Chart 1 illustrates the effect on the urinary excretion in the case of a vigorous patient admitted for ascites due to hepatic cirrhosis (non-syphilitic). He exhibited a remarkable tolerance for the drug, which caused no gastro-intestinal symptoms, and even begged for more intravenous injections, as the diuresis induced kept his ascites in check. It will be seen that the usual daily excretion of urine was 1000 c.cm. and that each injection of bismuth increased the day's output fourfold. There was no albuminuria, but a black line formed in the gums, with some gingivitis, which quickly subsided under treatment.

In two older patients a single intravenous injection of 2 c.cm. was followed by signs of renal injury, very slight and transient in one case, but definite in the other (see Chart 2). This latter patient, aged 54, developed an acute tubular nephritis. On the fourth day the urine showed a heavy deposit of casts—chiefly epithelial—without blood corpuscles and but very few leucocytes, while albumin was present to the extent of 3 parts per 1000 (Esbach). After this date the condition rapidly improved, and by the tenth day there was the merest trace of albumin with a few hyaline and granular casts. At no time did any oedema appear.

The action of bismuth was further tried on two cases of actual nephritis. In order to minimise toxic effects if possible, two small subcutaneous doses were first given in the hope that tolerance might be gained as with antimony. A larger dose (1.5 c.cm.) was injected intravenously after a few days, no harm having resulted from the preliminary injections. In one patient, a case of acute nephritis associated with chronic bacillary dysentery, a definite diuresis lasting some days followed immediately on the intravenous injection, and his condition improved; in the other patient, a case of chronic nephritis, no change either for better or worse was observed.

To determine whether the citrate component of the drug used was responsible for the diuresis produced, several patients were given an equivalent amount of pot. citrate by intravenous injection. This had a distinct but far less diuretic effect than that induced by the bismuth compound.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

LABOUR OBSTRUCTED BY A SOLID CARCINOMATOUS TUMOUR OF THE LEFT OVARY.

CÆSAREAN HYSTERECTOMY WITH REMOVAL OF TUMOUR.¹

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In the following case the uterus and left appendages were removed by operation during labour. Before removal the ovarian tumour was in Douglas's pouch, pushed down into the pelvis by the foetal head, thus forming an insuperable obstacle to delivery. In the fresh state the tumour measured 19 by 9 by 4.5 cm., the surface was smooth; on section it was dull white and whorled in appearance. Towards the centre it appeared degenerate and yellow with some extravasated blood: it was free from attachment to other organs and there was no evidence of any other disease in the pelvis. The right ovary appeared healthy.

The clinical history of the case was as follows: The patient, a primigravida, aged 40, was admitted to the London Hospital on April 24th, 1922, having been in labour 14 hours. She had been attended by a doctor, who had applied forceps unsuccessfully before sending her up to hospital.

¹ An account read at the Section of Obstetrics and Gynaecology, Royal Society of Medicine, on June 1st, 1922.

Examination after admission showed a quite good general condition; the foetus was alive, the foetal head engaged; the external measurements of the pelvis were normal. From her dates the patient was 15 days over full time. On vaginal examination the os uteri was three-quarters dilated and torn. Posteriorly the examining finger felt a large, hard rounded lump behind and outside the uterus, pressed down into the pelvis by the foetal head. The pains were strong and frequent. Diagnosis of the lump rested between an ovarian tumour or a fibroid in the lower uterine segment; the latter seemed rather more probable.

Cæsarean section was decided upon for the following reasons: Firstly, the foetus was post mature and large, the foetal heart was becoming more rapid, the patient was over 40; therefore, Cæsarean section afforded the only real chance of delivery of a living child. In the event of the child being alive it was decided to do hysterectomy because the uterus was most probably infected; the membranes had been ruptured nine hours, and forceps had been applied under unfavourable conditions.

Laparotomy was therefore performed and the uterus was packed off from the peritoneal cavity. The infant was extracted by the ordinary uterine incision, and the uterus, left tube, and left solid ovarian tumour were removed in the ordinary way. A small portion of the cervix of the uterus was preserved. The child was a well-developed female weighing 8 lb. 10 oz. The patient made an uninterrupted recovery, the temperature and pulse-rate settling after two days.

Histological examination of the tumour showed it to be a solid polygonal-celled scirrhus carcinoma of the ovary.

