

## Medicine and Books

### Battle long ago

*Platt versus Pickering: an Episode in Recent Medical History.* Ed J D Swales. (Pp xviii+156; £45 including postage.) Limited edition of 400 copies. The Keynes Press. British Medical Association. 1985.

Once again the Keynes Press has done honour to the memory of Geoffrey Keynes, the distinguished bibliophile whose love of typography and design is evident from such masterpieces as Siegfried Sassoon's *Vigils*. Sir Geoffrey would approve not only of Sebastian Carter's design and choice of type face, he would be pleased to see his old friends the Cambridge University Press printing this special edition, which is limited to 400 copies. He would be pleased, moreover, with the content of this volume, which, unlike many discourses on historical events, manages not only to make an interesting read but is also informative. It is the latter attribute that broadens the readership appeal of Swales's *Platt versus Pickering*. Those who knew Platt or Pickering personally, and all who espouse the specialty of hypertension will be interested in this book as a nostalgic reminiscence of a classic controversy. For doctors too young to have known Pickering and Platt, and for those outside the specialty of hypertension (or even of medicine) with an interest in the means by which a science advances, this book will intrigue. For the former the essence of the argument is paramount, whereas for others the fascination will be the behavioural reality of scientific life whereby two men of high intelligence by engaging in polemical debate with what at first seem to be mutually exclusive opinions, after 17 years of heated argument can blend together within one concept both viewpoints, and in the process advance scientific understanding. That one may have had more right in the substance of his reasoning than the other is of little importance: what is relevant is that the one, by provoking intellectual thought in the other, stimulated frequent and searching analysis and reanalysis of the facts so that ultimately science was served by a compromise of both viewpoints and not misled, as has happened so often in medical history, by the overpowering dogma of a persuasive individual. There is no denying, of course, that the whole affair was given an air of academic glamour by the colourful personalities of two titled professors of medicine capable of eloquent expression.

It all began in 1947 with a study by Platt in the *Quarterly Journal of Medicine* entitled "Heredity in hypertension," in which he set out to show that hypertension was a genetically transmitted disease. This paper is worth reading even if only as evidence of the change in the literary style of scientific writing over the past 40 years. The persuasive argument put forward by Platt rests more on his ability to state his case than on the scientific evidence on which is based his reasoning. Editorial policy of the time permitted reputation and erudition to obscure fact, and faulty dogma was more easily established than might be possible today, when editorial concern centres on scientific method and statistical design at the expense of literary style. Platt's unproved hypothesis was that "essential hypertension is a hereditary disease conveyed as a mendelian dominant with a rate of expression of more than 90%" and that "the great majority of cases of hypertension which do not conform to this rule are not essential hypertension at all, but are secondary to some renal or other cause."

Pickering's first contribution to the debate was in 1952, when he tended to agree with Platt on the importance of the genetic factor. As he analysed his work, however, and published his results in four lengthy papers in *Clinical Science*, his conclusions changed and were summarised in a lecture, "The genetic factor in hypertension," delivered to the American College of Physicians in Philadelphia in

1959, the same year as his book *High Blood Pressure* was published in America. In Pickering's papers the reader is introduced to a style of writing altogether clearer, and for that more persuasive than the style of his adversary. Pickering, who bemoaned "the lamentable failure of the average graduate to use the English language with precision, economy, and elegance," wrote clearly and without ornament. His reasoning is not only more persuasive in its presentation: he is scientifically sound in his analysis of earlier studies and in his use of statistics in making conclusions from his own results. In his lecture he acknowledged that previous workers were correct in postulating a genetic factor in hypertension but wrong in attributing this to mendelian dominant inheritance, which he believed to be the result of an artefact. He showed that in the general population at any stage "arterial pressure shows a distribution curve of the usual type, except that it tends to be positively skewed." He was unable to find evidence of two populations, and considered any division between normal and abnormal as purely arbitrary. Pickering's iconoclastic interpretation of apparently conflicting results was introduced with some temerity:

"A restatement of the facts would define essential hypertensives as that group of the population with arterial pressures exceeding a certain value arbitrarily selected and in whom no specific cause can be detected to account for the high pressure. It is suggested that the factors causing it are factors operating generally on the population. Of these factors the contributions of age, sex, and inheritance can be defined approximately. The influence of environmental factors, which would seem by exclusion to be of great importance, remains to be explored."

