dry and scaly condition, except at a small spot on the back. The following ointment was then applied: ichthyol, one drachm; ammoniated mercury, 10 grains; resorcin, 20 grains; vaseline, one ounce; and lanoline to make up two ounces. On the 19th the leg was normal in size and it was dry. The patient was now allowed to walk. On July 30th the leg was quite well. This was a bad case, which had already been under other treatment for six months. The constant rest was helpful, but the relief afforded by the action of the ichthyol on the dilated vessels was the direct means of cure.

CASE 4.—This patient was a married woman, 60 years of age, who had for years suffered from recurrent attacks of eczema. Any nervous excitement or worry brought on an attack. Both knees and wrists were scaly, red, and itchy, whilst the lower part of the abdomen and vulva and the upper part of the thigh were red and painful and exuded a copious serous discharge. The treatment was commenced on Oct. 30th, 1899. The abdomen being very painful I applied at first simply a dusting powder of starch and bismuth with a little boric acid. On Nov. 9th I prescribed 15 grains of ichthalbin thrice daily in cachets. On the 17th there were much less pain and exudation. I now ventured to apply 3 per cent ichthyol lanoline salve which answered admirably; the itching was relieved and the skin soon resumed a normal appearance. On the legs and arms the following ointment was used twice daily: ichthyol, one drachm; ammoniated mercury, 10 grains; oxide of zinc, two drachms; resorcin, 10 grains; vaseline, six drachms; and lanoline to make up two ounces. An improvement was manifest from the first, and recovery followed in six weeks.

In the acute cases no washing with soap was allowed, but with warm oatmeal water instead. When the parts were dry 10 per cent. ichthyol soap was used. No special diet was imposed. Ointments were not merely smeared over, but were gently rubbed in and the parts were covered with lint, linen, or silk, no cotton or flannel being allowed to touch the surface. In cases of eczema of the face I have also used with benefit zinc-ichthyol salve muslin, but it is rather difficult to keep applied.

ACNE.

Ichthyol is particularly beneficial in this disease, both in acne vulgaris and acne rosacea. In the former strong external applications can be borne, but in the latter much weaker strengths must be used. The best results are obtained when external and internal treatment are combined, and in some cases of acne rosacea in which the skin is too thin and irritable to bear even weak solutions the internal administration of ichthyol alone with steaming will suffice to effect a cure. My general plan of treatment is to begin with five grains of ichthyol thrice daily after food, increasing to 10 grains. Every night and morning the face is steamed for 15 minutes and then washed with ichthyol soap made into a lather and allowed to dry on, which is then gently washed off with water. After each washing, if it can be borne, ichthyol salve (often combined with ammoniated mercury) is applied. In acne vulgaris, after steaming strong sulphur and ichthyol soap is used, with brisk rubbing by means of a flesh-glove. The diet is regulated. Ichthyol itself relieves mild cases of constipation, but if it does not I give a compound pill of iridin and euonymin or podophyllin.

CASE 1.—This patient, a married woman, 46 years of age, had been treated for acne rosacea for six years. When she was first seen by me in February, 1897, her face was red all over and the smaller blood-vessels were very prominent. The nose, the brow, and the chin were covered with inflamed sebaceous glands, partly papular, others pustular. Her face was painful and she could not go out without a veil. She was placed on five grains of ichthyol thrice daily, and the following ointment was applied twice daily: ichthyol, 25 grains; ammoniated mercury, five grains; and vaseline and lanoline, of each half an ounce. Improvement was perceptible from the first and in a fortnight it was distinct. The amount of ichthyol was now doubled and extract of nux vomica was given before meals. In another month there were scarcely any inflamed glands and the redness was confined to a few dilated vessels on the cheeks. Two months later there were no traces of acne and the patient has remained free from it ever since. This case had resisted all remedies for six years; improvement commenced immediately that ichthyol was given, and to ichthyol I unhesitatingly give the credit of the cure. A similar condition existed in this patient's daughter, aged 24 years; it yielded to ichthyol in an equally satisfactory manner.

CASE 2.—This patient was a female, 17 years of age, who suffered from acne vulgaris. Her face was covered with inflamed sebaceous glands and "blackheads." Constipation was also complained of. Steaming, brisk rubbing with flesh-gloves, and the use of sulphur soap were prescribed. Internally saline purges were given. As this treatment did not do the good that I expected I ordered 10 per cent. ichthyol soap and the following ointment to be rubbed into the skin night and morning: ichthyol, 72 minims; resorcin, 10 grains; vaseline, two drachms; and lanoline to make up one ounce. Internally five grains of ichthyol were given thrice daily and on every second night a compound iridin pill. Improvement was gradual but sure and in three months the cure was complete.

OTHER APPLICATIONS OF ICHTHYOL.

