all hospitals have been excellent. For infections of the hand the instillation of the solution at a concentration of 1,000 units per c.cm. seemed to be more effective than the cream; but dressings have to be done more often, and were more painful. Small boils were successfully aborted in 24 hours by injecting 0.1 c.cm. of a strong solution of 10,000 units per c.cm. into the boil; the treatment, however, is painful, and not more than 0.1 c.cm. should be injected at a time. Local application uses up comparatively small quantities of penicillin.

Comment

Penicillin cream is certain to be used very widely in civilian practice, and the difficulty that practitioners and pharmacists have encountered was largely in the preparation of the sterile lanette wax and castor-oil base, which has to be autoclaved. This can, however, be prepared in bulk, and will keep indefinitely; when needed, the appropriate amount can be melted, cooled to 60° C., and the penicillin solution added to make a final concentration of 200 units per gramme.

It would be a great advantage if supplies of sterile cream base were available from a central store so that pharmacists and practitioners in small hospitals could make up their own penicillin cream as they needed it. A self-sterilizing cream would be very desirable, but until this is available it is essential that practitioners supplying patients with penicillin cream for application at home to a skin lesion should be careful to provide them with precise instructions on how to remove the cream from the jar with reasonably sterile precautions. We have found it satisfactory to tell patients to immerse the blade of a metal-handled table-knife in boiling water for five minutes and then cool it under a freely running cold tap; the cream is removed without delay, and the knife is not replaced in the jar without resterilizing. The tablets of penicillin proved to be easier to handle and more economical in use than the ampoules in which American and Canadian penicillin is dispensed. If in the future British penicillin is to be sold in ampoules it would be of considerable advantage if the glass used were soft enough to be cracked without considerable effort or, better still, if the substance could be dried in a bottle or ampoule with a rubber seal in order that the reconstituted solution could be removed in small quantities with a syringe and needle.

Summary

The types of case in which penicillin is likely to be of value in civilian practice are indicated by the conditions treated in the first three months in which British penicillin was freely available.

The general practitioner will probably use penicillin cream locally more often than any other preparation of the substance.

Sterilized penicillin cream base should be available to practitioners and pharmacists, who will then be quite capable of making up the cream from penicillin tablets.

With adequate instruction patients can carry out treatment of skin conditions with penicillin cream quite successfully in their own homes.

The consumption of penicillin is largely conditioned by the number of cases needing systemic treatment, and this was smaller than was anticipated.

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The third annual report of the North-Eastern Regional Hospitals Advisory Council contains as an appendix a report by Prof. J. C. Spence on the Durham University department of child health at the Royal Victoria Infirmary, Newcastle-upon-Tyne, which opened up in 1943. The main work of the children's clinic is the medical consultation service provided each afternoon in sessions held by experienced children's specialists. In collaboration with the health department of the Newcastle City Council a child welfare clinic was placed in the new department and opened in May last to serve as a training centre for doctors and nurses taking up this work. The main in-patient clinical work of the department is carried out in the children's wards of the Royal Victoria Infirmary, with additional wards in the Babies' Hospital. The teaching of undergraduate students in child health and clinical paediatrics is now established. It is intended that research shall become one of the chief features of the department's activities; already several important lines of research are being pursued.

Medical Memoranda

A Case of Exomphalos complicated by Acute Intestinal Obstruction

The following notes of a case of exomphalos which has come under my care may prove of interest.

CASE REPORT

At noon on Dec. 14, 1943, I was called to a ward where a Munyarwanda woman had just given birth to a male child with exomphalos. The proximal portion of the cord was in the form of a bag covered with translucent amniotic membrane. It was about the size and shape of a large lemon, and through the membrane covering coils of small intestine could easily be made out. The sac was attached to the abdomen by a skin-covered pedicle 1 in. in length and 1 in. in diameter. In all other respects the infant appeared normal and strong. The cord was ligated and severed distal to the sac.

At 3 p.m., three hours after birth, I performed an operation. Naturally the question of the most suitable anaesthetic arose. Langton Hewer states that in acute abdominal conditions in young children the techniques involving local and spinal blocks show a higher mortality than general anaesthesia. Lambert Rogers (1941) operated upon a very severe case of exomphalos 20 minutes after the birth of a baby. In this case the operation was so near the birth that he felt it might be considered a mere prolongation of normal birth trauma, and consequently used no anaesthetic. The child suffered no shock, respiratory distress, or other complication. Three hours was perhaps too long after birth to consider a severe operation as a prolongation of the physiological process of birth. Carman (1941), after operating on a 4-day-old baby for strangulated hernia, reported favourably on ether and oxygen as the anaesthetic agent, after premedication with atropine 1/200 gr. I had no ether or oxygen available. However, Ley (1942), in reporting a successful operation in a case of severe exomphalos on a baby 10 hours old, stressed the value of pure chloroform anaesthesia for abdominal sections in very young children. Accordingly I instructed my comparatively inexperienced native orderly to administer pure chloroform.

