

SMALLPOX

*Smallpox.* By C. W. Dixon, M.D. (Lond.), D.L.O. (Eng.), D.C.H. (Eng.), D.P.H. (Lond.). Pp. viii + 512. 284 illustrations, 74 in colour. R13.00, London: J. & A. Churchill. 1962.

It has certainly been most exhilarating and interesting to have had the privilege of reviewing this publication on smallpox by Dr. C. W. Dixon.

He has attempted to combine the clinical appearance of smallpox with public health aspects and in this way to fit the medical officer of health, who very directly—as stated by the author—should be wholly and solely responsible for dealing with outbreaks of smallpox which might occur in his area.

Certain of the views regarding the spread, as set out by the author, are most advanced, and will require further investigation with a view to proving their validity. The production of droplet infection in the sick room, together with the contamination of bedding and blankets which results therefrom has always been accepted as one of the main modes by which the smallpox virus is spread to susceptible persons. This droplet production has in the past been considered as being due to early maturation of lesions in the throat and palate. The present theory that the virus is extruded from the lungs is new, and might well, on epidemiological grounds, answer the query why an individual might become infected after doing no more than stand in the doorway of the sick room.

In the establishment of the diagnosis the importance of a pre-eruptive pyrexia, associated with constitutional upsets, is also given the emphasis that it so rightly deserves. This, together with the characteristic distribution of the rash, and its predilection for pressure points should, in the vast majority of cases, lead to a correct diagnosis.

There might be dissension regarding the author's contention that smallpox is infectious immediately after the occurrence of the pyrexia and before the appearance of the rash. His opinion that *variola sine eruptione* is much more common than is at present appreciated, and that this form of the disease is also infectious for the few hours that the viraemia is present, is also a new point which will require further study.

Dr. Dixon covers very fully the principles of smallpox control and quite obviously is not a staunch supporter of compulsory infant vaccination. With a great deal of justification he argues the point that if compulsory vaccination of this group is insisted upon in any modern society, then the equally important compulsory re-vaccination at set times must be carried out so as to render the population group relatively immune to the ravages of *variola major*.

The modification of the disease resulting from haphazard vaccination has been one of the main reasons for misdiagnosis and the occurrence of smallpox epidemics. On the other hand, recent outbreaks in Great Britain, which have received critical comment in this publication, indicate that it is the unusual

fulminating *variola major* (malignant Type I as designated by the author), where the patient dies within the first three or four days of his illness, that is today so frequently missed.

The chapters on the smallpox hospital, on disinfection and the disposal of bodies dying from smallpox, on the recommended manner of vaccinating (by three insertions as against the single insertion recommended by most authorities) in the case of contacts, are all most topical and of particular applicability and use to the medical officer of health of a local authority faced with an outbreak of the disease.

The much greater liability of laundry staff employed in large private laundries to contract smallpox is very well highlighted.

The book is beautifully printed; the black-and-white and colour photographs are outstandingly good and reveal even more succinctly the points which the author has gone to such pains to make. The index is full and, on checking, references were found to be accurate.

Several minor typographical errors exist in the various portions of the text, which it is hoped will be remedied in the next edition. References to figures and photographs in the text are also, in some cases, inaccurate.

I have no doubt that this is a book which should be on the bookshelf of every general practitioner, dermatologist, consulting physician and medical officer of health; and, furthermore, that it should not remain on the shelf once read, but should frequently and regularly be opened and consulted. The watchword of Wanklyn should forever be before every one of us: 'Can it be a case of smallpox?'

E.D.C.

RADIOGRAPHY OF CLOSED CHEST INJURIES

*The Roentgenological Aspect of Nonpenetrating Chest Injuries.* By J. R. Williams, M.D. and F. J. Bonte, M.D., F.A.C.R. Pp. x + 135, Illustrated. R6.00. Springfield, Illinois: Charles C. Thomas; and Oxford: Blackwell Scientific Publications. 1961.

This treatise is written in a concise, lucid and graphic style. The reproductions of the radiographs are excellent and fully illustrate the text. This work provides a comprehensive survey of all aspects of closed injuries of the chest, including even trauma to the thymus gland.

The authors rightly stress the importance of serial radiography at frequent intervals, since the pattern of thoracic visceral damage alters so rapidly.

It is pleasing to note the prominence given to the pioneer work of Zuckerman on 'Blast injuries of the lungs' during the early disastrous days of World War II in Great Britain.