On thinking over this case I am aware that my treatment will not be accepted as orthodox in two points: (1) The performance of Cæsarean section for obstruction by an ovarian tumour; and (2) the necessity for hysterectomy after Cæsarean section owing to the danger of sepsis.

On the first point, I have mentioned above that the reasons I decided upon Cæsarean section were that the patient was over 40, and a primigravida who had already been in labour with membranes ruptured for some hours. As the foetus was large it seemed quite likely that, if the ovarian tumour could be removed by laparotomy, natural labour might go on for quite a long time before delivery of the child could be effected. In other words, the chance of a living child was bad except by Cæsarean section.

On the second point, I am, in general, opposed to hysterectomy after Cæsarean section in a suspect septic case. I have found it impossible to determine practically by bacteriological methods whether or not the liquor amnii is seriously infected. I am therefore guided by the condition of the patient, the length of the labour, the length of time the membranes have been ruptured, and the extent and nature of manipulations and the conditions under which they were carried out. In this case I decided that it was too dangerous to leave the uterus.

The carcinomatous nature of the ovarian tumour might be considered an additional indication for hysterectomy. Yet I feel that in similar cases in younger women, apart from sepsis, I would be prepared to leave the uterus and keep the patient under observation.

TRAUMA AS A CAUSE OF CHRONIC GASTRIC ULCER.

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THE case here recorded is one of innocent gastric ulcer in which trauma seems to have played an important part as a causative factor.

A labourer, aged 58, was unloading brick dust on Nov. 23rd, 1921, when he was struck in the epigastrium by the handle of a spade used by one of the other men working with him. He was brought into the Albert Dock Hospital, collapsed and vomiting blood-stained material, and was admitted under the care of Dr. F. H. Lowe, who treated him for gastric ulcer. Later I was asked to see him with a view to operative treatment. As a result of the patient's anæmia, secondary to hæmorrhage, I did not think it wise to operate until Jan. 11th, when I did an exploratory laparotomy. An ulcer about a quarter of an inch in diameter was found on the anterior aspect of the stomach near the pylorus and the lesser

curvature. There were no adhesions to the stomach and the walls of the ulcer were only slightly indurated. Unfortunately at this juncture difficulties were experienced with the anæsthetic and the patient stopped breathing. Artificial respiration was resorted to for 20 minutes before the patient recovered. Further interference with the abdominal contents was deemed inadvisable; the wound was closed and the patient was returned to bed. He refused a further operation and was discharged from hospital at the end of January. In the beginning of March he had a recurrence of hæmatemesis and was readmitted to hospital. On April 10th a second operation was performed; the stomach was now found to have several adhesions to the anterior abdominal wall and one to the liver. These were broken down or divided and the stomach examined. The ulcer was found to be slightly larger than when previously seen and the stomach wall in its neighbourhood indurated over a greater area. There were no enlarged lymph glands felt in the gastro-hepatic omentum or great omentum. Posterior gastro-jejunostomy was performed and the vestibule of the stomach and the pylorus excised. The abdominal wound was closed and the patient returned to bed. The patient made an uneventful recovery. A section of the ulcer was cut and a microscopic examination showed no evidence of malignancy. The specimen is preserved in the museum at St. Bartholomew's Hospital.

The patient stated that he had only suffered from indigestion for one short period, about four years before his entry to hospital. When first examined I thought his condition was in all probability due to hæmorrhage from a chronic gastric ulcer which in some way had been injured at the time of the accident, but in view of the fact that at the first operation, six weeks after the original accident, there were no adhesions in the region of the ulcer and there was little induration of the surrounding tissue; whereas, at the second operation, three months later, there were several adhesions in the neighbourhood of the ulcer which had increased in size and its margins become much more indurated, it seems to me likely that when first seen the ulcer was in a comparatively acute stage, and in all probability was started at or about the time of the accident.

A CASE OF PNEUMOTHORAX FOLLOWING BREATHING EXERCISES.

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THE following case of spontaneous pneumothorax following breathing exercises may be of interest.

