

fullness and a boggy sensation in the posterior fornix. A diagnosis was made of acute appendicitis, probably with perforation, and an immediate operation was advised.

Two hours later we opened the abdomen over McBurney's point. The peritoneal cavity was found to contain dark blood clot, so a large medial incision was made. The lower part of the abdomen and pelvis were full of blood clot, and active haemorrhage was in progress, continuing after most of the clot had been removed. No bleeding points could be found, however, in spite of the gushing of pure blood; both Fallopian tubes were healthy, and the left ovary was normal. The right ovary, however, was twice the size of the left, and there was a punctured raw area about the size of a sixpenny piece, which extended into the ovarian tissue. The ovary was therefore removed, and it was noticed that while it was being held on the stretch the haemorrhage stopped. The appendix was inflamed, tortuous, constricted at the base, and covered with adhesions; it was therefore excised. A small cystic body, about the size of a split pea, was found in the blood clot in the pouch of Douglas, but, unfortunately, this and the right ovary were accidentally lost by a probationer nurse. No further bleeding points could be found, and, owing to the bad condition of the patient, the abdomen was closed as quickly as possible. Haemoplastin was injected during the operation, and afterwards at regular intervals. The patient made an uninterrupted recovery, and was discharged from hospital a month after admission.

We came to the conclusion that this was a case of primary ovarian pregnancy, the ovum having been fertilized on the surface of the right ovary. Unfortunately the loss of the two specimens robbed us of a definite conclusive diagnosis; we are at a loss to understand how all the haemorrhage came from the small rupture in the ovary.

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#### AN UNUSUAL CASE OF ACUTE PANCREATITIS.

The case described below is interesting as it throws some light on the etiology of acute pancreatitis. The boy had lived on a diet containing an insufficient amount of proteins and a superabundance of carbohydrates. The pancreas was overtaxed in dealing with this excess of carbohydrates. In addition to this, the absence of a proper supply of fresh proteins possibly predisposed the pancreas to inflammatory changes. Other vitamin-containing articles were obviously taken in insufficient quantities—for example, fruits. It is difficult to avoid looking at acute pancreatitis as a deficiency disease, in some ways resembling scurvy or pellagra, after carefully studying this case.

On August 8th, 1929, a messenger boy, aged 15, cycled to a neighbouring village after his day's work. There he had a meal of chips, and then cycled home. Towards midnight he started having what he termed a "bilious attack," accompanied by slight abdominal pain and vomiting. He had been subject to bilious attacks for years, and so did not send for his doctor until late in the afternoon of the next day. Dr. Pierce saw him, and promptly sent him into the local hospital. As the boy's condition got worse we saw him together about midnight. He then showed slight rigidity of the abdominal muscles, tenderness over the upper abdomen, definite fluid in the abdominal cavity, pulse 95, temperature 99.6°. The matron of the hospital informed us that the boy showed slight cyanosis of the lips when she first saw him in ordinary daylight, and that he reminded her of cases of acute pancreatitis she had seen before. The cyanosis was not obvious in artificial light.

*Operation.*—At 1 a.m. on August 10th a right paramedian supra-umbilical incision was made. The abdomen contained 2 to 3 pints of clear fluid; this was evacuated. The pancreas was red, and obviously enlarged and indurated, with a thickness of 2 to 3 inches. There were no areas of necrosis, and the omental fat showed no appreciable change. A corrugated rubber drain was put down to the head of the pancreas and the abdomen closed. The drain was removed in forty-eight hours as only a slight amount of clear fluid drained out. On August 15th and 24th the patient had a "bilious attack" with vomiting, pain, and a rise of temperature to 103°, otherwise his progress was fairly satisfactory. He left hospital on September 12th, and resumed work three weeks later. Since then he has had several very mild "bilious attacks," otherwise he has been comfortable.

Since operating on this patient we have gone more fully into the history, and this proved to be very interesting. The boy had never eaten any meat or eggs in his life, but lived on potatoes, bread-and-butter, pastry, and sugar. He drank large quantities of tea and water, and sometimes milk. While in hospital he was gradually trained to eat ordinary food, and is now leading a normal life, but still

has a good thirst, and a weakness for chip potatoes. He has never passed any sugar in the urine, but showed a trace of albumin occasionally while in hospital. He has always been a pale and poorly developed boy and was easily tired. The chest shows no organic disease.

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## Reports of Societies.

### CARDIAC INFARCTION.

At a meeting of the Medical Society of London, on March 10th, with the president, Mr. DONALD ARMOUR, in the chair, Dr. J. W. McNEE opened a discussion on cardiac infarction, speaking from the point of view of a general physician.