A transverse incision was made, as in Mayo's operation for umbilical hernia, through the skin and subcutaneous tissue. The inner layers of the neck of the sac consisted of tense, tight fibrous tissue, and so the superior-anterior surface of the sac itself was incised and the sac opened. It was seen to contain almost the whole of the small intestine, the coils of which were very congested indeed, and I was in doubt whether one of the coils was viable or not. The umbilical vessels were found on the inferior wall of the sac; these were carefully ligated and tied, and the sac was then opened completely. As the opening through the neck was so tight it was obviously impossible to attempt the return of the bowel through it. The fibrous ring was therefore cut. At this stage, the anaesthesia being light, the child strained and almost the rest of the bowel prolapsed. The normal pink colour of the freshly prolapsed coils was in marked contrast to those already seen. There was a distinct compression ring on the two coils which had been constricted in the neck.

Smellie, in Ley's case, was compelled to use "deep chloroform anaesthesia." As it was found impossible to replace the intestines under light anaesthesia I instructed the orderly to push the chloroform. This was done; but very soon, in spite of the constant use of towels wrung out in hot saline, the child became cold and clammy and its breathing very intermittent and gasping, like that of a baby just born with asphyxia neonatorum. I did not think it could survive the rest of the operation. With difficulty the bowel was replaced. The abdomen was closed with one purse-string suture through the peritoneum and fascia, and the skin with interrupted silkworm-gut sutures. The apparently moribund child was returned to the ward wrapped in cotton-wool, surrounded with hot-water bottles, and placed with its head low down. The operation had lasted about 1½ hours.

To my amazement the child rapidly recovered. That night it vomited only once. It almost immediately started taking the breast, passed water normally the first night, and had a normal action of the bowels the second night. With the exception of slight sepsis of the wound, which rapidly responded to fomentations and sulph-anilamide powder, it made a complete and speedy recovery. The weight of the baby was 6 lb.

DISCUSSION

Exomphalos, when a true sac is present, is a very rare condition, with a high mortality rate; but the above case, and more especially those reported by Lambert Rogers (1941) and Ley (1942), show that even marked degrees of this abnormality are viable if submitted to operation at once. Sheldon (1936) states: "Operative treatment is usually required, but, in the absence of intestinal obstruction, conservative treatment, by simply protecting the sac from injury, has been followed by slow natural repair." Intestinal obstruction is always a serious condition, and the younger the patient the more serious it is. Therefore a conservative treatment which awaits the signs of

obstruction seems one that is likely to deprive the infant of that chance of survival which surgery can give it. A further reason against expectant treatment is, as McGavin and Choyce (1932) pointed out, that the avascular amniotic membranes slough and rupture, leading to a factitious ectopia of the viscera and resultant death from shock or sepsis.

Brailsford (1939) has drawn attention to the possibility of diagnosing antenatally several of the severe forms of congenital deformity by a radiograph of the foetus. In a case of exomphalos he noticed a marked shortening of the spinal column. In the present case, in Lambert Rogers's, and apparently in Ley's, no such shortening was present, so that the absence of shortening in a foetal radiograph certainly does not indicate an absence of this deformity.

I would like to pay tribute to the splendid anaesthesia given by my native boy and, in doing so, to state what fine anaesthetists and nurses our comparatively uneducated Banyarwanda boys make. With their services as anaesthetists and assistants there are very few surgical procedures which we are unable to tackle in our lonely and primitive hospital.

Gahini, Ruanda,
Central Africa.

T. B. L. BRYAN, M.B., B.Chir.,
Medical Officer in Charge of C.M.S. Hospital.

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Muscle Spasm apparently due to Lack of Sodium Chloride

The following report may help other doctors who have to deal with a similar case.

CASE REPORT

At 12.15 a.m. on Aug. 10, after a week of increasingly hot weather culminating in an extremely hot day and night, I saw a boy of 17 years with the following history and condition. He had gone to bed at 10.30 p.m. on Aug. 9 feeling weak and poorly, and, like everyone that night, sweating freely. At about 11 p.m. he began to have "pins and needles," first in the arms, later also in his legs and face, followed in about ten minutes by a mild attack of cramp in each biceps humeris lasting a moment or so and passing off. Some ten minutes later another attack of cramp involving more flexor muscles occurred, passed off, and so on, each attack being worse and involving more muscles, the "pins and needles" persisting throughout.

When I saw him he was just going into a spasm, which lasted $3\frac{1}{2}$ minutes and at its peak was as follows: The arms were tightly folded as in a swimmer's photograph, fingers clawed, legs in the frog position, head flexed, trunk slightly flexed, face screwed up with pain but not a risus sardonius, copious sweating, respirations the incredible rate of 50 per minute, pulse forcible and 90 per minute. It was quite impossible to straighten even the fingers.

