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BOOK REVIEWS

GENETIC DISEASES IN PREGNANCY—MATERNAL EFFECTS AND FETAL OUTCOME. Joseph D. Schulman and Joe Leigh Simpson (Eds). Academic Press Inc. (London) Ltd. Pp. XVI+493. Price: £32.40/$55.00.

Pregnancy in those suffering from a genetic disorder can impose problems both from the effects of the disease on mother, foetus, or both, in addition to the obvious problems of foetal affliction in those disorders which can be inherited from an affected mother. A further major problem not discussed much in this book is the direct teratogenic effect of some drugs used, often necessarily, in the treatment of diseases such as diabetes, psychosis, epilepsy and clotting tendencies, which are often included under "genetic diseases".

As senior obstetricians have responsibilities for a thousand or so pregnancies a year in Europe, and considerably less in countries, such as the U.S.A, which lack a tradition of trained midwives, no obstetrician is likely to acquire much experience of diseases with an incidence of less than 1 in 10,000; the majority of genetic diseases fall in this category.

In such conditions as diabetes, psychosis or peptic ulcer there is substantial expertise available and it is unfortunate that this book attempts to include these. Not only are they no more "genetic" than the vast majority of "diseases", but such attempts are of little practical value. These are specialist fields in which patients and obstetricians would be well advised to keep clear of geneticists and libraries and to consult those with practical experience.

Unfortunately the book lacks any defined objective: parts are written in libraries, and lack any sense of balance, as well as omitting useful information which might be expected. Others, such as the chapter on the gastrointestinal diseases, seem largely about diseases which are not genetic in any meaningful way and no problem in pregnancy (indeed, pregnancy is well known to benefit peptic ulcer, a common but rapidly declining disorder to which 8 pages are devoted). Some problems, on which expertise is available, such as phenylketonuria, are discussed briefly with little useful advice (the adult dietary limits are not given). The problem of histidinaemia, a doubtful disease entity in man, merely mentions poor balance in the mouse—the absence of otoliths should be mentioned; so far only found in mice, but worth testing for in children. Gout, hardly a genetic disease, and as Hippocrates observed "rare in women and eunuchs" gets three pages, but no mention of the real problem of colchicine medication. Acute intermittent porphyria, a dominant, is mentioned, but not the disastrous effects of pentothal anaesthesia (whose recent use in pregnancy explains much of the earlier female presentation). The sentence "Thus avoidance of pregnancy is not necessarily an important aspect of prevention" is unexplained. Duchenne disease, an X-linked lethal, gets two pages. Dystrophia myotonica, in which there are serious obstetric problems, as well as a remarkable and well documented maternal effect, is not discussed in detail.

One chapter, by Judith Hall on connective tissue disease, actually sticks to the subject of the title, and alone justifies purchase, since it provides

and summarises important facts and advice not easily available, *e.g.*, the spine in achondroplasia is unusually "needle proof".

Two omissions are the sporadic infantile fragilitas ossium, which is more common than the recessive, and the need to avoid episiotomy in the Ehlers-Danlos' syndromes.

The chapters on clotting, haemoglobinopathies, and endocrine disorders are useful, but largely eclipsed by more extensive treatments in books on these subjects.

There is no chapter on the foetal hazards of maternal treatment, and, even though various diseases of limited claims to be more genetic than others are included (such as gout, diabetes and peptic ulcer), the foetal hazards of common and effective oral medication are not discussed. This book does not succeed in its objective, and deserves purchase only by the larger libraries used by obstetricians and orthopaedic surgeons.

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INTRODUCTION TO QUANTITATIVE GENETICS. Second Edition. D. S. Falconer. 1981. Longman, London and New York. Pp. viii + 340. Price: £9.95.

The first edition of this book appeared in 1960 and proved to be a much respected, widely used and frequently quoted text throughout the period until the publication of the second edition. The characteristics of the original book which gave rise to its success were the simple, lucid yet comprehensive style of writing, the minimal amount of previous mathematical understanding required to master basic quantitative genetic concepts and the coverage of the subject. It was perhaps hardly surprising, in view of Dr Falconer's laboratory experience, that much of the experimental work mentioned in the first edition was on laboratory animals especially mice and Drosophila. This aspect gave rise to the only major criticism of the book of which I am aware. The narrowness of the experimental evidence referred to did not appeal to students who were primarily interested in botanical research, as well as plant and large animal breeding. For those who could sensibly overcome the narrowness of their interests, Dr Falconer's first edition was to provide an excellent introduction to all aspects of quantitative genetics.

The merits of the first edition are at least as well displayed in the second. The structure, chapter headings and length of text are very similar in the two editions. The book covers a basic and straightforward presentation of gene frequency changes in populations, the structure of populations, variance, heritability, selection, inbreeding, crossbreeding, threshold and correlated characters, and a final discussion of metric characters under natural selection. The treatment is comprehensive but does not embrace all approaches that have been adopted to solving quantitative genetic problems. For this reason it is an admirable teacher's text whilst also being an invaluable support to more advanced research workers in this and related subjects.

Some may think that their favourite approach to an aspect of quantitative genetics has been omitted unnecessarily but perhaps they should recognise that the simplicity of explanation is a boon to the novice. In saying this I should emphasise that the book does reach the limits of