Dr. McNee said that, while working at the Johns Hopkins Hospital in 1924, he saw three cases of coronary thrombosis; the clinical diagnosis was made with such certainty that Dr. McNee looked into the matter, and discovered an extensive American literature on the clinical side. Once the clinical syndrome was recognized in this country many cases were reported, and the problem was often found to affect the general physician or surgeon rather than the expert cardiologist. The real reason for the lack of differentiation of coronary thrombosis until recent times appeared to be that the great teachers on cardio-vascular disease, such as Mackenzie, Allbutt, and Osler, did not separate coronary thrombosis from angina pectoris. The distinction was now recognized as important, for the course and prognosis differed in the two disorders. Dr. McNee added that it was possible to look back through older medical literature and make the diagnosis of coronary thrombosis on the clinical history and necropsy findings, as had been done by Ryle in discussing John Hunter's cardiac infarct. The anterior descending branch of the left coronary artery was usually affected by thrombosis, which led to infarction of the walls of both cavities of the heart, so that secondary embolism might occur either in the lungs or in some area supplied by the systemic circulation. The predisposing causes of coronary thrombosis appeared to be those of arterial degeneration in general; hereditary tendency played a part, and angina pectoris was a very common precursor. Several clinical groups were definable: (1) cases in which death followed immediately upon occlusion; (2) cases in which death followed a few minutes, a few hours, or at the most a few days after the occlusion; (3) cases in which grave symptoms of myocardial insufficiency immediately followed the accident, but death was postponed for weeks or months; (4) cases with grave symptoms easily recognized, but from which the patient eventually recovered; (5) cases without grave manifestations but with sufficient symptoms to be recognized; and (6) cases with mild and uncertain symptoms in which only a probable diagnosis could be made. Dealing more in detail with the type of case with signs and symptoms where survival occurred, Dr. McNee described how the onset was sudden and had no relation to effort. Pain was present in the majority; it was sudden, sharp, and knife-like, and differed from the pain of angina pectoris in its duration and constancy. It might last for hours or days, agreeing closely with the description of "status anginosus," and in its distribution might be irregular. If situated in the upper abdominal region, as it sometimes was, the pain might lead to the erroneous diagnosis of perforated gastric or duodenal ulcer, or gall-stones. It might radiate like the pain of angina pectoris, and not infrequently left muscular tenderness behind it, while its resistance to morphine had been noted by many observers. Dyspnoea was present in every case; the colour of the face, a peculiar earthy tinge with light cyanosis, was characteristic, indicating the severe shock present. Vomiting was common at the onset, and the rapidly developing cardiac failure which occurred in some cases led to pulmonary signs, which were easily mistaken for pneumonia. Fever began, as a rule, about twenty-four hours after the onset, and the leucocyte count was usually 20,000 per c.mm. or more. In the differential

diagnosis the most difficult point was to separate an attack of coronary thrombosis from one of pure angina. Other difficulties arose with regard to upper abdominal conditions, and particular confusion entered into those cases in which emboli were detached from the infarcted area in the heart. In discussing prognosis, Dr. McNee quoted a series of patients of whom 53 per cent. died from the attack; the average duration of life of the survivors was twenty-four months. There were cases on record, however, where survival in fair health had been possible for a much longer period. Treatment consisted of rest in bed, with morphine for the pain and shock. Cardiac failure had to be dealt with if it arose, and oxygen was useful for cyanosis.

Dr. J. PARKINSON dealt with the physical signs of coronary thrombosis, stressing the point that they were often less valuable than the general picture. The pulse might be regular and of moderate rate. Auscultation was almost worthless, but occasionally a pericardial rub was heard which was diagnostic in association with the characteristic pain. A fall in blood pressure was an important sign of the disease, but with so few physical signs the electro-cardiograph became of great interest. In the first stage the R-T period was raised or lowered from the isoelectric level, and in the second stage this plateau was replaced by a deep inversion of the T-wave. The third stage of convalescence was shown by a gradual return to normal. Dr. Parkinson mentioned the necessity of looking for signs of arterio-sclerosis between attacks of coronary thrombosis; the radiological appearances of the aorta were of particular help. He thought that the present knowledge of coronary thrombosis had simplified the problems of angina pectoris. The condition might initiate, complicate, or terminate cases of angina pectoris. The prognosis was always better after the first part of the attack was over.

Dr. W. G. BARNARD, dealing with the pathological side of cardiac infarction, mentioned the historical references to the condition. He took in turn the four types described by Van Leyden under the headings of sudden death, infarction, fibrosis, and mixtures of the last two. In cases where an elderly, healthy man suddenly dropped dead it had been shown, by experiments on animals, that the probable explanation was ventricular fibrillation which stopped the heart; if the patient survived, a condition of infarction developed, the area and extent depending upon the size of the coronary artery involved and the degree of change in the artery. In "massive" cases an early stage of swelling and purple colour of the part affected passed quickly into a stage where the myocardium became a pale clay colour, and reaction began in the tissues around. Polymorphonuclear infiltration occurred, and the granulation tissue formed gradually replaced the autolysed infarcted area. In the resulting scar tissue dilatation might occur, and during the stage of infarction two other accidents might happen: the heart might rupture through the infarcted area, or later an aneurysm of the heart might rupture. Over the area of infarction pericarditis was found as part of the aseptic inflammatory reaction. Out of the large number of causes of coronary occlusion only two were common—atheroma, and syphilitic aortitis. The latter affected the coronary arteries at their orifices, and it was rare to find fibrosis of the myocardium as a result of syphilitic diseases of the coronary arteries. Atheroma might occlude the coronary arteries, but it was more usual to find a small ulcer with a thrombus on it. This condition might be missed if the coronary arteries were opened in the ordinary way.