I have also used ichthyol with success in many other diseases, such as endometritis, in which I have had some startling results. Although it does not come within the proper scope of this paper I should like to mention one case of endometritis which under the ordinary routine practice would have involved the scraping of the uterine mucous membrane, but which was cured by continued nightly applications of glycerine-ichthyol tampons in the proportion of two drachms of ichthyol to one ounce of glycerine. This patient had had two mucous polypi removed from the cervix without relieving the pain, and she was therefore very reluctant to undergo another operation. The ichthyol treatment was persisted in for five months, and ergot, nux vomica, and potassium chlorate were prescribed at the menstrual periods. The result has been highly satisfactory, as all pain and feeling of "bearing down" are gone and the patient feels quite well again. I had a similar case in an unmarried woman with equally good results.

Recently I have used strong solutions of ichthyol to paint over sprains. The swelling was quickly reduced in the few cases in which I have tried it.

CONCLUSIONS.

My experience has been that from 2 per cent. to 5 per cent. ichthyol applications are best in acute forms of inflamed skins and from 5 per cent. to 10 per cent. strengths in more chronic, drier conditions. In acne vulgaris anything up to 25 per cent.—namely, between 10 per cent. and 25 per cent.—is useful. In all cases the internal administration of the drug is an assistance. I believe that ichthyol taken internally has a direct influence on the skin and is most probably excreted by it. Moreover, the taking of ichthyol internally increases weight, and this applies more particularly to weakly, stromous children.

The one disappointment which I must record is that itching is not relieved as quickly as one might expect, certainly not as quickly as the pain is relieved. Patients express gratitude for the feeling of comfort experienced, but the itching soon returns. The itchiness does indeed disappear after a time, but it is always the last symptom to go.

In prurigo and pruritus vulvæ or ani I have not found much benefit to result from the use of ichthyol, particularly in those cases where there is no known organic cause such as diabetes, ulcer cervicis, or anal fissure. I have tried ichthyol in 11 such cases and in only one have I had satisfactory results. This patient was a pregnant woman with pruritus vulvæ.

When prescribing ointments I always advise the patients to use their oldest under-linen as ichthyol has a staining effect, although it is stated that if quickly washed in warm water any clothing thus stained is made quite clean again.

Ichthyol, of course, is not applicable to every case of eczema or acne, neither do I claim for it a specific action, but it is undoubtedly a useful drug in these diseases.

Redcar.

FOURTEEN AND A HALF HOURS' ARTIFICIAL RESPIRATION IN A CHILD ONE WEEK OLD; RECOVERY.

By GEORGE E. KEITH, M.B., C.M. EDIN.

TOWARDS the end of August I delivered a lady in the country of a healthy boy weighing six and a half pounds. The birth was premature, but only by three weeks. The child was well formed in every respect and, with the exception of a very long and tight foreskin, there was nothing to

remark about him. As there was evidently much difficulty in passing water, the urine taking a long time to come and the child screaming and kicking, circumcision was advised as early as possible. This was agreed to, but, owing to the mother having a very severe bilious attack on the day after the confinement and as her milk did not agree with the infant, the operation was postponed from day to day. On the morning of August 27th, one week after birth, the operation was performed. The child did not breathe well under the chloroform and he lost more blood than is usual. He slept for some hours afterwards and awoke in the afternoon looking quite natural. He was then put to the breast, but did not seem to care to take much nourishment. He was quiet until 9 P.M., when he became very wide awake and screamed for two hours. There was no trouble with the urine and he had passed plenty since the morning. At 11 P.M. he became quiet and on being put to the breast took a little milk, but he did not seem to care to take much. He was now very sick and brought up seemingly all the milk that he had taken. Immediately afterwards he went to sleep. Up to 3 A.M. the nurse had looked at him several times and each time she found him sleeping heavily. At 3.15 A.M. the mother asked the nurse if the infant had not better be roused and put to the breast, and on the nurse picking him up she noticed that his breathing was laboured and that his face was cyanosed. She at once brought him to my room and on seeing him I thought that he must have had a convulsion, but whatever had happened he looked alarmingly ill. I sent her back to the mother's room telling her to give the baby some weak brandy-and-water, and hurriedly putting on my clothes I went to the other room, where I found a still more serious state of things, as the breathing of the child stopped entirely a few seconds after I arrived. To all appearances the child was dead. On listening to the chest I found the heart still beating, so I at once commenced artificial respiration. Within two or three minutes I was able to desist as the natural breathing was resumed, and after watching the child for ten minutes I returned to my room. In a few minutes I was again sent for, again to see an apparently dead child. Artificial respiration was recommenced, and after 20 minutes the natural breathing was established, but only to cease in a very few minutes. The heart was now very rapid and the colour was, if anything, worse, and though I began artificial respiration again it was more from a sense of duty than from any expectation of bringing the child to life. Very soon after commencing the artificial respiration for the third time the heart seemed as if it were going to fail as the beats dropped from about 200 to well under 100 to the minute, the exact number being impossible to count as I could only listen with my ear to the chest very hurriedly. I think this slowing of the heart's action was due to performing the forced respirations too seldom to the minute, as on moistening the lips with a good deal of strong brandy-and-water and increasing the number of respirations to about 25 to the minute the heart regained its rapidity. After this I never slowed down to less than 20 to the minute. Hour after hour this monotonous business went on and hour after hour I became more and more convinced that it was all wasted labour and that in spite of all my endeavours the child would ultimately die. The first gleam of hope came after it had seemed that all hope had gone, for by noon with every forced expiration and inspiration there came a most ominous creak, showing that the lungs were filling up with fluid and that if this went on increasing the end could not be far off. By 12.30 midday this sound had increased in the most alarming manner and more and more force was required to drive the air in and out of the lungs. The heart was again beginning to show signs that it was being asked to do more work than it was able, the sounds becoming weak and the beats irregular. As early in the morning as possible I had wired to London for cylinders of oxygen to be sent down by passenger train and most fortunately the first arrived just at this time. A slight stream of oxygen was at once directed against the child's nose and mouth, the end of the tube being held a few inches away. Within 15 minutes there was a decided change for the better; the colour of the face lost its earthy look, the moist sounds noticed with the forced respirations gradually died away, and the heart sounds increased in strength and regularity, but still there was no attempt at natural breathing. During all those hours I kept the child warm, as well as possible, by laying him on a blanket over a rubber hot-water bottle which was changed frequently and by covering the chest with a blanket, at

