

DO ORGANISMS PRE-EXIST IN THE PATIENT?

Do organisms capable of producing puerperal sepsis commonly pre-exist in the woman? Mr. Victor Bonney says the answer is Yes, and declares they can be constantly isolated from the lower bowel and peri-anal skin. The extensive study of infected gun-shot wounds during the recent war showed that the more virulent bacteria obtainable therefrom were, in general, excremental in origin—that is, they were derived either from the individual's own fæces or from the fæces of some other individual, or from the fæces of some animal in the form of manure.

In May 1919, when Mr. Victor Bonney first put forward the views given above, he encountered very strong opposition. To quote his words, "The principal arguments of those who defended the outlet of the intestinal canal from the aspersions I had cast upon it appeared to be: first, that through ages of evolution it had always been next door to the vagina and at times coterminous with it, and therefore, being natural, must be harmless; and, secondly, that faecal contamination of perineal lacerations frequently occurs, and healing by first intention takes place as a rule. To the first argument, which reminds me of the philosophy of Crichton in Barrie's classical play, I would reply that Nature makes for death no less surely than she makes for life; but the second requires closer discussion. It is true that tissues accustomed to faecal contamination show a strong resistance to infection by intestinal organisms; if it was not so, successful intestinal anastomosis, for instance, would be impossible, and all operations on the anus would be bound to end in necrosis or suppuration. But the case is very different when intestinal organisms are implanted in tissues to which their presence is entirely foreign. This knowledge, which has been gradually crystallising out of surgical experience, obstetricians would have come by sooner had midwifery been taught and practised as the branch of surgery which it is."

HOW DO THE ORGANISMS GET INTO THE UTERUS?

In this regard, attention should be drawn to the remarkable address delivered by Mr. C. J. Bond at the meeting of the British Medical Association at Leicester as far back as 1905.

He detailed certain experiments carried out by him, which showed that minute particles of indigo, carmine, or litmus placed in the cervix and upper vagina could be detected in the Fallopian tubes in about twenty hours afterwards, having been apparently carried up by an ascending current in the secretion from the wall of the uterus. There would appear to be a current along the surfaces of these canals flowing in the reverse direction to the main stream of the contents, analogous to that along the bank of a swift-flowing river. Bond's work would seem to offer a complete explanation of the fact that the symptoms in a large proportion of the cases of puerperal sepsis appear much later than they should do if the disease were due to direct implantation of organisms on the uterine wall during labour.

PROPHYLAXIS AGAINST SEPSIS.

The principle of antiseptic surgery as received by Lister was the creation of antiseptic conditions, in the wound primarily, and, therefore, as a corollary in all that surrounded and touched the wound. To prevent the conveyance of organisms from the adjacent skin into the wound the up-to-date surgeon attaches towels or sheeting in such a way as to cut the skin out of the operation area altogether. It is impossible fully to apply this method to the vagina in labour, but at least the anus should be excluded in all operative midwifery by fixing over it, either by clips or stitches, a large gauze pad soaked in a strong non-irritant antiseptic.

"VIOLET-GREEN."

Professor C. Browning and Mr. Bonney have shown that practical sterilisation of the ano-perineal skin can be effected by the use of "violet-green"—a one per cent.

solution of equal parts of crystal violet and brilliant green in half-and-half alcohol and water—and it has recently been suggested that this antiseptic should be used to paint the vagina and its approaches prior to any operative procedure, and that it should be used as the lubricant every time a vaginal examination is made. Mr. Eardley Holland has suggested that vaginal examinations be done away with altogether and rectal examination substituted in its stead, this mode of examination having all the advantages of the older method and none of its disadvantages. The recto-vaginal septum is thin and lax, and the state of the cervix, the sutures and fontanelles, the degree of descent of the head in the pelvis, and even a prolapsed cord, can all be felt with the utmost clearness. Furthermore, rectal examinations are infinitely less trouble, for none of the aseptic ritual, so necessary in vaginal examination, is required, and the number of examinations need not be restricted.

INTRA-UTERINE DOUCHING.

