Reports of Societies

GAS GANGRENE OF THE UTERUS

At a meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine, on November 29th, Dr. ARTHUR HILL read a paper on post-abortal and puerperal gangrene.

Dr. Hill said that thirty cases of gas gangrene had occurred at the Women's Hospital, Melbourne, between April, 1933, and February, 1935, when this infection had shown a remarkable increase in incidence. From twenty-two patients *Cl. welchii*, and from two *Vibrion septique*, had been recovered by culture from the blood or tissues during life ; a mixed infection was present in 45 per cent. of the cases in the first group. Of twenty-two cases associated with abortion, thirteen presented evidence of mechanical interference. Of eight patients who were at or near term, seven had histories showing that there had been predisposing or determining facilities for the introduction of the infecting organism into the uterine cavity. The death rate in the abortion cases was 59 per cent., and in the puerperal cases 75 per cent. The clinical features were protean, but certain groups of cases were well defined. The abortion series included nine cases of classical gas gangrene, with rapidly deepening jaundice, methaemoglobin in the serum and urine, increasing anaemia, cyanosis, and failure of the peripheral circulation ; five cases with jaundice, but no serological or urinary evidence of blood destruction ; two of metastatic gas gangrene, with agonizing skeletal muscle pain, collapse, and overwhelming toxaemia ; four of miscellaneous type ; and two of *Vibrion septique* infection. The mortality in these groups was respectively 89, 20, 100, 25, and 50 per cent. Only one patient in the puerperal class showed jaundice, and she recovered. There were two instances of puerperal physometra (involvement of the uterine muscle), with excruciating pain and the rapid onset of death ; three of septicaemia following Caesarean section, with increasing post-operative tachycardia, pallor, and a general feeling of well-being despite clinical evidence of advancing toxaemia ; and two of miscellaneous type, of which one survived. Dr. Hill emphasized the importance of reaching the diagnosis early, and indicated the salient clinical signs. One patient might at the same time be suffering from some or all of the four grades of anatomo-pathological lesions—namely, endometritis, physometra, peritonitis, or bacteriaemia. Prophylaxis was difficult in cases of abortion, but more possible in the case of women at or near term. In cases of established infection recovery depended upon the early removal of the focus of infection by curetting, total hysterectomy, laparotomy, and drainage, or the instituting of early and quiet delivery, depending on the type of case. With this should be combined intensive treatment on serological lines, alkaline therapy, and blood transfusions. Renal failure was threatened in cases of severe haemolysis.

Dr. R. M. FRY contrasted the severe and often fatal course in many of the reported cases with the much milder type of disease which he had seen in a series of twenty-nine cases of infection with *B. welchii* or *Vibrion septique* admitted to Queen Charlotte's Hospital isolation block. This contrast might be due to there being some difference in the virulence of the organisms or in the resistance of the patients in his cases as compared with those of Dr. Hill. Dr. JONA thought, on the other hand, that Dr. Hill had given grounds for believing that in Australia, at any rate, *B. welchii* was becoming increasingly responsible for the maternal morbidity and mortality. He suggested that in some cases it might be advisable to eventrate the infected uterus, and to treat it as an extraperitoneal abscess. Mr. WRIGLEY feared that intrauterine manipulations in the presence of dead tissue or of a dead foetus predisposed to generalized infection. Some of the cases of rapid collapse and death after labour might be due to a fulminating infection, and they had probably in the past been wrongly classified under such headings as syncope, heart failure, or embolus.

Aetiology of Pregnancy Toxaemia

Dr. IDA HIRSCHMANN read a paper in which she suggested that derangement of the cyanide metabolism might be the cause of pregnancy toxaemia. She stated that cyanides played an important part in the intermediate metabolism of protein. The increase in the excretion of thiocyanates in the saliva, with a rise in the neutral sulphur content of the urine and of the total sulphur of the blood, indicated an increased formation of cyanide radicals. Severe toxaemia (eclampsia) and cyanide poisoning showed a close similarity. In both, the course of the disease, the clinical signs and symptoms, and the biochemical findings were the result of deficient tissue oxidation. Oxygen deficiency explained the various biochemical findings in toxaemia as regards the metabolism of the carbohydrates, proteins, nucleoproteins, fat, and sulphur ; it should therefore be considered as a primary agent. Dr. Hirschmann had demonstrated the presence of free cyanide in the blood and organs in two necropsy cases, and in the blood of five living patients with severe toxaemia. The post-mortem findings in subacute cyanide poisoning were analogous to those of eclampsia. She stated that a study of the morbid anatomy of cyanide poisoning in experimental animals would be published shortly. She concluded that the severe toxaemia of pregnancy was a derangement of the protein metabolism due to the circulation of free cyanide in the body, and thought that the detection of free cyanide in the blood of toxaemic patients should afford a differential diagnostic test. Treatment should be based on two principles: to relieve the internal suffocation and assist detoxication by the administration of such drugs as methylene-blue and glutathione ; and to prevent or repair glycogen depletion by the exhibition of glucose and insulin.

