imminent. In two cases blood transfusion had to be resorted to in order that the patients might be kept alive during the operation of suprapubic cystotomy. The bladder haemorrhage was controlled within a few hours of the onset of the radium exposure.

It is necessary to stress the point that all the twenty-three patients, before treatment was commenced, were profoundly ill from either sepsis or profuse haemorrhage.

Three of these patients died in hospital within one month of irradiation. The remainder, twenty, were discharged from hospital in fair health, with their suprapubic wounds firmly healed, at periods ranging from three to five weeks.

One patient survived three years, and one two years.

Two patients treated in 1927 are alive, one of whom shows no recurrence of the growth, the other writing to say he is in poor health. A third patient is dead.

The remaining fifteen cases have been treated during the year 1928. Five have died since discharge from hospital. Ten are in fair health, and continue under observation.

In all cases of carcinoma of the bladder haemorrhage can be controlled by irradiation. In the presence of severe cystitis the prognosis is always bad.

The suprapubic wounds, without exception, have healed rapidly. In those cases where sepsis has been absent both general and local conditions have improved for about six months after irradiation. Improvement after this period has not been maintained apart from one or two exceptional cases.

One case of carcinoma of the female urethra invading the bladder, treated twelve months ago, remains a clinical cure. Previous to treatment there was complete incontinence of urine. Micturition is now normal.

The radium technique which has been adopted is as follows.

First a suprapubic cystotomy is performed, and the extent of the growth determined by palpation. Five milligrams of the element, in platinum tubes 25 mm. in length and with a screenage of 0.5 mm., are then inserted 2 cm. apart into the periphery of the tumour on its mucous surface, and also on its external aspect. The tubes remain in position for twelve to twenty-four hours. Each tube is threaded with silk-worm-gut, and at the termination of the period of exposure is easily withdrawn from the bladder through the suprapubic wound. The silk-worm-gut is used in preference to silk on account of its strength, and less likelihood of being torn when pulled on.

The fact that improvement, both in the general state of health and also in the local condition, occurred, in practically all the cases is encouraging. Increase in weight in every patient was noted for six months after the radium exposure.

OVIARTOTOMY FOR UNUSUALLY LARGE OVARIAN CYST IN A WOMAN OF 73: RECOVERY.

BY

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ATTENTION was drawn to the comparative rarity of the operation of ovariectomy in women over 70 years of age by Leslie Williams (see the *British Medical Journal* of April 13th, page 679), who cites two personal cases, bringing the total of recorded cases up to 155.

Very large ovarian cysts are not now often met with, for the simple reason that surgical facilities exist to-day for their removal before they attain to the size pictured in the textbooks of a generation ago. Now and again a case appears where the patient has been content to put up with things and live with her cyst, undismayed by its increasing size, even although advice for its surgical removal has been given. The following case is therefore recorded both on account of the rarity already mentioned and also because of the unusual size of the ovarian cyst removed.

The patient, who was 73 years of age, was seen by me on October 27th, 1927, in consultation with her family doctor, with a view to advising upon operation for an enormous swelling of the abdomen, thought to be caused by an ovarian cyst.

The patient was a woman of small stature, very cheerful and intelligent. She had had several children, and the menopause had occurred when she was about 50 years of age. When she was 65 she became conscious of her abdomen enlarging, but had decided not to worry about this misfortune until, eight

years later, when she was 73, the swelling of the abdomen had become so great as to interfere seriously with her breathing and getting about. She then complained of abdominal and sciatic pains, fatigue and breathlessness upon exertion, palpitation, sleeplessness, constipation, and inability to hold her water.

She was lying upon her side in bed when I saw her, and when she lay upon her back she was unable to see the top of the bedrail at the foot of her bed. She was a little cyanotic, with dilated venules about the nose, was troubled with slight bronchitis, and had a small degree of oedema round the ankles. Her heart action was arrhythmic and the sounds were feeble, although the valves were competent.

Examination of the abdomen revealed an enormous dull swelling rising from the pelvis and filling the whole abdomen as far as the xiphisternum, with changing areas of resonance to percussion on either flank. The fluid thrill was easily elicited. A diagnosis of large ovarian cyst was made, and preliminary puncture and drainage was advised, to be followed at a later date by ovariectomy.

Paracentesis was performed on October 29th, 1927. On this date an area midway between the umbilicus—which was protruded—and the pubic symphysis was anaesthetized with 1 per cent. novocain, and the cyst punctured by a large trocar and cannula. A long rubber tube was then attached to the cannula and led beneath the bed into a 10-gallon zinc wash-bath, and the fluid contents, which resembled pea-soup, were thus slowly removed. The joy of the old lady increased as her abdomen diminished, and her happiness seemed complete when she raised her head and saw her toes! It was considered best to withdraw the cannula without pressing upon the cyst, in view of possible leakage when the flow had almost ceased. The 10-gallon bath was approximately half full, and upon later measurement the amount of fluid totalled nearly 40 pints.

Two weeks later she came into a nursing home, and on November 17th was operated upon for the removal of the sac. Ovariectomy was performed under chloroform and ether, attempts to introduce the needle for spinal anaesthesia having failed. Slight adhesions were encountered, but after bringing the cyst to the surface of the wound and withdrawing about ten pints of fluid which had again collected, the huge sac slipped out of the abdomen with gentle traction. Blood vessels the size of adult fingers spread over its surface from the pedicle, which was situated upon the right side. The pedicle was securely ligated and the cyst removed, the operation giving rise to no difficulty and being completed in twenty-five minutes.

The specimen was an ovarian cystadenoma, with smooth, tough, and evenly thick walls about three-eighths of an inch thick, except at the base, where there were septal remains.

The patient made an uninterrupted recovery, and left the nursing home at the end of twenty-one days, and now, at 75, enjoys very good health.

I regret that a photograph was not taken before operation, and that the weight of the cyst and its contents was not ascertained by recording the weight of the patient before paracentesis and after ovariectomy.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TWO CASES OF OVIARTOTOMY IN WOMEN AGED 84 AND 77 RESPECTIVELY.

IN view of the article by Mr. Leslie Williams in the *Journal* of April 13th, I should like to record the following two cases.

CASE I.

Mrs. X., aged 84, a patient of Dr. Mitchell of Guildford, was, on May 1st, 1918, operated on for a large ovarian cyst, the size of a full-term pregnancy. The tumour was a huge, simple cyst of the right ovary, and was removed entire without previous tapping. The patient made an uninterrupted recovery and has remained well ever since. She is now 95 years of age and in good health.

CASE II.

Miss Y., aged 77, was a patient of Dr. Cliff-Hodges of Godalming. She was a very frail old lady, crouched, and bent in her bed, and was toothless except for two old stumps. She had been an invalid for years, but had lately suffered from intestinal obstruction, which at the time of my visit had been partially relieved by enemata, and the vomiting had ceased. Her temperature was 100°, and her pulse was rapid and feeble. The abdomen was filled with a huge, irregular, tender solid tumour, which had recently been wedged into the pelvis; but Dr. Cliff-Hodges had partially dislodged it and thus to some extent relieved