is all I use it for, this is quite satisfactory, and it is unnecessary to use a Kromayer lamp.

For general treatment I begin by exposing the chest and back twice a week to the light at three feet distance. The first time 1 minute, the same for the back; the next time 1½ minutes, then 2 minutes, then 2½ minutes, then 3 minutes, then 3½, then 4, then 4½, then 5, then 5½, then 6, then 6 minutes. Some patients easily take somewhat longer periods, but I doubt if it is any use. This is the first course. Then the patient waits for a month, when the second course of twelve treatments is given. One of the most successful cases I had was that of an elderly lady who had been treated by me and others for many years with all sorts of things, and she would only respond for a short time. Since her second course she has had no asthma. This is now nearly four months ago. She had no other treatment. In another case a lady who had spasms practically every night was relieved for two months, when the spasms returned. She also took 50 tablets of radiostol, nothing else. In many other cases I have given agar serum peptone and radiostol. The radiostol I first used was a glycerin solution in 1 c.cm. ampoules. A few drops of water were mixed at the time of using, and it was then sucked into the syringe. To this the agar serum peptone was added, and it gave very good results. I shortly afterwards gave one tablet of radiostol daily. The radiostol is not equal to the ultra-violet rays, although both (and especially radiostol) much increase, amongst other things, the phosphorus in the blood, which is favourable for asthma.

Glucose and Insulin.

It is well known that the liver plays a part in asthma, as by it the toxic products of bacteria with undigested protein are rendered non-toxic, and it transforms albuminous products into urea, etc. It was suggested by Barber and Oriol¹⁵ that the giving of glucose would in many cases strengthen the general function of the liver, enabling it to assimilate glycogen, etc. Some time previous to their paper, the giving of glucose was suggested to me by Dr. Parkes Weber. I have given it in a good many cases, and I believe with advantage. It may be given alone or with a little insulin. Several have noted the benefit derived from insulin; there is an increase of appetite and a sense of well-being in non-diabetic cases. MacLean finds it excellent in cases of malnutrition. He gives five units twice daily—before breakfast and before dinner. Along with this he gives one ounce of glucose, mixed with an equal part of orange juice at intervals of an hour after each dose of insulin. A good deal of starch is given with meals. The insulin is gradually increased to ten or twelve units, and the treatment kept up for three or four weeks. I have often given the glucose and insulin in this manner, along with ultra-violet rays and agar serum peptone, and in some cases the mixed coliform vaccine, in small doses twice a week, as recommended by Coke. I usually found this very good. The vaccine seems to act prophylactically. In one case, in the St. Marylebone Hospital* I treated a very thin woman, aged 37 (who for many years has had violent attacks of asthma near her menses), with glucose and insulin, ultra-violet rays, ovarian extract 5 grains daily, thyroid 1 grain daily, and her own blood (autohaemotherapy), 5 c.cm. of which mixed with 1½ c.cm. of peptone was injected immediately into the upper arm. She also had weekly doses of the vaccine. She practically recovered and was sent to a convalescent home.

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* I desire to thank Dr. Basil Hood, the medical superintendent, who for a long time has kindly permitted me to examine and treat all cases of asthma and other allergies admitted to the hospital.

A CASE OF CUTANEOUS DIPHTHERIA AS THE CAUSE OF AN OUTBREAK.

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LEEDS.

To Chomel is credited the first reference (in 1759) to dermatitis diphtheritica. Some seventy years later Trousseau made fuller investigation of the disorder. Neisser first explored the condition bacteriologically. Jenner¹ mentions a case of diphtheritic infection supervening upon a chronic pemphigus, also two cases of ulcer of the leg with superimposed diphtheria. Slater² recorded a case of chronic cutaneous diphtheria. Knowles and Frescoln³ collected reports of cutaneous diphtheria cases, which incidentally illustrate the diversity of clinical appearances capable of being presented by the condition. Barber and Knott⁴ and, later, Perry⁵ described cases of chronic diphtherial ulceration of the skin. Greenbaum⁶ contributed a case of primary cutaneous diphtheria of the face. Goodall and Washbourn⁷ mention cases of primary dermatitis diphtheritica affecting the fingers. The invasion of wounds by Klebs-Loeffler bacilli is a rare occurrence to-day, though at one time not so uncommon.

Dermatitis diphtheritica may be primary or secondary. A breach in continuity of the skin is a necessary antecedent. The case now recorded was secondary to a faucial diphtheria, and infection was by auto-inoculation affecting a small area of intertrigo situated behind the right ear. The case was responsible for the outbreak of faucial diphtheria outlined below. The outbreak comprised seven patients, all of whom were nurses employed at the Wyther Infants Hospital, Leeds. The bacteriological findings, in respect of the patients and domestic staff of the institution, were negative throughout. The sequence of cases was as follows:

Case.	Patient.	Date Admitted to Isolation Hospital.	Bedroom Previously Occupied at Wyther.	Ward in which engaged at Wyther.	Remarks.
1	C. C.	23.12.28	No. 1	A.	Clinical diphtheria. Resumed duty at Wyther on Jan. 23, 19.9.
2	E. A.	15.2.29	No. 1	A.	Clinical diphtheria.
3	M. M.	17.2.29	No. 7	A.	Non-clinical diphtheria.
4	J. T.	2.3.29	Sister's separate room.	A.	Clinical diphtheria.
5	M. S.	4.3.29	No. 7	A.	Non-clinical diphtheria.
1	C. C.	Readmitted 6.3.29	No. 1	A.	Cutaneous diphtheria (see below).
6	L. C.	7.3.29	Lodgings; separate block.	B.	Clinical diphtheria. Nursed Case 4.
7	E. T.	8.3.29	No. 7	A.	Non-clinical diphtheria.