Herniation of a Foetus

Lieut.-Colonel D. COUTTS read a paper describing the herniation of a foetus into the maternal thigh.

A Hindu woman had been knocked down and run over by a heavy motor omnibus. She sustained several injuries, the most important of which eventually proved to be rupture of the pregnant uterus with extrusion of the foetus into the abdominal cavity. The force which caused the rupture seemed to have continued to act so as to force the foetus down towards the right thigh. The inguinal ligament and the structures attached to it were then forcibly detached from their bony insertions into the pubis and ilium, and the head and trunk of the child were propelled into the upper third of the mother's thigh, the feet remaining near the iliac crest. Intense shock delayed active surgical treatment for some time, but eventually the foetus was extracted, the placenta was removed from the uterus, the uterine tear was repaired, and such steps as were possible were taken to restore the abdominal wall. The mother survived this drastic operation, and then passed without injury through an earthquake and an attack of pneumonia.

OVARIOTOMY

At a meeting of the North of England Obstetrical and Gynaecological Society held in the University, Leeds, on December 13th, the president, Mr. ALFRED GOUGH, delivered his presidential address, taking as his subject ovariotomy with special reference to the operative technique.

Mr. Gough said that though the physical signs might lead one to make a diagnosis of unilateral tumour, it was always wisest to warn the relatives that both ovaries might have to be removed, and also that tumours which appeared to be innocent might possibly prove to be malignant. In young people during the active period of sexual life an effort should be made to preserve at least a portion of an ovary. The features which were suggestive of malignancy were solidity, satellite nodules in the pouch of Douglas, ascites, pain, and cachexia. A primary growth should always be sought for, and in doubtful cases x-ray investigations should be made. Sometimes an exploratory operation was essential to ascertain the nature of the growth. He had very seldom found the patient to be unfit for operation, and had only

twice refrained from operating because of extreme age and feebleness. When there was serious systemic disease a short delay might be permitted for the patient to be brought into a safer condition. Preliminary tapping was advised before the excision of very large cysts. Removal by the vaginal route need hardly ever be considered. Mr. Gough favoured paramedian incision, since this made provision for a stronger scar. When there were adhesions it was as well to separate them, especially from the intestines, before emptying the cysts. The pedicle was best dealt with in small segments. There was danger of puncturing a vein if the pedicle was transfixed, and it was best to cover the stump with peritoneum whenever possible. It was advisable to remove the second ovary in malignant cases in patients after the menopause and when the other ovary was also involved by similar pathology. The speaker gave statistics of 180 cases with a mortality of four: 126 were simple cysts ; twenty-five were malignant ; sixteen were twisted ; seven were suppurating ; and six had previously ruptured. The statistics did not include follicular cysts or chocolate cysts of the ovary. A brief summary was given of the four fatal cases.

Corporeal Recurrence after Radium Treatment

Mr. P. MALPAS (Liverpool) stated that corporeal recurrence of carcinoma cervicis was not common. These cases gained importance from the fact that they represented the type of recurrence most amenable to further treatment. He had encountered five cases among 359 cervical carcinomas treated with radium. The absence of gross cellular pelvic infiltration justified the performance of secondary hysterectomy. All the cases were originally Stage I or Stage II growths ; three were adenocarcinomas. The syndrome produced by corporeal recurrence was late onset of irregular lower abdominal and lumbar pain indicative of uterine and renal distension, with return of the watery discharge. The uterus was found to be enlarged and globular, and *x*-ray examination showed ureteral obstruction. One patient died from uraemia four days after the operation, and another died similarly nine months later. One death was due to very rapidly growing recurrence after the patient had been free from symptoms for five months. A fourth patient remained well for fourteen months, and then began to show evidence of malignant distension of the colon. The last patient was still alive now two years after the hysterectomy, and five and a half years after the original radium treatment. In these cases excretion pyelography seemed to show ureteral obstruction. After removal of the uterus this appeared to be relieved. Mr. Malpas stressed the importance of having a uterine applicator of sufficient length when treating cases of carcinoma cervicis by means of radium. Hysterectomy had no place in the secondary treatment of carcinoma cervicis until at least twelve months had elapsed.

