomes to assemble activated amino-acids into polypeptide chains. On the other hand, Randle and Young consider that insulin is most likely to play an intracellular role separate from its effect on the entry of substances into the cell, but confess that it is not known at present whether or not the many effects of insulin are likely to be explicable in terms of a single action.

The four clinically biased papers are excellent and include an account of the relationship of endocrine disorders and insulin action by Russell Fraser, and a highly critical account of the clinical applications of insulin by Oakley who confesses that the long-acting insulins have not fulfilled all that had originally been hoped; he admits to the impossibility of reproducing blood sugar control comparable with that of normal subjects even with frequent doses of insulin. The relation between the molecular structure and hypoglycaemic activity has been considered by Mahler. Indeed, the development of the oral hypoglycaemic agents has been highly empirical and it is still impossible to determine the chemical or physical feature responsible for their activity. Nabarro provides a valuable account of the clinical effectiveness of the various insulin substitutes but states that it is too early ‘to attempt any long-term assessment of the place of any sulphonamide derivatives in the treatment of diabetes mellitus’.

It is becoming a commonplace that acquisition of knowledge passes first through a phase when all seems straightforward and easily understood, only to be followed by a phase of great complexity. Our knowledge of the functions and mechanism of the action of insulin is no exception. When insulin was first isolated 40 years ago, all seemed simple and it would then have been difficult to foresee that even now we would still be ignorant of so much of this subject. This special number of the British Medical Bulletin provides a synthesis of present-day knowledge which will be invaluable for all concerned with this hormone, whether research workers or clinicians essentially preoccupied with its therapeutic use.

Charles H. Gray


This book, based on the Lowell lectures of 1958, is concerned with the stimulus given by medical studies to investigations in the basic sciences. The first chapter is by Linus Pauling and the last by René Dubos and the long list of contributors is a distinguished one. The range of