Dr. F. J. POYNTON described a case in which it appeared that emboli from a condition of phlebitis had travelled directly into the heart, producing a condition strongly resembling coronary thrombosis. A French physician had called this an example of reflex shock in the heart, and Dr. Poynton invited an explanation. He also mentioned the difficulty of distinguishing some cases of severe food poisoning from coronary thrombosis. Dr. F. PARKES WEBER mentioned the confusion existing in the earlier literature between angina pectoris and coronary thrombosis. He thought that observations upon cases of status anginosus had given the older writers the main basis for the coronary theory of angina pectoris, but, in the light of present knowledge, the worst cases of so-called angina pectoris

previously described might really be examples of coronary obstruction. Sir WILLIAM WILLCOX said it was not infrequent to encounter cases of coronary thrombosis with apparently normal hearts and blood pressures; he asked for evidence that cardiac infarction could be caused by a primary thrombosis of the arteries occurring in a toxic condition. The PRESIDENT referred to a patient in whom cardiac infarction developed one week after an abdominal operation and gave rise to difficulty in diagnosis.

### PSYCHOTHERAPY IN THE PSYCHOSES.

A COMBINED meeting of the Section of Psychiatry of the Royal Society of Medicine and the British Psychological Association was held on March 11th, when the subject of discussion was the treatment of the psychoses by psychotherapy.

Dr. HENRY DEVINE, who opened, said that in the early days of psycho-analysis he had hoped that a cure might be effected in some psychotic patients by elucidating the underlying conflicts which were assumed, according to the new teaching, to be the cause of the symptoms manifested. Unhappily the hope had not been realized. It would probably be generally admitted that the therapeutic possibilities of psycho-analysis were definitely limited in their scope, and that, so far as the psychoses were concerned, they were practically negligible. Similar limitations would appear to exist in respect of the therapeutic methods associated with the names of Jung and Adler. He was inclined at one time to feel that a certain type of paranoid patient should, on clinical and pathological grounds, be responsive to analytical treatment if a suitable technique could be devised, but he cited one case which had proved disappointing. As for the desirability of submitting the manic-depressive patient to psycho-analysis during the interval between his attacks, while the manic patient might be a subject of psycho-pathological study, he was, in his mania, scarcely the subject for therapeutic analysis, and, speaking from the standpoint of an institution psychiatrist, Dr. Devine had always found the depressive patient singularly impenetrable. In spite of the psychological interest of these cases, he could not but feel that the manic-depressive psychosis was the expression of an obscure disturbance of physiological rhythm. When the patient had got over his attack he might be considered as well; the sooner he returned to his life-work and forgot all about his illness the better. To submit him to analysis during his normal period was unlikely to avert another attack; it would lead him to think about his illness, and would serve to furnish him with more psychological material to which to give expression should he fall ill again. Furthermore, analysis in these cases or in incipient psychosis would seem to be not free from danger, even when utilized for diagnostic purposes. In these cases the somewhat discouraging policy of "leave well alone" was most desirable.

Thus it must be conceded that at present there were no specific remedies, either psychological or physical, capable of curing the pathogenic psychosis. That was not to say that treatment in those conditions was of no value; on the contrary, nowhere in medicine were persistent therapeutic efforts more necessary and at times more rewarded than in the sphere of psychiatry. Although the psychiatric methods utilized with psychotic patients could not be considered causal or specific in their aims, this did not mean that they were haphazard or unsystematized. At the outset it was essential to listen respectfully to what the patient said; supplying the patient with a free outlet for his delusional beliefs afforded relief of tension, while the psychiatrist needed to obtain a knowledge of the phenomenal world of his patient. The study of the psychotic content was very important, for how else could the seemingly irrational behaviour of the patient be understood? From a practical point of view, however, it must be confessed that the morbid impressions of the psychotic could not be suggested or analysed away. Apart from physical treatment, the main task of the psychiatrist must be to develop what was normal in the psychotic patient, and to stimulate the social consciousness in the hope that the narrow, isolated, morbid psychic content—the besetting delusion, hallucination, or

fear—might melt away or be relegated to the background. The kind of stimuli upon which reliance was placed were simple and natural ones, like games, occupation therapy, music, companionship, and general conversation, all intended to assist the patient to regain the art of living. In comparison with the more technical psychiatric methods, this kind of treatment might appear unimpressive; nevertheless it was often instrumental in bringing about a partial or complete social regeneration. In conclusion, Dr. Devine said that he did not question that psycho-analysis had rendered a service to psychiatry. The emphasis it had placed on family situations and sexual difficulties gave precision and direction to the advice to the psychotic patient at a stage when he was sufficiently receptive to respond intelligently to psychotherapy. It should be said also that the mechanisms described by Freud were constantly exhibited in psychotic patients, though he did not think it possible to rationalize all that manifested itself in the psychotic content. On the whole, however, he felt that psycho-analytical practice had not kept pace with the increasing elaboration of its theory.