Dr. J. W. BRIDE (Manchester) believed that recurrence in the body was much commoner than was usually surmised, and that Mr. Malpas's communication should put surgeons on their guard. Mr. J. E. STACEY (Sheffield) thought it difficult to estimate whether a recurrence was corporeal or whether the body was secondarily involved, because the growth was so advanced when subsequent examinations were made. Mr. M. DATNOW (Liverpool) stated that he had operated on several cases after radium treatment for cervical cancer because the uterus had become mobile and the body had remained large. He had found corporeal growth present. In one instance healing of the vaginal vault was greatly delayed and the patient had suffered much pain.

Vitamin Treatment of Habitual Abortion

Mr. D. W. CURRIE (Leeds) described results obtained from the treatment by wheat germ oil of thirty patients who had suffered from repeated abortion. In this series eighteen had reached full term, two the thirty-sixth week, and one the thirty-fourth week. The remaining nine pregnancies were all over five months. Two of the twenty-one children who had been delivered died subsequently. The speaker's experiments showed that the presence of vitamin E was essential for the continuance of pregnancy to a successful termination. He advised that 3 minims of the oil should be taken daily in capsules by mouth. The administration was continued until the onset of labour. The speaker added that twenty-one delivered mothers had previously had fifty-nine pregnancies, resulting in only five living children. Dr. RHODA ADAMSON (Leeds) had treated several patients with success by means of wheat germ oil ; they had suffered from renal disease, and living children were obtained who seemed to be rather over-weight. Miss RUTH NICHOLSON (Liverpool) mentioned two cases similarly treated, but which unfortunately had aborted. After hearing the previous speakers, she had been encouraged to try again. Professor W. GOUGH (Leeds) thought that if the vitamin was not thermolabile semolina should be given instead.

TREATMENT OF ENLARGED PROSTATE

At the November meeting of the Manchester Medical Society Mr. H. H. RAYNER traced the development of prostatectomy since its establishment as a practicable operation about 1901. He pointed out that little improvement had taken place in the technique of the operation until the last few years, though better results had been obtained because of an increased knowledge of the risks of the operation, and the means by which these could be reduced by preliminary treatment. He stated that even to-day, in endeavouring by drainage of the bladder to improve the renal function before operation, the grave handicap of sepsis might be inflicted on the patient by faulty technique in the use of the inlying catheter, or failure to recognize in time that a particular patient was unsuited to this type of drainage. During the last ten years there had been considerable advances in the actual technique of treatment, resection per urethram on the one hand and the refinement of the open operation, introduced by Harris, on the other ; this last had really eliminated the chief objections to open prostatectomy—uncertain control of haemorrhage and sepsis. The modern conception of the mechanism of urination was described: the opening of the vesical meatus being accomplished by a pulling backwards of the posterior lip of the meatus, the obstructive effect of thickening or rigidity of the posterior lip on the calibre of this opening was manifest ; in this way could be explained the occurrence of classical symptoms of prostatic obstruction in the absence of any enlargement of the prostate. In the treatment of patients suffering from this type of obstruction transurethral resection had proved a great advance, and must be regarded as the treatment of choice, for it gave results as good as the open operation with much less trouble to the patient. Most surgeons preferred the open operation of enucleation for the patient with gross enlargement of the prostate, for the results were more certain and the risks little, if any, greater. But for the very infirm or broken-down patient with lasting retention a very limited resection of a large prostate often succeeded in restoring voluntary micturition, and, though this benefit might be but temporary, it was clearly preferable to a radical operation in these patients.

