Consideration of the effect of the various arrangements described above shows that (a) the top inch or so of the contents of a tube is heated to 100° C.; (b) the middle portion is brought to a moderate heat; (c) the lowest portion remains quite cold. The advantage of these conditions is demonstrated in the case of a highly phosphatic urine, which should be treated as follows:—

A test-tube is taken from the apparatus, filled with the urine, acidified with dilute acetic acid, and replaced in the bath. Steam is now turned on for five minutes, and on removing the tube a beautifully clear and sharply defined result is obtained. The albumin, if present, is visible in the strongly heated layer of urine, even in the merest traces. The contents of the middle portion of the tube are quite clear, owing to the fact that the heating has been sufficient to clear the phosphates in acid urine, without being strong enough to bring down the albumin. The lowest portion of contents is cold and in its original condition, and serves to contrast with the heated layers.

When dealing with a large number of urines much saving of time is effected, as 40, or even many more samples can be heated in five minutes, according to the size of the apparatus. Most hospitals have a steam-supply laid on, but failing this advantage a very small boiler on a gas-ring has been found to produce all the steam required for a 40-tube apparatus. The boiler may be started in the morning by the nurse, so that when the physician arrives the apparatus is ready for use.

The method was used by me for several months in a London fever hospital, where the number of urines tested daily was large, and I believe the original experimental apparatus is still in use there.

TWO CASES OF TRAUMATIC RUPTURE OF INTESTINES WITH- OUT EXTERNAL INJURY.

BY G. E. PEPPER, L. & L.M., R.C.P. & S. IREL.

THE interesting cases reported by Mr. E. Gerald Stanley in THE LANCET of Oct. 25th lead me to record two further cases of the above injury treated by me during the war.

CASE 1.—A private in the R.A.V.C. was thrown by a restive horse, the animal falling on top of him. On admission to hospital half an hour later I found him very collapsed and complaining of great hypogastric pain. T. 96° 8' F., P. 100. No dullness of abdomen on percussion, but marked rigidity. He had a hard irreducible hernia the size of a hen's egg in the left inguinal canal, but stated that it had existed for years. Catheter specimen of urine normal. One hour later he appeared worse (pulse 120), and I opened his abdomen in the middle line below the umbilicus. There was no free fluid or blood in the abdominal cavity. The hernia proved to consist of the entire great omentum, which had dragged the transverse colon down to the lower part of the abdomen, remaining attached to it by a pedicle 2 in. long. As this pedicle was severely lacerated I ligatured it and removed the mass of omentum. Four inches distal to the base of the pedicle there was a rupture of the transverse colon 1½ in. long, and this I closed with Lembert sutures. At this point of the operation the patient collapsed, and it was necessary to close the abdomen hurriedly by through-and-through sutures, one pint of normal saline, T. 100°, being poured into the abdomen. Patient rallied after the operation, but died 18 hours later. Post-mortem examination revealed a second rupture situated in the jejunum 6 in. below the duodeno-jejunal flexure.

CASE 2.—A private in the R.A.S.C., whilst exercising a restive horse, was thrown on to the pommel of his saddle, and from there fell to the ground. I saw him

two hours later, and found him suffering from severe hypogastric pain, with an intense desire to micturate. There was marked dullness on percussion over the lower abdomen, and blood was obtained on passing a catheter. T. 97°, P. 100. I diagnosed intraperitoneal rupture of the bladder, and opened abdomen in middle line above the symphysis. A large quantity of blood and urine poured out, and an extensive rupture of the bladder presented; after sponging the cavity dry I closed it by two layers of catgut sutures. On examining the intestines I found two small ruptures of the ileum close to the ileocaecal valve, and closed them by purse-string sutures. The abdominal cavity was sponged dry, a large drainage-tube passed to the bottom of the pelvis, and the wound closed by layers. A catheter was tied into the urethra and was removed on the third day, the patient passing urine normally. The abdominal tube was removed on the fifth day, and the patient made an uninterrupted recovery.

These cases emphasise two points of great importance—the urgent need for early operation, and the necessity of examining the whole length of the intestines at the time of operation.

Dublin.

CASE OF LABOUR OBSTRUCTED BY A TUMOUR.

BY THOMAS H. MORSE, F.R.C.S. ENG.

SOME years ago I published a paper¹ on the Treatment of Obstructed Labour when Caused by the Impaction of a Tumour in the Pelvis, illustrated by four cases. Since then another similar case has occurred as follows:—

CASE 5.—I was asked to see Mrs. D., who had then been in labour 48 hours, and was becoming exhausted. Pulse was 120, and pains were recurring about every three minutes. On examination per vaginam a semi-solid tumour occupied the pelvis, and with difficulty the finger could reach the presenting head, which had not yet engaged in the pelvis, but remained above the brim; the os uteri was fully dilated. The pelvis was so blocked that forceps and other instruments could not be passed into the uterus.

I decided to open the abdomen. She was at once removed in a cab to a surgical home. An incision about 11 in. long was made in the middle line of the abdomen as rapidly as possible, and the whole fundus of the uterus turned out. Mr. A. Ross, who assisted at the operation, very carefully kept it covered with hot sponge cloths. The right Fallopian tube and round ligament formed a tight cord passing behind the fundus down into the pelvis. On tracing this I found it attached to a tumour filling the hollow of the sacrum; this was about the size of a cocoanut, it was not adherent, and was easily drawn upwards and out of the wound; its pedicle was long and twisted upon itself. Having ligatured it with silk, the tumour was cut away; on examination it proved to be a dermoid ovarian cyst. The uterus was now with some difficulty replaced, as the parietes seemed insufficient to cover it; however, this was finally accomplished. The whole operation had to be rapidly performed, the pulse having reached 130 per minute before beginning. Brandy enemata were given and strychnine hypodermically, and the patient rallied quickly. The wound was dressed temporarily, and then Mr. Ross applied forceps and delivered the child, which, although well developed, was dead, the result, no doubt, of the prolonged labour. The after-treatment was quite satisfactory, and the patient was quite well in a week.

As cases of this kind will recur it will be a gratification to me to find that the method described above has become the recognised form of treatment, and that it can be easily carried out by the surgeon of the present day.

Deal.