One of the recognised treatments for many years has been the douching out of the uterus and the removal of "retained products" from its cavity by means of a blunt curette. This practice, however, has been recently condemned by some observers, on the ground that the antiseptic used is so weak that when mixed with the uterine discharge it is doubtful if it could have any lethal effect on organisms merely in the uterine cavity, and certainly none on those which have invaded the intra-mural tissues, whilst the manipulation necessary not infrequently disturbs injected thrombi and spreads the infection.

Progressive sterilisation as suggested by Carrel is with difficulty applied to the uterus, for it is not easy to arrange irrigating tubes so as to be sure of the antiseptic reaching every part of the infected surface, but the matter is still *sub judice*.

CONCLUSIONS.

We must, then, regard the theory of heterogenous as distinct from autogenous infection to be an exceedingly valuable one, and which once accepted will lead to a long series of investigations which may well culminate in the discovery of a specific treatment for this disease. To each city hospital where cases of puerperal fever are admitted there should be attached a keen young obstetrician in touch with a pathological laboratory and competent to undertake such surgical treatment as may appear to him advisable.—*The Hospital*, Oct., 1920.

Reviews.

A SYNOPSIS OF SURGERY.—By E. W. HEY GROVES.
Fifth Edition. Published by John Wright & Sons,
Ltd. Price not given.

THIS well known book has been revised and re-written, and now summarises in its pages the chief results of our war experiences, especially in the sections dealing with fractures, and is, as before, a very valuable and complete summary of Surgical Diagnosis and Practice. It now contains a certain number of illustrations, chiefly illustrating the author's well known splints, which were so much used in war hospitals; which are very useful, and the diagrams illustrating surface markings, have been altered and improved. It is a very useful reference book for any busy practitioner or teacher, though too condensed for students' use, and can be strongly recommended.

VILLAGE SANITATION.—By Dr. CHUNILAL BOSE, I.S.O., M.B., F.C.S., late Officiating Chemical Examiner, Bengal. Published by Dr. Jyotiprakash Bose, M.B. Price Four Annas.

THIS little publication is one of the rare attempts on sanitary literature in Bengali. After briefly touching on the present deplorable condition of the rural districts and the duties of the educated classes towards its amelioration, the author deals with the following subjects in a most elementary manner: 1, water; 2, food; 3, air; 4, dwelling houses; 5, malaria; 6, prevention of small-pox, cholera, phthisis and influenza. The information contained in it is by no means intended to be exhaustive, yet it is quite useful and capable of ready assimilation by the laity. The price is commendably low. We wish this book a very wide circulation for the good of the masses.

THE COURSE OF OPERATIVE SURGERY.—By Prof. Dr. VICTOR SCHMIEDEN of the University of Berlin and Halle, and Mr. ARTHUR TURNBULL, of the University of Glasgow. (Published by Baillière, Tindall & Cox, 8, Henrietta Street, Covent Garden, London.) Royal 8vo. size, pp. 350, with 436 illustrations. Price 25/- net.

IN this work the authors furnish students and practitioners with a most useful collection of material for operative surgery. The details have been worked out with accuracy and perspicuity. Every section has an introduction, in which the general principles of the proposed operations and the necessary instruments are discussed. There are practical hints regarding handling of instruments and the use of operating gloves. In important operations the different steps and stages are demonstrated by illustrations. The technique of abdominal operations and sutures is carefully described and beautifully illustrated. *Surgical anatomy*, which is the bedrock of the successful practice of surgery, has been given an important place in every section.

The author has been eminently successful in confining the copious material of vast experience within the limits of a handy volume. Simple methods are everywhere preferred to complicated ones. Most of the illustrations have been drawn from the operations performed by Prof. Schmieden on dead and living subjects. The few diagrammatic drawings are sketches based on anatomical atlases. Surgical incisions and topographical illustrations are particularly well executed.

A truly scientific survey of modern operations has been put before the students, and every essential detail taken notice of without crowding the canvas with details which, the authors very rightly affirm, can only be mastered in the operation theatre.

This work will eminently help students to successfully bridge the gap that exists between anatomy and surgery by affording them a connected survey of modern operations, and by encouraging them to develop an attitude of not applying a too rigid and typical set of operations

to a more or less putty-like and inert body, whether living or dead. The aim is to take a more scientific outlook.