Pickering had made the challenge, Platt chose the arena for the ensuing contest—the *Lancet*—which, ever since its inception, has welcomed controversial discussion. The *Lancet*, and indeed general opinion also, favoured Platt, whose appeal was to the clinician rather than the scientist. Pickering's concept, he claimed, had failed to convince a number of clinicians.

We may note with amusement a degree of editorial flexibility that permitted Platt to satisfy the *Lancet's* requirement of a summary:

"This paper re-examines the data of Hamilton, Pickering, Fraser, Roberts, and Sowry on essential hypertension and gives reasons for doubting their hypothesis as to its nature. It is quite short. The reasons cannot be summarised and those who seek to understand the arguments should therefore read the paper."

Swales has brought together skilfully the essence of each combatant's viewpoint while sparing us the tedium to which such a lengthy discourse must at times descend. Indeed, Pickering himself voiced his irritation in 1962:

"Perhaps it is the end of term feeling in me, but I have to confess that I am a little tired of being misrepresented and then abused. If only my critics would read what I have written and try to understand it, instead of inventing Aunt Sallics, we would perhaps make progress."

Sir George's plea was acknowledged in the 'seventies, and now again in this posthumous tribute by Professor Swales. Though Pickering may be judged the victor, the decision is one made on but few points, and the result was by no means an early round knock out. Hypertensologists can accept Pickering's multifactorial concept of hypertension, while also being able to reconcile an as yet unidentified subgroup in which hypertension might be a manifestation of a single gene behaving as mendelian dominant. Indeed, by looking at the academic backgrounds of Platt and Pickering (as Swales does in his comprehensive and balanced epilogue) we can understand how

each could fail, at least for a time, to see the other's point of view. Platt, the clinician, saw his patient as dying from a discrete genetic disorder named hypertension ("a bastard" term in Pickering's view), whereas Pickering, a physiologist in outlook from the Lewis school, was rightly obsessed with the variability of blood pressure and the multiplicity of factors that might influence its behaviour:

"Now look at blood pressure. It depends on the fourth power of the radius of a vast number of different blood vessels of different sizes in the body. It depends on the length of those blood vessels (which nobody has ever studied). It depends on the viscosity of the blood. It depends on the cardiac output. It depends on the baroreceptors. It depends on the secretions of the cortex of the suprarenal, on the medulla of the suprarenal, on the secretions of the pituitary, on the electrolyte composition of the blood. Now, do you really think this is going to be manifested as a single gene? I mean, to me it is so incomprehensible. If somebody shows the gene, I will believe it, but not until then."

It is regrettable, but perhaps understandable, that at the end of perusing a scientific controversy that preoccupied both Platt and Pickering for the greater part of their academic careers the reader is not much the wiser as to the characters of these men. The details of personality should not, of course, concern us; our interest should be in the fruits of achievement, but then curiosity is a dominant trait of the human condition. Thus the paintings of Pickering and Platt reproduced here add to the reader's enjoyment of this book.

It may be predicted with confidence that *Platt versus Pickering* will run to an ordinary edition, even if only for distribution at some future gathering, such as the International Society of Hypertension, and looking towards such an event an omission in the bibliography—namely, the final major contribution of new data by Platt, "Heredity in hypertension"—might be corrected.

This enjoyable volume will be seized upon by that growing band that count themselves the proud owners of all the first editions from the Keynes Press, after which a fraction of the hypertensologists in the cardiological discipline will be fortunate enough to obtain this historic, informative, and beautifully produced book.

EOIN O'BRIEN

## Essential nephrology

*Therapy of Renal Diseases and Related Disorders*. Ed W N Suki, S G Massry. (Pp 752; figs; £99.85.) Martinus Nijhoff. Distributed by MTP Press. 1984.

Although many nephrology texts have been published recently, Dr George Schreiner's claim in the foreword that this one is unique must be correct. I know of no other book that is devoted essentially to details of the day to day practical therapeutics of renal diseases. But do not fear a cookbook approach. Each topic has a full account of aetiological, clinical, and diagnostic features as a firm basis for a critical analysis of the therapeutic options.