This book is thoroughly recommended to radiologists, thoracic surgeons and casualty officers, owing to the prevalence of closed chest injuries occurring in automobile and industrial accidents.

W.J.L.

## PHYSIOLOGY IN SURGERY

*Fundamental Approach to Surgical Problems.* By L. F. Williams, jr., M.D. and G. F. Wynne, jr., M.D. Pp. xiv + 216. R.20. Springfield, Illinois: Charles C. Thomas; and Oxford: Blackwell Scientific Publications. 1962.

The ideas underlying this book are pleasantly conceived, and many of the usual approaches to standard problems of the physiology of surgery are emphasized by being viewed from an unusual angle.

As a whole the book represents a superficial review of the subject. No evidence of original work is presented, but any work which emphasizes physiology in surgery is welcome.

It is very suitable reading for final-year students, house surgeons and physicians. R.D.H.B.

## SENILITY

*The Senile Brain.* A clinical study. By R. S. Allison, V.R.D., M.D., F.R.C.P., D.P.M. Pp. vi + 288. Illustrated. R5.00. London: Edward Arnold Publishers. 1962.

A book covering the early symptoms and signs of intellectual decline caused by organic disease, especially as they occur in the elderly, is most welcome. The author describes various procedures of clinical examination and differential diagnosis, based on 198 patients personally examined over a period of 13 years.

The roundness of style, the repetition and the fact that only 35 patients were actually over the age of 65, detract from this book. D.G.

## CONTROL OF GASTRO-INTESTINAL SECRETIONS

*Secretory Mechanisms of the Gastro-Intestinal Tract.* By R. A. Gregory, D.Sc., M.R.C.S., L.R.C.P. Pp. vii + 248. Illustrated. R3.60. London: Edward Arnold. 1962.

This monograph presents an authoritative review of the evolution of our current concepts of the nervous and hormonal mechanisms controlling gastric, pancreatic and intestinal secretions. The author has referred freely to the works of Pavlov and Babkin, and has tempered conclusions drawn from more recent studies with his considerable personal experience in the field. The book, based on seminars given by the author to his senior physiology students, is well written, clearly illustrated and infused with the rare quality of masterly assessment of available data. Physiologists and gastro-enterologists will find this an invaluable book, and surgeons will be specially interested in the chapters on the nervous and hormonal control of gastric secretion. I.N.M.

## DERMATOLOGY

*Dermatologie und Venerologie.* Vol. 1, part 2. Ed. by H. A. Gottron and W. Schönfeld. Pp. xii + 745 to 1464. Illustrated. DM 370. Stuttgart: Georg Thieme. 1962.

The subjects treated in this volume are general clinical dermatology; statistics; ethnographical dermatology; weather, climate and the skin; instruments; general therapy; chemotherapy and antibiotics; biochemistry of the skin; syndromes and diseases named after persons; infertility in the male; and trichomonad infections.

Nobody is likely to complain of errors of omission except in the list of syndromes (the indefatigable Henri Gougerot is poorly served, and there are other lapses) and in the chapter on ethnographical dermatology, which is largely devoted to Turkey.

In aiming at completeness the authors go too far. The section on instruments with its photographs of syringes, needles and the outside of a diathermy machine is redundant, and one question the necessity of reduplicating material to be found in textbooks on pharmacology in the chapters on treatment. The weather section contains a wind scale. J.M.

## HENRY HEAD

*Henry Head Centenary. Essays and Bibliography.* By K. W. Cross, Ph.D., M.B., M.R.C.P.; R. A. Henson, M.D., F.R.C.P.; M. Critchley, M.D., F.R.C.P.; and Sir Russell Brain, D.M., F.R.C.P. Pp. 41. 30c. London: Macmillan. 1961.

The year 1961 marked the centenary of the birth of Henry Head, one of the most influential members of the modern school of British neurology. To celebrate the occasion, a number of commemorative and learned lectures were given by some of his distinguished successors and 4 of these were published in *Brain*, the journal which Henry Head had once edited. These 4 papers, together with a bibliography of Head's writings, have now been reprinted in pamphlet form and are available to interested persons for little more than a nominal fee.

The papers by Drs. Cross, Henson and Critchley deal respectively with Head's work on the paradoxical respiratory reflex, sensation, and aphasia. In each case, Head's contribution is described and then critically discussed in the light of more recent knowledge. In each instance, Head's theories and the accuracy of some of his observations are found wanting, but his influence on the development of modern neurological thought is shown, nevertheless, to have been considerable and beneficial.