This book will help the student to pass any surgical examination with credit, and assist a medical man to practise the science of operative surgery with the touch of an artist.

THE THEORY AND PRACTICE OF NURSING.—By SISTER GULLAN. Price Rs. 6.

THE book is likely to be of the greatest use to matrons and sisters in preparing their lectures to nurses. It is rather too advanced for probationers. The chapters dealing with the digestion, and feeding of patients, are well worthy of special mention, the whole being very clearly and concisely explained.

The entire book is well written and nicely got up.

INDEX OF PRACTICAL NURSING.—By COOK. Price Rs. 3-8.

A VERY helpful book for nurses during their training, mention being made of practically every treatment they are likely to be ordered to carry out.

SURGICAL NURSING AND TECHNIQUE.—By C. P. CHILDE. Price Rs. 5-8.

WE cannot speak too highly of this book which is quite the best work of its kind we have read. It should certainly be in the possession of all surgical ward and theatre sisters and nurses and would also be of great assistance to house surgeons and dressers in their work. No chapter can be particularly mentioned, all being equally good.

MIDWIFERY.—By TEN TEACHERS. Edited by COMYNS BERKELEY, H. RUSSELL ANDREWS and J. S. FAIRBAIRN. Second Edition. London: Edward Arnold. Four coloured plates and numerous illustrations. 1920. pp. 772. Price 30/- net.

THE first edition of this work was published just over three years ago. The present one has been carefully and thoroughly revised and considerable additions have been made, bring it well up to date. The chief new additions are a short chapter on ante-natal hygiene, a review of proteid metabolism and the oxidation of fats and their modification in acidosis, an abstract of modern bio-chemical methods for the estimation of renal efficiency in toxic cases and a more detailed account of the breast-feeding of infants. These additions considerably enhance the value of the work.

The fact that a second edition has been called for so soon is a proof that the book has found a large circle of readers, which is not surprising as it is written in a clear and interesting style and its teaching is thoroughly sound and representative of English obstetrics.

We have no hesitation in most strongly recommending this new edition to all students of medicine as one of the best text books they can possibly study for their final examination. It

contains all that is essential for this purpose, and there is no unnecessary or useless padding. The general practitioner will also find the book a great help and a safe and reliable guide in his obstetric practice.

A HANDBOOK OF MIDWIFERY FOR MIDWIVES, MATERNITY NURSES AND OBSTETRIC DRESSERS.—By COMYNS BERKELEY. London: Cassell & Co., Ltd. Fifth Edition. With coloured frontispiece and 74 illustrations. 1920. pp. 550. Price 7/6 net.

THE latest edition of this well known book has been thoroughly revised and the section on Breast Feeding and chapter on Artificial Feeding have been re-written. It would seem superfluous to praise a volume which has acquired such widespread popularity that it has passed through so many editions since it was first published only 14 years ago. This book has always been in the first rank and is quite one of the best of its kind for those for whom it has been written. This latest edition will, we are sure, more than keep up its reputation. We can most confidently and cordially recommend it to all midwives, maternity nurses and junior students for the clearness and simplicity of its style and the soundness of its teaching, which is eminently practical.

ANNUAL REPORTS.

GOVERNMENT RESOLUTION ON THE TRIEN- NIAL REPORT ON THE WORKING OF THE HOSPITALS AND DISPENSARIES IN BIHAR AND ORISSA, FOR THE YEARS 1917, 1918, 1919.

COLONEL G. J. H. BELL, C.I.E., M.B., I.M.S., held charge of the office of the Inspector-General of Civil Hospitals, Bihar and Orissa, during the triennium under review except for six months in 1918 when Lieutenant-Colonel J. C. S. Vaughan, I.M.S., acted for him.

2. At the beginning of the period fifteen officers of the Indian Medical Service were on military duty, of whom only three reverted to civil duty before its close, one in 1918 and two in 1919. Two officers of the Indian Medical Department who were recalled to military duty in 1916 reverted to civil duty in 1919. At the beginning of the period only three civil surgeoncies in Bihar and Orissa were held by officers of the Indian Medical Service, and at the close only five. The vacancies were filled by the employment of two European doctors and of Civil Assistant Surgeons. In addition to the officers of the Indian Medical Service and Indian Medical Department recalled to military service, certain of the junior Assistant Surgeons volunteered and obtained temporary commissions in the Indian Medical Service and Sub-Assistant Surgeons to the number of sixty-eight were called up. The medical cadre of the province has thus been very seriously depleted.