The book divides into sections, the first concerned with disorders of fluid, electrolyte, and acid-base balance. There are authoritative accounts of hypo-osmolar and hyperosmolar states and of disorders of potassium, calcium, magnesium, phosphate, and acid-base regulation. The second part deals with the intrinsic renal parenchymal diseases, both glomerular and tubular interstitial, and the third deals with renal involvement in systemic disease such as systemic lupus erythematosus, vasculitis, dysproteinaemias, liver disease, pregnancy, and diabetes mellitus. There are shorter sections on neoplasia of the urinary tract (useful since patients do not invariably fall neatly into the correct clinic or ward), hereditary and congenital disease, chemical and physical injury, and a particularly useful chapter on the bladder catheter. Inevitably, the lion's share is devoted to uraemia, with three subsections, one concerned with nutrition, osteodystrophy, early renal failure, and peritoneal dialysis, and the others with haemodialysis and transplantation. It is odd to find the chapter on nephrolithiasis and nephrocalcinosis sailing under the "transplantation" flag. The 48 chapters are all fully referenced, with an up to date bibliography, mainly of American publications, but generally none the worse for

that. This also holds for the background of the authors, but there is a healthy international flavour, with contributions from the United Kingdom, Canada, Israel, Australia, Sweden, France, Belgium, and Germany. The index is excellent.

The editors promise further editions to reflect further advances in renal therapy, to which we may all look forward. I suggest that when the next edition is being prepared Drs Suki and Massry take a tighter editorial approach. They should certainly do something about the impressive and remarkably consistent array of spelling mistakes and leave out the discredited Darsee reference on page 119. More importantly, they should provide cross references between chapters to avoid unnecessary duplication, such as the tables of the types of renal tubular acidosis on page 149 and again on page 159 (or at least get the authors to agree on which disorder causes which RTA). The rather thin accounts of essential hypertension and cardiac failure could profitably be omitted. I would like to see a fuller account of nephrolithiasis in the light of modern urological techniques.

I enjoyed reading this book and have already got a good deal of use out of my copy. Unhappily, others will have to pay rather a lot for theirs, but no medical library can afford to be without one.

B I HOFFBRAND

## Metabolic disease at birth

*Methods in Laboratory Medicine*. Vol 4. "The Laboratory Diagnosis of Selected Inborn Errors of Metabolism." V A LeGrys. (Pp 174; figs; £28.50.) Praeger. Distributed by Holt-Saunders. 1984.

Anybody who teaches inborn errors of metabolism will have the problem that the textbook they recommend to their students is likely to be large, detailed, and overwhelming to the metabolic novice. This new book will be welcomed by the teacher and new student alike, as it provides a perspicuous introduction to metabolic disease. The author, an assistant professor of clinical chemistry in the University of North Carolina Medical School, presents the key features of 11 commonly encountered metabolic diseases. Each disease is discussed in terms of the metabolic pathways, clinical findings, genetics, principles of treatment, and laboratory investigations. A particularly useful final part of each chapter is a case that illustrates the typical results of diagnostic and routine investigations in the disease.

Opening with a chapter on phenylketonuria is a good choice, as many students will already have heard about the disease. The metabolic pathways are given in sufficient detail to allow the author to cover the important aspects of bioprotein metabolism and its investigation in an infant with hyperphenylalanaemia. Like all chapters in the book, this one contains a flow diagram that illustrates the logical application of diagnostic tests to the investigation of the disease. The next chapter, on hypothyroidism, covers screening for thyroid dysgenesis rather than detailed investigation into dysmorphogenesis. Screening tests and definitive enzyme assays on fibroblasts are discussed for classical maple syrup disease and the intermediate, intermittent, and thiamine responsive forms of the disease. The technical details of such tests are not given, for the book is not a treatise on analytical methods. Carbohydrate metabolism is represented by galactosaemia and glucose-6-phosphate dehydrogenase deficiency. There are chapters on homocystinuria, cystic fibrosis, and muscular dystrophy before the reader is introduced to the more complex biochemical problems that are associated with adrenal steroid biosynthesis, mucopolysaccharidosis, and Tay-Sachs disease. Each chapter ends with about 30 references, which are selected because they are seminal papers, major reviews, or reference texts rather than the most current articles. The contents give a balanced résumé of metabolic diseases. A final chapter on the selection of laboratory tests to be used in the initial screening of an infant with suspected metabolic disease, the application of definitive techniques of tissue culture, and the use of DNA analysis would have been beneficial. For the reader in the United Kingdom there is a problem because concentrations are