Each of these 3 predominantly scientific papers provides glimpses of the personality of Henry Head; in the fourth paper, Sir Russell Brain (now Lord Brain) deals mainly with 'The man and his ideas'.

Head is revealed by these writers as a fine example of the best type of 'eminent Victorian'. He was descended from Quaker stock and his life epitomized the traditions of service and integrity of this noble sect. He was highly regarded by his fellows as a poet and as an authority on literature and art; one notes with respect that he was able to develop and to maintain his many interests and activities, including his neurological researches, while continuing to practise busily as a general physician. Like so many scientific pioneers through the ages, Head reflected in his writings the general cultural spirit of his times; in his scientific heyday, Darwinism was all the rage and particularly in his attempts at explaining the aphasia and the integration of the sensory system, Head showed how much he was influenced by the evolutionary doctrine.

Head is best remembered today for the brave experiments which he conducted on himself in order to study the peripheral sensory pathways. He arranged for a segmental excision to be performed on the radial and cutaneous nerves of his left forearm and then proceeded to record the progressive return of sensation as regeneration took place. His observations led him to postulate 2 types of superficial sensory nerve fibres: those conducting 'protopathic' (crude, poorly localized) sensation and those which transmitted 'epicritic' (fine, discriminatory) sensation. But while admiring his daring, the modern critic realizes that the subjective assessment of personal sensations can be grossly misleading, and although the matter is not yet settled, more objective studies have led to the rejection of several of Head's observations and interpretations.

Head's versatility, however, will ensure his place in the history of science. Historians of the future may forget about the cutaneous nerves of Head's left forearm, but as interplanetary travel becomes commonplace, they will surely recall that Head made an important early contribution to the science of space flight. Here is the relevant excerpt from Dr. Henson's commemorative paper:

... in 1918 he reported that a test pilot had experienced graying of vision followed by fainting while flying in a small, horizontal, banked circle in which positive acceleration reached 4.5 g. He wrote, "this pilot found experimentally that whenever the acceleration (g) was pushed up to a high figure, he experienced the characteristic darkening of the sky which was preliminary to fainting". This was the first account of the effect of positive acceleration on pilots in flight.' H.G.

## SPEECH DISORDERS

*Speech Disorders.* Aphasia, apraxia and agnosia. By Sir Russel Brain, *Bt.*, D.M., F.R.C.P. Pp. v + 184. Illustrated. R5.20. Durban: Butterworth. 1961.

This is a very good book. It is a compact, lucid account of a difficult and complex subject that extends into the fields of linguistics, phonetics and communication. Speech is a strictly human activity and we can learn nothing about it from animal experiments. Naive psycho-anatomists have made the cardinal error of ascribing conventional divisions of speech function to discrete brain areas because lesions have been found in these areas in affected patients; they have not appreciated the fact that such lesions only disturb the physiological processes which underlie speech.

Further, the understanding of words and expressing meanings by their use is very much a psychological phenomenon. It is not until a combined anatomical, physiological and psychological concept is evolved that the problem can begin to be understood and this is what Lord Brain has so ably done. He is never dull, never obscure, always logical and, with a profound knowledge of the literature of the subject, is factually critical or approving of other ideas and theories. Every neurologist and physician, or prospective one, must have and read this book.

S.B.

## THE CEREBROSPINAL FLUID

*The Anatomy of the Cerebrospinal Fluid.* By J. W. Millen, M.A., M.D., D.Sc. and D. H. M. Woollam, M.A., M.D., M.R.C.P. Pp. viii + 151. Illustrated. R5.00. London and Cape Town: Oxford University Press. 1962.

This little book is a most valuable corrective to the perpetuation of mistakes that have appeared in neuroanatomy textbooks in the past 20 years in the sections concerned with cerebrospinal-fluid physiology. The system of spaces that run from the perineuronal spaces to the epispinal spaces of His have been shown to be artifacts caused by shrinkage during fixation or to be openings from the pressure of injections. Yet reference to two of the best-known neuroanatomy textbooks and to a leading book on neurophysiology, all in their latest editions, shows that these perineuronal 'spaces' are still accepted as natural phenomena.

The authors clearly describe the minute anatomy of the pia mater and arachnoid, and it may come as a surprise to many that the arachnoid mater is quite avascular. A great deal of recent information, with admirable illustrations, is packed into this book which deserves the attention of all who are in any way interested in the mechanisms of the nervous system.

J.M. Mac G.