3. During the period 32 new dispensaries were opened and 15 were closed. The net increase of 41 is due to the above changes combined with the recognition of 30 dispensaries already existing and the removal of six from the list. The problem of providing more medical assistance in rural districts is very urgent; and with a view to stimulating the efforts of local bodies in this direction a sum of Rs. 3,00,000 has been provided in the budget of the current year for distribution as grants to local bodies to meet a part of the capital expenditure involved in the construction and equipment of new medical institutions and in the improvement of the existing ones. It is hoped that it may be found

possible to repeat this grant in forthcoming years so as to provide for a continuous policy of expansion of medical relief in outlying areas. This, however, must necessarily depend on the state of the provincial finances, and the present outlook is not a very hopeful one. The District Boards spent upon medical work nearly 40 per cent. more than in the previous triennium; but in this, as in so many other directions, progress has been hampered by the recent increase in the cost of buildings and maintenance.

4. Although travelling dispensaries have not yet met with uniform success in Bihar and Orissa, the Inspector-General favours an extension of the system and hopes to place them upon a better footing by adopting the methods and equipment of other provinces where they are more popular. He also proposes to experiment with a scheme introduced in certain parts of Bengal of subsidizing local doctors of the Sub-Assistant Surgeon class to encourage them to settle down to practices in the mofussil. The Lieutenant-Governor in Council will watch with interest the results of these experiments.

5. The number of in-patients treated in all classes of dispensaries rose from 53,035 in 1917 to 65,319 in 1919, but that of out-patients fell from 3,754,138 to 3,663,677. The decrease in the outdoor attendance is attributed to an improvement in the public health of most districts in 1919 as well as to the further discouragement of the system of treatment by proxy. There was an exceptionally large increase in the number of surgical operations, *viz.*, from 152,005 to 173,878.

6. Malarial fever was, as usual, responsible for the largest number of cases treated, but the number of such cases fell from 800,285 to 732,428. The gradual increase which is noticed in the sale of quinine indicates that people are beginning to appreciate this drug for malarial treatment. Interesting experimental use of the leaf of the '*Vitex Peduncularis*' given by way of an infusion was adopted by Lieutenant-Colonel Vaughan, I.M.S., with results which have shown that the drug is worth a thorough and scientific examination: the more so as it is indigenous to Chota Nagpur and capable of easy cultivation.

7. Influenza of a mild type appeared in the middle of 1918. By the autumn it had assumed an extremely severe form and an epidemic occurred which caused an appalling mortality. It is estimated that the death roll was at least 600,000 before the epidemic subsided towards the close of the following year. The magnitude of the epidemic made it quite impossible for the very limited medical staff to make much impression in fighting it. The Inspector-General thinks that insanitary conditions were responsible for aggravating the disease and that the improvement of unhealthy tracts and the employment of a larger staff of health officers would help in mitigating the severity and arresting the spread of any recrudescence of it in the future. But it must be remembered that the epidemic was not confined to India and that the mortality was equally high in many countries where sanitary conditions are far more favourable than in India. The new prophylactic treatment of this disease by means of vaccine inoculation was adopted to a small extent experimentally and is reported to have met with encouraging results.

8. Cholera exacted a heavy toll in 1918, especially in the districts of the Tirhut Division. His Honour in Council has noticed with great satisfaction the enterprise of Dr. Ashutosh Ray, a private medical practitioner in Hazaribagh, who succeeded in stamping out an epidemic by means of inoculation. The immunity from cholera of towns with a piped water-supply should stimulate all municipalities to initiate schemes for waterworks. The mortality from plague was exceptionally low in 1919, and the total number of deaths from this cause during the triennium was considerably less than one-third of that from cholera.

9. An investigation into the causes of filariasis is being undertaken in the Puri District by Dr. Premamanda Das, and it is hoped that his researches may produce valuable results.