leak, and in some cases the leakage is such that we have not been able to carry out the method. A slender vein can generally be found which answers the purpose. The pressure in the second armlet must be lowered quickly directly the vein has been stroked empty, so that the filling of the vein from below may be observed before it can leak full from above.

In cases of high pressure it is difficult to get patients to endure long enough the somewhat painful feeling of pressure which results from the maintenance of the first armlet at a pressure close to the obliteration pressure. It is necessary to work quickly in these cases, and give a rest between each test.

REFERENCES.

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TREATMENT OF INOPERABLE CANCER BY HYPOCHLORITES.

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DURING the past three or four years I have, when called upon to deal with cases of inoperable cancer, employed a method of treatment which is entirely novel so far as I am aware. The cases in which I have carried it out thoroughly are not numerous, and at present only the three recorded are of sufficiently old standing and sufficiently verified as regards diagnosis.

CASE I.

A woman employed as a cook in a large block of flats in London. In October, 1901, ovariectomy was performed on her at Guy's Hospital and the right ovary removed. Little relief from her previous symptoms resulted, and she continued to attend as an out-patient, the uterus being curetted on two or three occasions. As she continued to fail in health she was readmitted in November, 1902. On laparotomy a mass was found in the pelvis, suggesting a malignant growth with a secondary deposit in the omentum. No microscopic examination was made, but from the relations of the mass and its appearance it was concluded that it was a case of malignant disease. Consequently the abdomen was closed without further interference, and the patient discharged in February, 1903.

Ten months later, or in December, 1903, the special treatment in question was commenced. By May, 1904, five months later, the patient was so far recovered that she was able to do all her household work and to go out bicycling, riding as far as thirty-five miles in a day. In appearance and feeling she was perfectly well. Nevertheless, the treatment was continued for several months longer. At the date of writing, four years later, this patient is still in good health and earning her living by her own exertions.

CASE II.

A woman who had a radical operation for mammary carcinoma at Guy's Hospital in March, 1907; the diagnosis of cancer was verified by microscopic examination. Two months after she had been discharged, some enlarged glands were noticed on the left side of the neck, and these were removed surgically at the Soho Hospital for Women. Again, two months later, further growth was observed in the same locality, whereon the special treatment was commenced. In two months' time the growth had disappeared, and at the time of writing, eighteen months later, she is in absolutely good health, feeling well, taking active exercise, and pursuing her ordinary occupation—that of a school teacher.

CASE III.

A French gentleman, who, through a bicycle accident, received a blow on the right breast. A tumour formed, and was diagnosed in May, 1904, as a malignant growth. In consequence a radical operation was performed at King's College Hospital in the same month, the growth, on microscopic examination, being found to be a spheroidal celled carcinoma. The patient was seen now and then by his surgeon, and in 1906, though the cicatrix seemed in good order, the conclusion was reached by this surgeon that there was a secondary and inoperable growth in the sternum itself. Subsequently the patient had x rays applied a few times and received some injections of what was probably a culture of *M. neoformans*.

Finally, in November, 1907, he placed himself in the hands of the writer of this note, who commenced the special treatment in question. It was continued until May, 1908, at which date all evidence of new growth had disappeared, and the patient was apparently in perfect health, locally and generally. That is still the position at the date of writing, eight months later.

In describing these cases it has not been thought necessary to enter into finer details of their clinical course, but their more essential features are all duly recorded. It is conceivable, of course, that in Case I the growths seen and deemed by the operator to be malignant and inoperable may have been tuberculous. Such cases do occur, but it

would be a strange coincidence if one followed a previous operation for cystic disease of the ovary. In the other two cases the initial disease was verified microscopically, and, as in the first case, the recurrences were deemed by surgeons holding positions on the senior staff of important London hospitals to be malignant.

I propose to report the conditions of these three patients again a year hence, whatever it may be.

The treatment employed was the injection of a solution of hypochlorites of potassium and sodium. This I prepare by dissolving 5 grams of KOH and 4 grams of NaOH in a litre of distilled water, and passing it through washed chlorine gas. Of this solution, 1½ to 2 c.cm. were injected daily for a varying period, usually under the skin over the deltoid muscle or over the great trochanter, so that the solution might enter the system at a site in the general neighbourhood of the lymphatic glands. The growth itself and the skin over it were carefully avoided. So, too, was the use of alcohol during treatment. I use an ordinary all-glass syringe with a platinum needle (to avoid corrosion), and in making the injections adopt ordinary aseptic precautions. There is a varying amount of local pain, lasting for from two to five minutes. I have not seen any reaction.

Should any medical reader care to try the treatment and desire further details, they are, of course, at his disposition.

THE TREATMENT OF CANCER WITH COCAINE.

By ROBERT MUNN GILCHRIST,
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THE first time I used cocaine in the treatment of cancer was as a local application in a very painful secondary case, the primary growth having been removed a few weeks before by the late Dr. McGill of Leeds. On its recurrence, I saw Dr. McGill along with my patient, and he at once came to the conclusion that further operation was out of the question. This was a very instructive case, as, being on the face, you could watch the progress of the growth under varying forms of treatment.

Before the use of cocaine, from the first indication of a fresh deposit until ulceration occurred was a period of about three days, but after the use of cocaine this period was lengthened to as many weeks, thus showing that cocaine had some influence in retarding the growth.

In July, 1891, discussing with my late friend, Dr. Calderwood, "the Mattei treatment of cancer," I said that the only agent I had ever used having any effect on the growth of abnormal epithelial tissue was cocaine, and having a very suitable case under my care at the time, I determined to try the effect of the internal administration of cocaine.

CASE I.

Mrs. C. was 49, and almost in *articulo mortis*. Extreme anorexia, probably from secondary deposits in stomach and liver in this case of uterine cancer, had brought her into this condition. Having an idiosyncrasy to opiates, whichever way administered, made this case not a very easy one to treat, especially as she was suffering very much pain. I commenced the treatment with cocaine by giving her one-eighth of a grain every three hours, and gradually increasing it to one-quarter of a grain. The growth in this case occupied almost the whole of the vagina, and involved both bladder and rectum. She had excruciating pain, retention of urine, general anasarca with albuminuria, and most alarming attacks of hæmorrhage. The effect of the administration of cocaine was most marked and immediate. The hæmorrhage became less and less, the pain was very much relieved, the anasarca and albuminuria disappeared, sickness stopped, and she again began to take her food with relish.

She continued to improve for six months, when, being much upset by her husband, she had an attack of meningitis, from which she died.

CASE II.

Miss W. consulted me about her breast in May, 1891. I found a growth involving the whole of the left breast, and enlargement and induration of the axillary glands. The skin over the breast was becoming affected, and I advised immediate removal. To this she would not consent. I then commenced treatment by administering cocaine both internally and externally. The pain, which had been the most important factor, became to all intents and purposes a negligible quantity. The skin broke down in many places over the breast, but healed. The growth seemed to remain in a stationary condition, and the glands in the armpit, if anything, became smaller. She continued in