Dr. EDWARD GLOVER said that in practice psycho-analysts had made contact with the psychoses from two directions. One group of investigators had taken from the first a special interest in psychiatry, and had decided to employ psycho-analysis as an instrument of investigation and treatment. On the other hand, in this country at any rate, a larger group of analysts had been interested in the psychoses as one of a number of fields of study, but had ultimately been compelled to analyse psychoses because of the demands of patients who came for treatment. But although many psycho-analysts had had the treatment of psychoses thrust upon them, their previous training had qualified them in a peculiar degree to handle psychotic states. Psycho-analysis was considered primarily for transference in neuroses. The modifications necessary in treating different conditions did not imply modifications of analytical principle. The aim in all cases was to release the individual from anxiety and guilt, and analysts were compelled to take the quickest way home even if, as was often the case, it appeared the longest way round. It was true that the psychotic might appear inaccessible because of his reduced capacity for positive transference, but a great deal of his alleged inaccessibility was only a proof of the therapist's protective inaccessibility to him. Dr. Glover added that the problem of psychotic study in childhood had hardly yet been approached. Advances in the treatment of the psychoses would depend less on the experience of direct treatment of what were now called psychoses and more on the experiences derived from mental processes in young children, together with those derived from the treatment of infantile psychotic states.

Dr. R. D. GILLESPIE dealt with some of the reasons why personal analysis was important; dreams were often very serviceable from this point of view, also the history of the illness. Where cure of the developed condition was so difficult prevention was the more important, but prevention in this field had hardly ever been tried. With regard to occupational therapy, he thought its effect depended entirely on how it was carried out. Mrs. MELANIE KLEIN discussed the examination of the fantasies of children, and the occasional undiminished existence in older children of fantasies characteristic of the very young, a fixation which clinically gave rise to arrest of development. One of the chief tasks of the child analyst was to discover pure psychoses in children. Dr. H. YELLOWLEES said that it was a surprise to be told by Dr. Glover that it was the therapist, not the patient, who was inaccessible. One was quite prepared to have it said that one's clinical observations were mistaken, as probably they often were, but it was a little hard to hear that one was too clinical and too close to one's material, and that the more theoretically the problem was viewed the more likely was a solution to be found. It was a question of what was meant by psychiatric treatment; various methods of treatment, such as occupation therapy, which had been practised in mental hospitals long before Freud, were an invaluable factor in stimulating the recovery process in psychoses.

Dr. W. H. B. SRODDART considered that manic-depressive psychosis was amenable to psycho-analytic treatment. He

had at the present time a patient—a case of melancholia—who was just completing her analysis after three years. It had been said that analysis should proceed only during the intervals between the melancholia, but in this case he had carried it on right through every attack. They had spent thirteen hours in absolute silence; apparently nothing happened, but that time was not wasted, because during the whole of those thirteen hours the patient was reacting upon him with hatred; she had a negative transference. The results of the treatment were quite satisfactory. With regard to paranoia, he was not optimistic about curing in a particular case, but he felt that the patients could be treated psycho-analytically in order to give them insight and to a certain extent to delay the progress of the disease. With regard to dementia praecox he was very sceptical; he thought it might be not an organic disease. Dr. SYLVIA PAYNE, physician to the London Clinic of Psycho-analysis, said that evidence of lasting cure of the manic-depressive was not lacking. Freud reported two cases with no tendency to relapse after several years. Apart from curative effects, the patients experienced relief from mental stress. Without undue optimism it could be said that psycho-analysis had proved that it could do something in psychosis, and it opened a road for advance in knowledge and research in therapeutics not so far sufficiently realized.

Dr. N. G. HARRIS emphasized the importance of other branches of psychotherapy, particularly in the work of the mental hospitals. Nearly everyone who had worked for many years in a mental hospital came up against the difficulty of treatment, but he thought the value of developing in the admission ward, for example, an atmosphere of suggestion and re-education might be more explored. The post-encephalitics were extraordinarily stubborn to treat, but there was a very large functional element in most of them besides the organic condition, and he had found, while treating the organic condition, that far better results were obtained if suggestion therapy and re-education were also pursued. Dr. DORIS ODLUM spoke of the personality of those who carried out the treatment as being a factor of importance. She noticed in mental hospitals and in hospitals dealing with early nervous cases that certain personalities suited certain patients and were absolutely useless in dealing with others. Some members of the staff were always unsuccessful with paranoiacs. In future perhaps, in the treatment of psychoses, personalities rather than methods would be prescribed. Dr. F. DILLON said that his experience was that a greater proportion of cases than was commonly realized were suitable for systematic treatment by the method of analysis. It was also true that this method, improperly applied, was capable of doing more harm than other methods. In his opinion, particularly with reference to psychoses, while it might not be possible to do much good by psychotherapy, they always had the power to do a great deal of harm. The danger lay in the use of ready-made rules without reference to the patient's individual requirements. In certain phases of mental illness valuable contact could be made with the patient, and there were practically always indications of underlying mechanisms in the light of which it was surprising how often a positive working transference could be achieved. There were no positions in which a delicate psychological touch was more necessary than in the psychoses. Three other points seemed to be of considerable interest in the analytical treatment of psychoses: to be content for periods with stages of provisional interpretation; to make judicious use of loosening mechanisms short of actual interpretation where the latter was considered inadvisable; and to be on the watch to head the patient away from dangerous and possibly disrupting highly charged ideas.

Dr. DEVINE, summing up the discussion, said that his own clinical experience, the writings of psycho-analysts generally and the individual study of cases, together with the discussion with his colleagues of cases which had been psycho-analysed, had given him the impression that on the whole psycho-analysis was not an effective method of dealing with psychoses, and so far he thought that there was extremely little evidence to show that it was. It was not a suitable method of effecting treatment; it enabled one to understand, not to cure.