On April 8th of this year a patient was referred to me by Dr. J. H. Paul, of Millport, suffering from breathlessness and pain in the right chest. Examination of the thorax showed immobility and distension of the right side of the chest. The percussion note was hyper-resonant. In the infra-scapular and lower axillary area amphoric breathing was elicited. Elsewhere there was an absence of any respiratory murmur. No metallic tinkling was heard. His temperature was normal and the pulse-rate 90 per minute. An X ray examination of the chest showed the lung to be completely compressed against the lower mediastinum, and there was a band of adhesions stretching from this to the axillary area. The diagnosis of pneumothorax was obvious. The patient stated that previous to the onset of this condition he had never felt better in his life. He was interested in athletics, and when unable to indulge in sport went through breathing exercises once a week. A week before I saw him, after going through those exercises, he felt a sharp pain in the chest and became breathless. After breakfast he was much better and went off on his motor-cycle for a run from Glasgow to Largs—a distance of approximately 45 miles. At Largs he felt so ill that he had to be taken back to Glasgow in a motor-car. No history could be elicited definitely indicative of previous lung disease. He stated that while in the army he had had a bad time with "gastric fever," but except for that, according to his history, his record was clear. The pleuritic adhesion seen in the radiogram indicated that there nevertheless may have been an active tuberculous lesion of the lung at some remote period previously.

I have seen the patient since, and he is apparently progressing satisfactorily. Although the lung is not expanding rapidly his temperature remains normal, his pulse has improved, and he has now no difficulty with his breathing. The case demonstrates the danger of violent respiratory exercises even in apparently healthy individuals.

Medical Societies.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NAVAL, MILITARY, AND AIR FORCE GROUP.

Laboratory Meeting.

A GENERAL meeting of this group was held at the Royal Army Medical College, London, on July 21st, Surgeon Rear-Admiral Sir PERCY BASSETT-SMITH being in the chair. The chairman pointed out the value of the group as a means of union between the various public health services and the assistance that meetings of this sort afforded to practical coöperation. Demonstrations in the hygiene and pathology laboratories of the College were given under the auspices of Lieut.-Colonel J. ANDERSON, Professor of Hygiene, and Lieut.-Colonel MARIAN PERRY, Professor of Pathology.

Hygiene.—The storage of bleaching powder for water sterilisation in hot climates has always presented difficulties. A series of exhibits were shown illustrative of a solution of this problem. The deterioration of bleaching powder in tropical countries is due to the interaction of the bleach and its absorbed water under the influence of heat; it has been found that it is practically impossible to obtain an anhydrous bleach on a commercial scale. The difficulty has been overcome by adding 20 per cent. of quicklime, and it has been found that tins of this bleach and quicklime mixture, after several months of storage in the tropics, show very little fall in the available chlorine content.—Another exhibit dealt with the equipment problem: the measurement of energy expenditure by indirect calorimetry was demonstrated by Major LOTHIAN, also the various problems connected with equipment and the load of the soldier.—An interesting demonstration on motion study and its practical value was given in connexion with a recent research carried out at the School of Military Engineering, Chatham, on trench digging. The cyclographic method of studying motion was shown, also a complete set of cyclographic and slow-motion photographs.

Pathological.—Living specimens of *Bullinus contortus* and *Planorbis boissyi*—intermediate hosts of the bilharzia parasites—were demonstrated, showing all stages of development from the egg upwards.—Lantern demonstrations showed the striking results of vaccine prophylaxis upon the incidence of typhoid and paratyphoid fevers during the late war. A demonstration was also given of the method of preparation of "T.A.B." vaccine.—Specimens were shown illustrative of the intestinal lesions which may occur in visceral leishmaniasis.—Modern diagnostic methods in the various infective intestinal diseases were shown in considerable detail. Exhibits were also shown dealing with the ætiology and prophylaxis of various tropical diseases, such as plague, malaria, and bilharziasis. These specimens afforded convincing evidence of recent advances made in bacteriological and protozoological technique.

The venereal section was divided into three parts: prevention, diagnosis, and cure. Preventive packets from British and foreign armies were shown, with a suggested simplified outfit. The various organisms were demonstrated, either under dark-ground illumination or as stained slides. The Wassermann test for blood serum and cerebro-spinal fluid, mastic test, and various chemical tests completed the diagnostic part. Various instruments used in the treatment of urethral gonorrhoea were shown, also an exhibit dealing with the value of flavine dyes in the treatment of gonorrhoea, both intravenously and by the subcutaneous route.—The use of an adsorbed gonococcal vaccine in treatment and of sulpharsenol in small doses to cut short complications illustrated new methods in the cure of this intractable disease.