C. C. (Case 1) appears as the central figure in the outbreak. She was admitted to isolation hospital on December 23rd, 1928, suffering from faucial diphtheria. On discharge she resumed nursing duties at Wyther on January 20th, 1929. The outbreak proper began with E. A. (Case 2) on February 15th, 1929—that is to say, twenty-six days subsequent to the return to duty of C. C. Other cases followed, and, on March 5th, during the course of investigation, C. C. was found to have an area of intertrigo behind the right ear; it now transpired that this condition had been present, but had escaped notice, at the time of her discharge from isolation hospital on January 20th. The affected area of skin showed no outward manifestation of diphtherial infection, but nevertheless a swab was taken therefrom and was reported upon the next day as follows: "Bacilli present morphologically resembling K.L.B." A subsequent virulence test gave the following result: "On the third day there was a slight erythema around the site of inoculation; the sugar reactions were positive for Klebs-Loeffler bacillus; the result suggests an

organism of low virulence." Throat and nose swabs proved negative. Here, then, was a case of cutaneous diphtheria which the available evidence indicated as the source of infection. The patient was readmitted to isolation hospital on March 6th.

The lapse of twenty-six days between the return of C. C. from isolation hospital and the subsequent occurrence of the next clinical case (2) has to be explained. In this connexion M. M. (Case 3) might well have been infected first by C. C., for, being a non-clinical case, she was only discovered in the course of a general swabbing following the removal of E. A. on February 15th. Moreover, there might conceivably have been delay in the assumption of activity by the organisms of the original case. M. M. was removed on February 17th. At this juncture the swabs of all others were negative. On March 2nd—thirteen days after removal of M. M., J. T. (Case 4) was removed with clinical diphtheria, and a further general swabbing revealed M. S. (Case 5) as a case of non-clinical diphtheria, and the patient was removed on March 4th. As related above, C. C. was exposed on March 6th as a case of cutaneous diphtheria and was readmitted to hospital. L. C. and E. T. (Cases 6 and 7) followed on March 7th and 8th respectively, and there the outbreak ended. L. C. probably contracted infection from J. T., whom she had nursed prior to removal.

There appears to be no doubt that C. C. gave origin to the outbreak. Owing to the occurrence of certain non-clinical cases in which the date of initial infectivity was not determinable, it is difficult to outline the passage of infection from case to case, although it is essayed to do so in the tree below.

Our thanks are due to Professor J. Johnstone Jervis, medical officer of health, Leeds, for permission to publish the above particulars relating to an interesting case and its sequel.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

STRANGULATION OF OVARY IN AN INGUINAL
HERNIA ASSOCIATED WITH CONGENITAL
ABNORMALITY OF THE KIDNEY.

THE interest of the case here recorded lies in the close developmental relationship between the kidney and the ovary, in that they both arise from the Wolffian body. As it seems highly probable that a congenital abnormality of the one organ should be associated with an abnormality of the other, I should be glad to hear if any similar cases have been reported, or whether cases are on record of abnormalities of the kidney associated with an imperfectly descended testicle. It would also be interesting to know what the prognosis would be in this case should pregnancy occur at some future date.

A female child, aged 5 years, was admitted to the Royal West Sussex Hospital complaining of a tender swelling in the left groin. The mother stated that the child had had a rupture since birth, which for the past two years had been kept back by a truss. Eight hours before admission the child complained of pain in the left groin, and it was found that the swelling had become tender, and could not be pushed back. Five hours before admission the

patient vomited partially digested food. The bowels had not been open for twenty-four hours.

The patient, a well-built child, appeared to be in great pain. Temperature 97.6° F., pulse 140, respirations 24. Nothing abnormal was found on examination of the heart and lungs. The abdomen showed some rigidity over the whole of the left iliac fossa. In

Pyelograph taken when the patient was convalescent, showing the site of the left kidney.

the region of the central portion of the left inguinal canal was a firm, exquisitely tender, irreducible swelling, oval in shape, and about three-quarters of an inch in diameter. There was no impulse on crying. The skin over the swelling was hot, red, and oedematous. It was at once remarked that if only the patient had been a male the diagnosis would have been torsion of an imperfectly descended testicle. In the circumstances, however, the more obvious diagnosis of strangulated inguinal hernia was made.

Treatment.

One hour after admission, under general anaesthesia, an incision was made over the swelling. This was found to consist of a hernial sac containing blood-stained fluid and a strangulated gangrenous left ovary, tube, and broad ligament. Strangulation was found to be due to a torsion of the tube and broad ligaments, which were both markedly elongated. The gangrenous organs were then resected. Subsequently a smooth, rounded tumour of firm consistency was felt lying in the pelvis close to the internal abdominal ring. As this could not be identified a left paramedian subumbilical incision was made and the pelvis explored.

The resected ovary, tube, and broad ligament.

The tumour was found to be the left kidney, which was lying with its long axis almost horizontal across the brim of the pelvis, and its lower pole against the internal abdominal ring. The left ureter was about two and a half inches in length. (This is well shown in the pyelogram taken when the child was convalescent.) In addition to its normal blood supply the kidney had an aberrant artery and vein communicating between its lower pole and the left common iliac vessels. The right kidney and ureter, the uterus, and right appendages were normal, though the uterus was displaced slightly to the left of the mid-line. Both wounds were then closed, and the child made an uneventful recovery.

Chichester.

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