Dr. GLOVER remarked that analysts had never held that there was no other valid method of psychotherapy, but the method had had by no means a complete trial. Not more than a dozen trained psycho-analysts were systematically dealing with psychoses at the present moment. The outlook was promising, but they were still learning. It seemed to him time that the psychiatrist who rejected psycho-analysis should realize that the methods he employed, such as occupational therapy, only differed from analytical psychotherapy in that they had no direct application of dosage and method.

#### THERAPEUTIC EFFECTS OF THE OESTRUS-PRODUCING HORMONE.

At the meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine, on March 11th, with Dr. PHILIP HAMILL in the chair, Professor E. C. DODDS (with whom was associated Dr. J. D. ROBERTSON) opened a discussion on the therapeutic effects of the oestrus-producing hormone.

Professor Dodds sketched briefly the history of oestrogenic preparations since 1911-12, when they were first made by the extraction of ovary with volatile solvents. For some years there was no definite method of standardization. The only criterion of activity was that when injected into animals the substance produced rutting out of season, and growth of the genitals in immature animals. From about 1920, however, a fairly elaborate method of standardization, involving a large number of animals, had been available, and the results were calculated on a statistical basis. The activity of the product had been very greatly increased, and with the advent of purer preparations sufficient solubility in water was obtained to admit of subcutaneous injection without the unpleasant local and general symptoms that followed on the early use of the material with an oily constituent. This water-soluble concentrated oestrus-producing substance, which had been called oestrin, was one which, when injected subcutaneously into ovariectomized animals, produced oestrus. In addition, the substance might be expected, administered in the same manner, to produce puberty in immature female animals, and to bring about abortion in pregnant animals. Was it justifiable to expect that this substance, however active in animals, would give similar reactions in women? The claim was made in commercial literature that such preparations would restore menstruation. This implied that oestrus and menstruation corresponded, but the majority of workers on the subject had grave doubts as to the relation between the two, for menstruation had a number of phenomena additional to the ordinary oestrus of animals. With regard to the production of puberty, this test was very difficult to apply to the human subject; while as to the production of abortion or premature labour, this was obtained fairly easily in experimental animals, but only with great difficulty in women. On these grounds some differences might be expected between the action on animals and that on the human female. Professor Dodds went on to relate particulars of an investigation in which the material used had been manufactured from the placenta and the urine of pregnant women, and tried in some 80 cases. It was put up in ampoules consisting of 10 units per cubic centimetre. The cases treated were referred to his department from the gynaecological out-patient department, and consisted mainly of patients suffering from amenorrhoea. The course of treatment consisted of 1 c.cm. (10 units) every day for two months. Of the 80 cases treated, only 62 went through the full two months' course, and of these, 28 started to menstruate, while 59 of the 62, apart from any question of the menstruation, "felt better." The results were rather better in the married than in the unmarried. Of the 32 unmarried who went through the full course, menstruation started in 10, and of the 30 married, in 12. The reason for this might be that the patient was older, or there might be some other reason. Although practically all the patients felt better, irrespective of the menstrual function, when in the case of some of them normal saline was substituted for the hormone preparation, they felt just as well on its continued use as they had on the material under test. Three cases in which it was desired to produce premature

labour had been treated, with roughly 300 units each. In only one did delivery occur before the expected time, so that the results were quite indefinite. With regard to the question of the menopause, five cases had been treated with injections for two months, with the result that the vasomotor symptoms were very definitely controlled, and in two cases menstruation started again. In three cases where the ovaries had been removed menstruation also started. In conclusion, Professor Dodds felt that the material should be given a very extended trial. The trouble was the great difficulty in obtaining the material. It was for clinicians to decide whether a 30 per cent. definite response among all cases treated was significant of real value. In only one case had there been any bad results.

Dr. A. S. PARKES discussed the relation between oestrus in the lower animals and menstruation. A good deal of confusion, he said, existed on that subject. The probability appeared to be that, instead of menstruation being telescoped, as suggested by Marshall, into the previous oestrus, menstruation, as found in the lower primates, was actually due to a hold-over of the pre-oestrus breakdown coinciding with the breakdown of the endometrium when fertilization had failed. Thus a double phenomenon was produced, resulting in menstruation. In animals which did not ovulate the same hold-over of a pre-oestrus breakdown resulted in menstruation from an undeveloped endometrium which had not been acted upon by the corpus luteum previously. On this view oestrin clinically should be sufficient to cause that part of menstruation which corresponded to the delayed pre-oestrus breakdown, but should not produce that part of the menstruation which was really due to the action of the corpus luteum. Oestrin clinically should not be expected to produce the premenstrual congestion of the uterus normally associated with the menstrual phase.

Dr. L. C. RIVETT said that in three cases in which it had been necessary to induce premature labour oestrin had been tried. In one of these cases the substance did seem to start labour three weeks before term, but there again it was impossible to say whether labour would not have started spontaneously. The present idea seemed to be to simplify these female hormones and try to make it appear that there was only one of them, but there must be many more. He instanced the breast in pregnancy: in early pregnancy the breast tissue developed and became fairly active. It then remained quite stationary until after labour, when further changes took place leading to the production of milk. That seemed to him powerful evidence of two hormones, one of which stimulated the breast and the other inhibited it, and until that second hormone was removed the breast did not actually secrete milk. It was possible that the effect of menstruation on the uterine glands was to produce another hormone, which stimulated the ovary, and that might be the explanation of the difference in the effect of oestrin on the woman who still had her ovaries and that on the ovariectomized woman.