Open prostatectomy had received a great impetus in its favour from the Harris technique, the essential feature of which was the covering over of the ragged walls of the prostatic cavity by the vesical mucous membrane. The advantage of this was assured haemostasis without use of packing or bags, and in consequence suprapubic drainage of the bladder after the operation was either dispensed with or practised for two or three days only with a fine-bore tube. Thus healing of the abdominal wound and restoration of natural micturition could be obtained within about fourteen days with considerable regularity. His own experience of nineteen such operations had led him to regard the method as standard and only to be departed from under exceptional conditions. Finally he pointed

out that the personal attention of the surgeon and the services (almost whole-time) of an experienced nurse in the preparatory treatment and after-treatment were as important as the technique of the operation, and hence in great part the striking disparity between results of the operation in private and in hospital practice.

RADIOLOGY IN OBSTETRICS

At a meeting of the Liverpool Medical Institution on December 5th, with the vice-president, Mr. T. P. MCMURRAY in the chair, Dr. R. E. ROBERTS read a paper entitled "Radiology in Obstetrics, with Special Reference to its Dependability."

After considering the various questions which might be put to the radiologist by the practising obstetrician, Dr. Roberts showed, with lantern illustrations, how the radiologist would try to answer them, and discussed briefly the reliance which might be placed on the answers. His conclusions were as follows. Radiology in obstetrics had proved to be reliable in the diagnosis of pregnancy after the sixteenth week, and sometimes earlier. It supplied information about the position and presentation, and regarding multiple pregnancy or foetal abnormalities, which was more complete and reliable than that obtainable by any other diagnostic means. In assessing the period of gestation in cases where this was in doubt, radiology could be relied on in many cases to give information which was considerably more exact than that which was obtainable by clinical means. In the matter of disproportion, radiology in skilful hands gave precise information as to the size of the foetal skull and the measurements of the maternal pelvis; the application of these cephalometric and pelvimetric data was, however, outside the province of the radiologist. In the diagnosis of intrauterine death the radiological evidence was reliable if positive; when this condition was suspected a firm negative opinion could only be given if repeated x-ray examinations were made. The x-ray diagnosis of extrauterine pregnancy was reliable if direct radiology was followed, where necessary, by the use of contrast media. In the diagnosis of placenta praevia two methods of employing contrast media were described. The first, radiography after the injection of uroselectan into the amniotic sac, was open to the objection that the injection was almost certain to induce labour, and that in the radiographs the exact site of the filling defect due to the placenta was not always readily detected. The second method, radiography after the injection of an opaque solution into the bladder and the demonstration of an increased gap between the foetus and bladder in placenta praevia, was only reliable in the later months of pregnancy in cases of central placenta praevia where a central clot was excluded. Both these methods were in their infancy, and insufficient data were available as yet for a firm opinion as to their reliability.

Dr. C. H. WALSH was glad that Dr. Roberts only claimed ability to measure the pelvic brim by his special method, and thereafter left the obstetrician to decide the mode of delivery. Dr. Walsh maintained that a radiograph of a moderate-sized hydrocephalus was extremely difficult to interpret, and that the final diagnosis rested on clinical findings. After considerable experience of amniography, which he had instituted at Mill Road Infirmary, Liverpool, about three years ago, Dr. Walsh had come to the conclusion that the introduction of uroselectan into the amniotic sac had a useful but limited place in obstetric diagnosis. It would outline the placental site and would demonstrate beyond doubt an abnormal foetus, but only an expert radiologist could interpret the findings, and the method suffered from the disadvantage that sooner or later labour was induced.