The spasm left him utterly relaxed and exhausted; temperature 96.4°F .; "pins and needles" present and strong; mind clear throughout. Tetanus and tetany were ruled out; no abnormal signs in chest or abdomen; no rash. Direct questioning elicited "Yes" to "Do you sweat a lot?" and "Do you dislike table salt?" Three teaspoonfuls of sodium chloride in one-third of a pint of warm water was given, and, interestingly, he volunteered that it tasted good; nor was there any nausea. Three minutes later another attack started, but less violent and long. Another drink of two teaspoonfuls to one-third of a pint was given, which, he said, tasted a bit strong. Within 15 minutes of the first drink the "pins and needles" had begun to go, and within 30 minutes had gone. He felt hungry; temperature 97.6°F . I left him eating two huge "door-steps" of bread and margarine.

Later that day I visited him; he was up, had no physical signs of anything abnormal in the chest, temperature 98°F ., and he said he had an appetite for the first time in three weeks.

COMMENT

One must decide, was it an acute shortage of sodium chloride in the blood giving rise to cramp of a most unusual violence and cured by the strong saline draught, or was it something else which had reached its peak as I arrived and went off despite the treatment? I think the former, but unfortunately I did not taste his sweat (it might have been saltless); nor do conditions in a council house encourage taking blood for a sodium chloride estimation when the nearest laboratory is sixteen miles away. There can be no doubt that had the condition not cleared up his heart would not have stood up to the strain for more than another six or seven hours. Also why does this sort of cramp and athlete's cramp always affect the flexor muscles?

Stamford, Lincs.

A. H. GREGSON, M.B., CH.B.

Reviews

NEUROSYPHILIS

The Management of Neurosyphilis. By Bernhard Dattner, M.D., Jur.D., with the collaboration of Evan W. Thomas, M.D., and Gertrude Wexler, M.D. Foreword by Joseph Earle Moore, M.D. (Pp. 398. \$5.50 or 25s.) New York: Grune and Stratton; London: William Heinemann. 1944.

Dr. Dattner, formerly assistant in the Vienna clinic of Wagner-Jauregg, has written a useful and much-needed book. His subject is one that is common to syphilology, neurology, and psychiatry, and it is good to find it treated as an all-round problem of its own and not one-sidedly as an incidental topic in one of the three major specialties.

The book is well documented, the findings of other workers are culled from far and wide, and useful personal observations are included. There is no rushing at conclusions, and controversial problems are squarely faced. We are glad to see the author's insistence on the importance of spinal-fluid findings in diagnosis and during the early stages of syphilis, and he puts the matter of therapeutic results in true perspective when he stresses negative serology and longevity—and not clinical improvements—as the chief criteria for estimating the efficacy of particular treatments.

One might disagree with certain statements—e.g., that a post-malarial fluid once negative remains so—but these are only minor matters. One criticism that must be made, however, is that little or no space is devoted to flocculation tests. It is high time that the Wassermann were dislodged from its preferential position, and a reference to the greater sensitivity of the Meinicke, Müller, and Kahn tests (to mention a few) would have been welcome; it would, incidentally, have had an important bearing upon the question of the frequency of negative serology after treatment and also upon the likelihood of finding negative blood results in cases of untreated meningo-vascular syphilis. Moreover, the inclusion of the flocculation tests might have led to a consideration of the all-too-neglected problem of standards of cure—standards of satisfactory progress (beyond which intensive treatment is no longer necessary) which will never be established until we are all agreed as to which tests we will accept.

The book is a timely one, clearly and capably written, and it can be confidently recommended to all concerned in the recognition and treatment of neurosyphilis.

SURGERY FOR STUDENTS

Surgery. A Textbook for Students. By Charles Aubrey Pannett, M.D., F.R.C.S. (Pp. 740; illustrated. 35s.) London: Hodder and Stoughton. 1944.

With the sentiments Prof. Pannett expresses in his preface the majority of surgeons, and, we hope, all surgical examiners, will agree. The gist of the matter is that he believes a textbook for undergraduate students should be the product of a single author, since "it does not seem fair to expect the student to have more exact knowledge than his examiner possesses, or to have read a series of monographs by experts." The specialist may have acquired special facility in technique by confining his work within narrow limits, "but the facts of the specialty and the principles on which he works are within the compass of the general surgeon's wit." The object of the book is "to present the facts of general surgery in as few words as possible"—a very desirable aim in these days of prolixity.

In the application of these principles, however, we cannot help feeling that the author has not been entirely successful. In large portions of the book the condensation has been overdone, which has made it a guide more suited to the nurse or medical auxiliary than to the medical student. It will be accepted, too, that the greater the conciseness the more the need for extreme accuracy, and in this the book unfortunately falls short of expectations. We are, of course, not criticizing legitimate expressions of opinion, but factual statements, as the following examples will show: "The brilliant discovery by Metchnikoff of arspenamine," although one of the numerous synonyms for "606" is "Ehrlich-Hata compound"; "the secretion of testosterone by the spermatogenic cells": true, it has been