Dr. H. GARDINER-HILL said that Professor Dodds had supplied the preparation to St. Thomas's Hospital, where a certain number of cases of amenorrhoea had been treated. These 48 cases belonged to three groups—namely, primary amenorrhoea, primary menstrual irregularity (that is, cases which had never had the normal rhythm) and secondary amenorrhoea, or cases in which amenorrhoea developed after a period of normal menstruation. Positive results were obtained in 33 per cent. of the cases, definitely negative results in 55 per cent., and the remainder were doubtful. In the first cases treated about two dozen injections were given, spread over a period of two or three months, but in the later cases Professor Dodds's method had been adopted of giving a dose of 1 c.cm. daily for about ten days, and then a second course after an interval of two or three weeks, and an improvement in the proportion of positive results followed.

After Mr. DUNLOP MARTIN, a veterinarian, had related some facts bearing on the subject from his experience of canine practice, the remainder of the discussion was occupied with the question of the obtaining of supplies of this material. Dr. T. IZOD BENNETT said he believed that a certain Continental firm had taken out world-patent rights for all ovarian extractions, and other manufacturers

feared to infringe an international patent. This scandal had existed for ten or fifteen years, and it was high time the subject was ventilated in the medical profession. Dr. J. W. TREVAN said that a British firm manufacturing a preparation of ovarian hormone exposed itself to the risk of High Court action, with its heavy costs, and as the evidence for the therapeutic value of the material was not conclusive, as that discussion had shown, it was little wonder that manufacturers should hesitate. He thought that clinicians who wanted to use the hormone should make representations to the Board of Trade committee on patents, stating that they were hindered in their work by the non-availability of the substance. Professor DODDS said a tribute should be paid to one firm of manufacturers, Boots Pure Drug Company, without whose assistance the expensive work in which he had been engaged in his laboratory could not have been carried on.

It was remitted to the Council of the Section to consider what, if any, action could be taken on the question of the patent.

### RENAL OEDEMA.

At a meeting of the Liverpool Medical Institution, on February 20th, Dr. O. I. V. DE WESSELOW read a paper on renal oedema. Discussing the various renal lesions with which oedema was associated, he pointed out that very gross pathological changes in the kidney might be associated with satisfactory excretion of water, and that in types of renal disease in which oedema appeared the only common factors seemed to be a high percentage of protein in the urine and a diminution in the excretion of water, the oliguria not necessarily being attributable to renal damage.

Reviewing the "retention" or purely renal theories of this type of oedema, Dr. de Wesselow suggested that the phenomena of renal dropsy were as readily explained by pre-renal deviation of water to the tissues as by failure of the kidney to excrete water. The blood volume in nephritic oedema was not suggestive of retention of water owing to renal failure. For Widal's salt retention theory due to renal failure to excrete chloride little could be said. It had been shown by Lundin and Scharf that in partially nephrectomized animals salt feeding led to enormous salt retention, but that such salt retention was dry and was not accompanied by water retention. The interesting theories of Epstein and Kylin might present a more exact picture of the processes underlying the development of renal oedema. The hypalbuminosis of the blood plasma, which had been considered by Epstein to be the cause of renal oedema, might, however, persist after the oedema had cleared. The increased permeability of the capillary wall, advocated by Kylin, needed further proof. The whole question might be clarified in the future by separate consideration of the oedema of glomerulo-nephritis and of nephrosis. Though both types of oedema happened to be associated with albuminuria, their causation need not be identical, and there seemed to be good reason for assuming that they were separate entities.

### SYMMETRICAL NECROSIS OF THE RENAL CORTEX.

At a meeting of the Edinburgh Obstetrical Society on February 12th, Drs. TURNER and J. DAVIDSON presented a paper on symmetrical necrosis of the renal cortex, which was illustrated by a clinical record of two cases occurring in Dr. Turner's practice. From a study of these cases certain points of similarity with regard to symptomatology, or rather the lack of it, were pointed out.

Both patients were multiparae, one being a 4-para and the other a 3-para; their respective ages were 37 and 39. Both were delivered of macerated foetuses at the seventh month of pregnancy. In the first case there was an antecedent history of pre-eclamptic toxæmia and accidental hæmorrhage, but in the second case no abnormality during the ante-natal period was present. Both patients lived for twelve days after delivery, during which time marked diminution in the urinary secretion was present, 19 ounces being passed by the first, and 8 ounces by the second. In both there was a comparative absence of symptoms. Until the eighth and fifth days respectively the only noticeable features were partial suppression of urine and gradually increasing generalized oedema. The puerperia were afebrile throughout. On the eighth and fifth days uraemic phenomena began to appear, but were slight in degree; they consisted, first, of progressive drowsiness, stupor,

and ultimately of coma, secondly of dyspnoea, and thirdly (in the first case) of uraemic vomiting. In both death supervened in the absence of convulsions. Treatment in both cases was on general lines, including free elimination, diaphoresis, and the administration of diuretics, but without benefit.

In both cases the kidneys showed the same characteristics—namely, total necrosis of the outer two-thirds of the cortex, the inner third being healthy; there was slight congestion of the medullary portion. In neither case was there thrombosis of the renal vessels, nor was there any evidence of previous nephritis.