Dr. A. WINFIELD said that radiographs indicating pioneer work in x-ray pelvimetry had been shown. He had used x-ray pelvimetry, particularly in subjects difficult to examine digitally. Amniography, however, entailing the insertion of a needle and the risk of abortion, did not appear to be of much practical value, and was apt to shake the confidence of a patient who had only expected to have a picture taken. Dr. F. J. BURKE stated that in a series of cases he had found amniography safe and accurate and helpful in the diagnosis of doubtful cases of placenta praevia. One advantage of this method was that it enabled the demonstration of abnormalities of the foetus which might not be shown by direct radiography—for example, meningocele. This was possible because foetal soft parts were outlined as well as the bony skeleton. The method of injecting radio-opaque substance into the bladder was insufficiently accurate to be of real value. Diagnosis depended upon a study of the distance between the posterior aspect of the bladder and the anterior aspect of the foetal skull. This demanded the most careful radiographic technique to obtain a view in the correct plane. Moreover, it was difficult to see how it was possible to diagnose placenta praevia in this way unless the placenta occupied the anterior part of the lower uterine segment, and was actually interposed between the maternal bladder and the foetal skull. Mr. ST. GEORGE WILSON said that obstetricians did not need exact measurements of the bony pelvis and of the foetal head. What they needed was a view of the foetus presenting by the head *in utero* at or about thirty-seven weeks, in order to decide whether it would traverse the pelvis. It was important to remember the factor of uterine action. With regard to the evidence of placenta praevia, he considered that sodium iodide in the bladder was better than the amniography method, since it did not tend to start labour. However, he recognized that it was only of use in the central and marginal types of placenta praevia. When the uterus was so tense that palpation was of little assistance, diagnosis by means of x rays was very valuable.

Surgical Aspects of the Kidney

Mr. R. KENNON read a paper entitled "The Kidney from the Surgeon's Point of View," drawing attention to the large number of urinary cases which were so indefinite as to require the attention of both the surgeon and the physician. Some patients had frequency of micturition only, and others came with haematuria or renal colic, which could only be explained as renal congestion or mild nephritis. Normal urine (without casts) was possible with advanced nephritis, as was witnessed by the reports upon those cases of "essential haematuria" which on occasion were explored. Normal urine was common with multiple renal abscesses and perinephritic abscess. Infective nephritis had been overshadowed by the milder term pyelitis on slender pathological evidence. The possibility of acute nephritis of the abdominal type, caused by sun bathing, required continued emphasis to avoid a dangerous laparotomy. Subnormal gall-bladder functioning, or a normal hypertonic stomach in ill-health at the age of 60, might be the first indication of approaching uraemia. The swing from alkalinization to the ketogenic diet and mandelic acid was discussed. Results were best when stasis was eliminated. Delay to recognize when relief of tension by nephrotomy or otherwise was required presaged disaster. Nephrectomy for essential haematuria, often in fear of early tuberculosis, was serious. Renal carbuncle rarely called for nephrectomy, which operation carried a mortality of 7 per cent. for all types of case, and must frequently be preceded by drainage.

Mr. COSBIE ROSS commented on the relative frequency with which cases of uraemia presented themselves as abdominal conditions, and cited three such occurrences within a period of two years. One patient was admitted as a case of haematemesis, another as acute intestinal obstruction, and a third as pyloric obstruction. An interesting feature of the case of haematemesis was that the house-surgeon stopped the administration of all fluids by the mouth, with the result that the patient's condition became steadily worse; when the diagnosis had been established and forced diuresis was instituted rapid recovery ensued. All three cases were subsequently proved to be uraemic. Mr. Ross expressed his firm belief

that as a means of estimating renal efficiency the indigo-carmine test was superior to the estimation of urea in the urine collected by means of a ureteric catheter. Dr. R. W. BROOKFIELD said that Mr. Kennon had emphasized the fact that the classification of kidney disease was continually undergoing modification. The precise aetiology of many renal conditions was still obscure, and none was more baffling than the case of undoubted renal pain unaccompanied by any demonstrable abnormality in kidney or ureter, and relieved by renal sympathectomy. He thought that surgeons performing operations for calculus should remember the possible existence of a generalized bone condition still in an early stage of evolution. He referred to a case of well-marked Paget's disease, recently seen, in which a renal calculus had been removed some years previously.

CORRESPONDENCE

Facilities for Thoracic Surgery

SIR,—In your issue of December 14th you report that the Joint Tuberculosis Council "is of the opinion that the benefits of major surgery both for tuberculous and non-tuberculous conditions should be available to every patient in need of such treatment, and considers that steps should be taken by local authorities to provide facilities at tuberculosis institutions if adequate arrangements have not or cannot be made at other institutions." May I stress a few points which I think should be considered before putting this advice into practice.

Thoracic surgery is a very special branch of surgery, and, in order that treatment should be beneficial and efficient, it must be done by a surgeon with experience and training in chest work. The tendency for general surgeons in certain parts of the country to do thoracoplasties without previous training or practice under a recognized authority frequently produces very unsatisfactory results, and must be strongly condemned. Similarly, if the after-care is carried out by the staff of a general surgical ward not trained in the special details required for the post-operative treatment of chest cases, the chances of a good recovery will be considerably lessened.

