in saline. No superficial ulceration is produced at the site of the injection.

2. Glycerine extract of liver. This is not so toxic and the dose used was 15 minims of a half dilution in saline. No superficial ulceration is produced at the site of injection; the extract has the disadvantage of being particularly unstable.

3. Mixed extracts of intestinal mucosa and liver. 10 minims of mixed intestinal extract (one-half dilution) plus an equal amount of liver extract (undiluted) was toxic and lethal without producing superficial ulceration. The dose tolerated of the foregoing mixture was five minims.

4. Mixed extracts of intestinal mucosa, liver, and pancreas. This is very toxic, and the superficial ulceration produced necessitated the destruction of the animals. It was, however, found that five minims of the following mixture was tolerated: equal parts of intestinal extract (one-half dilution), liver extract (undiluted), and saline solution, plus 4 per cent. of pancreatic extract (one-half dilution); the tryptic strength of the pancreatic extract was 10 grains, and the amylolytic strength five grains to the drachm (A. and H.).

5. Splenic extract (ox). The spleen was digested in water containing 0.2 per cent. of acetic acid. The dose employed was 15 minims of one-half dilution with physiological saline solution, but no toxic or ulcerative effects were produced by the same dose of the undiluted extract.

The investigation was commenced in March, 1908, and up to the end of July it seemed to afford me some ground for encouragement. For example, in one series of nine mice, which survived, although previous treatment with intestinal extract did not prevent the tumours from appearing after inoculation, two tumours grew progressively and seven became absorbed. In another series of 16 mice two were negative to inoculation, six grew, and eight became absorbed; while in a third series of 12 mice, treated with the mixed extracts of intestine, liver, and pancreas, two were negative to inoculation, three tumours grew, and these, together with seven which were positive to inoculation, practically disappeared. No conclusion was, however, permissible from these results owing to the early death of some of the treated and untreated (control) mice in the several series. Neither was any conclusive result obtained by treatment with liver extract alone, owing to its liability to undergo decomposition.

Repetition of treatment with the mixed extracts during later months has not given the same result nor confirmed the earlier hopes. For example, in one series of 16 mice four were negative to inoculation, six growths took place and six disappeared, compared with six growths out of 12 and six disappearances in the untreated controls. As regards the growths, the slight difference in favour of the treated mice is not sufficient to demonstrate a specific action, since the tendency to spontaneous absorption was also present in the controls. As regards the negative cases and absorbed growths, in favour of the treated also, it is not possible to say whether treatment assisted natural processes or not.

In the case of tumours of generally slower growth there is no evidence that any beneficial influence has been exerted, although in such cases it is more difficult to arrive at a comparative conclusion, especially as regards retardation of growth. In other observations on rapidly growing tumours without a tendency to natural absorption the treatment did not arrest their onward progress. In one series in which splenic extract was used, while six were negative to inoculation and five growths disappeared, there seemed to be increased growth, eight progressive tumours occurring in 19 mice treated, compared with three in the 12 untreated control animals. The treated mice had a smaller average weight than the untreated; this may have been a possible factor in the result.⁶

It is too early to conclude that these results are condemnatory of the whole theory of intracellular ferment action and ferment treatment in carcinoma. They refer solely to the hypodermic method of administration or to particular combinations of the extracts employed.

Tables I. and II. present in a concise manner the whole

⁶ In the treated of this series a moveable lymphatic gland in the inguinal region on the side of inoculation was evident to palpation in seven (in one case bilateral) of the negative cases and absorbed growths. In the treated of Series C, No. 4, the same was noted in eight (in one case bilateral) similar cases, and in one of the untreated controls; in this series also metastases took place, apparently in the lymphatic gland in one of the treated cases.

series of observations, chiefly with the mixed extracts, on squamous celled carcinoma (mammary), adeno-carcinoma, and medullary cancer in mice. Table I. shows the results in cases in which treatment was commenced previous to inoculation and continued afterwards. The small difference in favour of the treated mice in Series A and C so shown may have some significance, but does not appear to be conclusive. Table II. shows the results in which mice were treated after inoculation, and shows that the results in these therapeutical experiments must be considered negative.

Green-street, Park-lane, W.

Clinical Notes :

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

LABOUR OBSTRUCTED BY A FIBROID TUMOUR; CÆSAREAN SECTION; SUPRAVAGINAL HYSTERECTOMY.

BY C. E. PURSLOW, M.D. LOND., M.R.C.P. LOND.,
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I SAW this patient in consultation with Mr. J. K. Syms at her own home at 11 P.M. on Feb. 20th last. She was 39 years of age and this was her first pregnancy. There was nothing in her previous history which pointed to the existence of a fibroid tumour. Labour pains had commenced 24 hours before I saw her, and the membranes had been ruptured ten hours. Mr. Syms on being called in at once recognised that there was a tumour obstructing labour and asked me to see the case with him.

On examining the abdomen a breech presentation could be diagnosed, and it was easy to make out that the presenting part was well above the pelvic brim; nothing could be felt of the obstructing tumour by abdominal palpation. On making a vaginal examination the pelvis was found to be occupied by a hard, somewhat uneven, tumour, which could not be displaced; the os was clearly in front of the tumour, which pressed upon the posterior vaginal wall, but by the greatest effort it was not possible to reach the cervix with the examining finger, the pelvis being completely occupied by the growth. Cæsarean section was decided upon and the patient was taken to the Queen's Hospital in a cab, and at 1 A.M. I operated.

The abdomen was opened by a median incision, and the uterus was likewise incised vertically in the middle line, and child and placenta were removed. The tumour was found to be growing from the posterior wall of the uterus low down and by a broad base of attachment. Hysterectomy seemed to be the most suitable operation, and I accordingly removed the uterus and tumour by the supravaginal (or subtotal) method, the edges of the cervix were brought together by catgut, the peritoneum of the pelvic floor was united by continuous fine silk sutures, and the abdominal wall was closed in layers.

The patient made an uninterrupted recovery. She was unable to suckle the child, as no milk was secreted; artificial feeding was used, but the child made good progress and both mother and child left the hospital in excellent condition at the end of a month.

Birmingham.

A CASE OF HERNIA THROUGH THE FORAMEN OF WINSLOW.

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THE following case, which occurred in my practice recently, is perhaps in some respects unique. According to Treves,¹ "hernia into the foramen of Winslow occurs in adults, and in men more often than in women. Eight cases at least have been recorded."

A coloured boy, aged five years, was brought to my surgery at 9 A.M. on the morning of Jan. 28th in a moribund condition, and he died within half an hour while in the

¹ System of Surgery, 1898 edition, vol. ii., p. 658.