In the first case the liver presented areas of focal necrosis of the central zone cells of the lobules.

Dr. Davidson showed specimens of kidneys from three cases of bilateral cortical necrosis of the kidneys, one relating to a case that had already been described by Dr. Turner. The second case showed the earliest changes of this condition; thrombosis of the afferent arterioles of the glomeruli was well seen in microscopic sections. The third case displayed advanced stages of necrosis, and was of interest because there was ante-mortem thrombus formation in both ovarian veins. Dr. Davidson pointed out that there had been one case previously described in literature where thrombosis, visible to the naked eye, had occurred in both renal and ovarian veins. The pathology of the condition was discussed, and lantern slides were shown illustrating the well-marked primary arterial thrombosis of the interlobular arteries which was due primarily to the deposition of blood platelets. Attention was also drawn to a case which was published some years ago of a man, aged 37, whose kidneys showed the typical appearance of bilateral cortical necrosis.

### LEUCOSARCOMATOSIS.

A MEETING of the Section of Pathology of the Royal Academy of Medicine in Ireland was held in the Royal College of Physicians on February 21st, with the president, Dr. J. LAIT, in the chair; Dr. H. F. MACAULEY reported a case of leucosarcomatosis in a boy aged 21 months.

Dr. Macauley said that the patient had been quite healthy till three weeks before admission to hospital, when he began to suffer from gastric trouble which gradually got worse; he then developed periorbital swelling with hæmorrhagic staining of the overlying skin. On admission to hospital it was found in addition that the abdomen was considerably distended, and a definitely enlarged liver extending to the umbilicus could be felt, with enlargement of the spleen and right kidney as well. Blood examination showed a condition of lymphocytic leukaemia. Progress of the malady was rapid, death occurring within five weeks of the onset.

Dr. W. D. O'KELLY, demonstrating a kidney from the case, said that the cells which had invaded the kidney, though varying somewhat in type, were chiefly mononuclears. The difficulty about cases such as this was the nomenclature; he thought that the proper name was leukaemia with tumour formation, for examination of the blood left no doubt that leukaemia was present.

The PRESIDENT mentioned two cases seen recently which resembled this case. The first patient, a boy aged 3, had had his tonsils removed, and returned to hospital about three weeks later with enlarged glands in the neck. General glandular enlargement was found, and lymphatic leukaemia was diagnosed by blood examination; a very large number of nucleated red cells was present. The child died of hæmoptysis, and at the necropsy a large tumour in the mediastinum was found, which had apparently started in the thymus. The second patient was a man with pyrexia who had been treated at first as a case of pneumonia, but after ten days a big tumour was found to be the cause of the consolidation of the lung. He also suffered from leukaemia, and died quickly, but a post-mortem examination was not permitted. In cases in which there was leukaemia and tumours, it was difficult to decide the exact relationship of the two.

Dr. P. J. SHANLEY said he had seen the case with Dr. Macauley; a blood film supported the clinical appearance of classical chloroma. Dr. T. T. O'FARRELL mentioned a case he had seen which was similar, being a typical one of chronic lymphatic leukaemia. The condition of the patient's face resembled that in leprosy. The patient died, and at the post-mortem examination most extensive glandular enlargement was found.

*Cerebral Abscess of Unusual Etiology.*

Dr. T. G. WILSON described the clinical features of an abscess of the temporal lobe of the brain, which occurred in a child aged 6. The patient had very few symptoms, and a simple mastoidectomy was first performed; this operation revealed some necrosis of bone around the mastoid antrum, but the dura of the middle fossa was normal on exposure. Nine days later, however, the patient's condition was not satisfactory, and a radical mastoidectomy was performed. At this operation a fistula was found leading through the tegmen tympani into the temporal lobe of the brain, and about 3 c.cm. of fetid creamy pus was evacuated from a brain abscess through it; a Gram-negative bacillus was found in pure culture in this pus, and was isolated from the cerebro-spinal fluid. The child developed purulent meningitis five days later and died.

Professor J. W. BIGGER said the organism belonged to the pseudomonas group. It was Gram-negative; produced a brownish pigment which diffused through solid medium; was actively motile; and failed to ferment any sugar or to produce indol. The cerebro-spinal fluid was very cloudy owing to the large number of organisms present and in spite of the almost complete absence of pus cells. The organism was one of a very low degree of pathogenicity.

*Mucoid Carcinoma of the Breast.*

Dr. T. T. O'FARRELL exhibited a specimen of mucoid carcinoma of the breast which had been removed from a woman aged 65. On admission to hospital the tumour was found to be freely movable, with no involvement of the skin or nipple, and no glandular enlargement. Under the impression that the growth was benign a limited removal was contemplated, but, as the specimen presented a doubtful appearance when incised, a radical operation was performed. The patient made an uneventful recovery and left hospital in nine days. The growth measured 3 by 2.5 by 3 cm., being more or less spheroidal. On section it had a gelatinous appearance, with some points of haemorrhage; in places the tissue was more solid, and was closely adherent to the surrounding fat. Microscopically the specimen presented the appearance of mucoid carcinoma. It consisted of islands of spheroidal epithelium imbedded in mucoid material, which gave the typical reaction with haematoxylin. There was an occasional attempt at acinus formation, but this was exceptional. Very few mitotic figures were observed.