Local authorities must realize that major thoracic surgery is expensive and the number of cases requiring it are comparatively few. If treatment is to be efficient and economical the unit for thoracic surgery must be kept busy. One surgeon told me that for efficient work a unit should do two major chest operations each week. To satisfy such a demand it is useless trying to arrange for an occasional thoracoplasty to be done at the local general hospital or sanatorium. It will be necessary to establish a sufficient, but not an excessive, number of specialized centres for thoracic surgery in various parts of the country where tuberculous and non-tuberculous cases requiring such treatment can be collected from definite areas. These centres must be conveniently situated, and in each case have the services of specialists in chest surgery and a staff trained in all the details of the operative treatment and after-care.

Only by such means can it be hoped to give patients all over the country facilities for adequate and really beneficial treatment in an economical way. As the number of cases requiring this treatment is not large the "splendid isolation" (to use Dr. Stobie's expression) idea of local authorities must give way to the spirit of co-operation for the benefit of the patient and the justification of the expenditure to those who provide the money.

I must add, Sir, that these views are entirely my own personal opinion, and are not connected with any authority.—I am, etc.,

London, N.W.9, Dec. 14th. FREDERICK HEAF.

Pink Disease

SIR,—In common, I feel sure, with paediatrists all over the world, I feel grateful to Drs. A. J. and I. Wood of Melbourne for their excellent paper on pink disease, which was published in your columns on September 21st. Dr. A. J. Wood is a recognized authority with wide experience in this fascinating but elusive complaint, the aetiology of which remains as obscure as it did when first described by Swift in 1914. Readers must, however, have experienced a feeling of disappointment that the treatment he advocates is practically the same as he advised at the Brisbane meeting of the Australasian Medical Congress in 1920, with one significant exception when he states that "most patients will be aided by graded sun baths."

The Woods are insistent that no improvement can be looked for as a result of treatment until towards the end of three months, when the patient will begin to show signs of improvement. To neither proviso can I fully subscribe, for, although perhaps true in a certain proportion of cases, experience has taught me that with suitable treatment the duration of the disease can often be shortened below the period mentioned, and if untreated the symptoms of this disease may be prolonged with little if any improvement for as long as nine months. Until the aetiology and pathology of pink disease is better understood its rapid cure or prevention can hardly be expected, but I consider that greater advance has been made in its treatment than the Woods would lead us to believe.

In December, 1930, I published an article in the *Archives of Disease in Childhood* on the treatment of Swift's disease (as I prefer to call it), in which I advocated the use of artificial sunlight, and quoted seventeen cases in which most satisfactory results were obtained in ameliorating the symptoms and shortening the course of the disease. Eight of the cases in this series received treatment comparatively early in its course, and were rendered free of all symptoms of this disease, except for some muscular weakness, partly owing to disuse, in an average period of eight weeks from the onset of the complaint. Other cases were first seen when the disease had been in progress for five, seven, eight, and nine months respectively, with all the symptoms of this distressing complaint still in evidence. Since my paper was published I have treated eighteen more cases on similar lines with equally good results, and, rightly or wrongly, have come to the conclusion that treatment by artificial sunlight is as nearly a specific as it is possible at present to obtain.

The advantages of artificial sunlight over graduated natural sun baths are the following:

1. It is always available, whereas sunshine, even in Australia, is not to be depended upon at all seasons of the year.
2. Treatment being entirely under the control of the physician in charge of the case, the real danger of overdosage with ultra-violet rays (when the sun is used as the medium for treatment) is prevented.
3. It causes no distress to the little patient, who, owing to photophobia, resents being placed in the glare of the sun.
4. It is simpler and more effective, a few minutes' exposure in the nude to artificial sunlight given twice a week in gradually increasing doses being all that is necessary to effect a cure, provided that the hygiene measures advised by the Woods—such as open air, a minimum of clothing, and suitable food—are insisted upon.

To my mind one of the most important parts of the Woods's paper is that in which they draw attention to the grave danger of admitting patients suffering from this disease into a public institution. The average medical man does not realize the perils of hospitalization to very young children suffering from a chronic disease, and con-