*Empyema due to Gaertner's Bacillus.*

Dr. R. H. MICKS and Dr. G. C. DOCKERAY made a communication on a case of empyema due to *B. enteritidis* Gaertner. An infant, 16 months old, was admitted to hospital suffering from pneumonia; within a few days of admission, and when the pneumonia fever had begun to decline, extensive pleurisy appeared at the base of the right lung. An effusion developed, which was drained by rib resection; it was fibrino-purulent, solid fibrin forming the greater part of the contents of the pleural cavity and fluid pus being relatively scanty. Uninterrupted recovery followed. The organism, obtained in pure culture from the effusion and seen in large numbers in stained films, was identified by Dr. Dockeray with the *B. enteritidis* Gaertner; the patient's serum after operation contained no agglutinins for the organism isolated, a feature not unusual in Gaertner infections. The stools were plated on two occasions, but no organism resembling *B. enteritidis* was found, and no explanation of the infection was forthcoming; search through the literature on the subject led to the belief that this was the first case recorded of empyema due to Gaertner's bacillus.

Dr. DOCKERAY, describing the bacillus which he had isolated from the case, stated that it was typical in so far as its microscopical and biochemical behaviour was concerned. In spite of the fact that it agglutinated with Gaertner serum to full titre, it would be necessary to await the results of agglutinin absorption tests in order to determine whether it really was *B. enteritidis*, or some very closely related serological type, such as the Dublin or Tokio strains.

**Reviews.****A SYSTEM OF BACTERIOLOGY.**

It will be remembered that towards the end of last year volume iii of the *System of Bacteriology* was reviewed in these columns (November 16th, 1929, p. 908). Volume ii,<sup>1</sup> the third to appear, is devoted to a consideration of the cocci and haemophilic bacteria. Both these groups of organisms are of outstanding importance, the former because it comprises the agents of so many common diseases of man, the latter because its consideration entails a review of that vexed question the etiology of influenza. We looked forward, therefore, to some interesting reading in this volume, and it may be said that in the main this anticipation is realized.

The volume opens with an account of the staphylococci by A. Fleming. Most bacteriologists would probably admit that, despite the importance of this organism to both surgery and medicine, they look upon its study as a somewhat dull occupation. One has the feeling that the author has approached his task in some such spirit; the account is orthodox and correct, but it is unlikely to arouse interest. Chapter II, which is devoted to the streptococci, and is contributed to by a number of authors (J. W. McLeod, T. J. Mackie, D. G. S. Percival, and C. H. Browning), is excellent. Space forbids a detailed analysis of this chapter, and where so even a standard is maintained it might be thought invidious to single out a few features for comment. Such questions, however, as the role of the haemolytic streptococcus in the etiology of scarlet fever, the relation of streptococci to rheumatic fever, and sub-acute bacterial endocarditis, call for special mention. They are questions of particular importance, and their treatment is critical and exceedingly well balanced. The next chapter—on the pneumococcus, by W. Mair, J. W. McLeod, and F. Griffith—is equally good, and the account of the serological races of this organism most interesting, especially Griffith's experiments on mutation of types. Following this we have accounts of the meningococcus and the gonococcus, by E. C. D. Murray and W. J. Tulloch respectively. Both writers have given clear and eminently readable accounts of their subject, in which possible lines of future research are not obscured by a recital of what is already known.

Perhaps the best of the many good chapters in this volume is that on the influenza group of bacteria, by W. M. Scott. Here only the true haemoglobinophilic bacteria are dealt with, organisms such as *B. pertussis*, *B. ducreyji*, and *B. lacunatus*, included in the haemoglobinophilic group in the American classification, being relegated to a separate chapter of their own, for the good reason that they can be grown in media devoid of blood. The feature of the account of the influenza group is the discussion of the problem of the etiology of influenza, which is a really masterly appreciation of the situation. It should serve as a most useful base line from which to start further research. This chapter has in addition a section on *B. pneumosintes*, contributed by McCartney, in which the claims of this organism to be the etiological agent of influenza are considered in a clear and unbiased manner. The volume closes with a chapter on *B. pertussis*, *B. ducreyji*, and *B. lacunatus*, by R. T. Hewlett, which is clear and adequate.

**SPINAL ANAESTHESIA.**

THE original purpose with which Dr. CHARLES H. EVANS wrote his monograph on *Spinal Anaesthesia*<sup>2</sup> was to provide a textbook for use in the New York Post-Graduate Hospital. While claiming no very great originality either in methods of technique of spinal anaesthesia or in the choice of the drugs used, the author believes that the technique advocated and the drugs described provide adequate anaesthesia for the surgeon to carry out his work

<sup>1</sup> *A System of Bacteriology in Relation to Medicine*. Medical Research Council. Vol. ii. London: H.M. Stationery Office. 1929. (Sup. roy. 8vo, pp. 470. Single volumes £1 ls. net; set of nine volumes £8 8s. net.)  
<sup>2</sup> *Spinal Anaesthesia*. By Charles H. Evans, M.D. Introduction by W. Wayne Babcock, M.D., F.A.C.S. Foreword by Charles Gordon Heyd, M.D., F.A.C.S. London: W. Heinemann (Medical Books) Ltd. 1929. (6 x 9½, pp. xxii + 203; 40 figures. 25s. net.)