least as much as was possible. For nourishment it was only possible to moisten the lips with brandy-and-milk, as there was no attempt made to swallow and I was afraid of fluid going into the air-passages if put into the mouth in larger quantities. There was no further improvement until 3.30 P.M., more than 12 hours after the commencement of the illness, when a very feeble attempt at inspiration was noticed. This happened at first every minute, but the intervals got shorter and shorter until at 4.30 P.M. the child was inspiring entirely. Still there had been no attempt made at expiration, but the difference which the last hour had made was so marked that I began to hope that there was a slight chance of saving the child's life. The normal expiration began to return about 5 P.M., and in exactly the same manner as the inspiration, and at 5.45 P.M. I was able to cease all artificial means of inflating the lungs—exactly 14½ hours from the onset of the symptoms. By now the condition of the child was pitiable. The chest and the upper part of the abdomen resembled raw beef, though the skin was not broken, the arms were red, excoriated, and marked all over with angry lines from the violent use to which they had been put. He was quite unconscious, there was no pulse at the wrist, the heart beats were very rapid, and the breathing was of the most shallow description. The skin covering the anterior fontanelle was depressed and every now and again there was a peculiar contraction of the muscles of the lower jaw. From the commencement of the illness the pupils had been contracted, but not very markedly so, and this condition continued for some days. In the afternoon, as I was getting exhausted from the prolonged manipulation required for the artificial respiration, and not knowing how long it would be necessary to continue it, I wired for assistance from town, and though this arrived too late to relieve me of the manipulation there was plenty of work to do in watching the child. After such a terrible experience I felt that a medical man must be in constant attendance on the child day and night. About 10 P.M. the child became very cold and I had him wrapped up in cotton-wool. The oxygen was kept constantly playing on his face until midnight, when it was stopped for an hour and a half, but it had to be begun again as the child became very cyanosed, and as immediate benefit was at once noticed the administration did not again cease for many hours. After the normal breathing commenced again he was fed by a spoon with brandy-and-water and milk-and-water alternately, 20 drops of the former being given at a time, but as there was much difficulty in getting him to take the milk-and-water and none in taking the brandy-and-water, the latter was alone given for the next 15 hours; it was given every hour. The breathing was so shallow all through the night that the closest attention was required to say whether the child was breathing or not. At 3 A.M. the temperature was 103.6° F. This was the first time that it had been taken. One grain of antitoxin was given and this brought the temperature down two degrees in a couple of hours. About this time the child appeared to become conscious as he gave a few feeble little cries, the first sound he had made for many hours. The bowels were moved early on the morning of August 30th, and as the motions were most offensive and unhealthy one grain of grey powder was given. The child remained much in this state all day. I had him put to the breast in the afternoon, but he could not get a proper hold of the nipple so we had to continue feeding him with the brandy-and-water. The temperature did not rise above 102° all day and the heart beats gradually slowed down to 170, and it was now possible to feel that there was a pulse at the wrist, though it was not strong enough to count the beats. The oxygen was still being continuously used. As night came on the child did not seem so well; his face became pinched and white, the pulse could no longer be felt at the wrist, the heart beats increased in rate and decreased in strength, there was marked Cheyne-Stokes breathing, and the temperature rose in a most alarming manner. At 1 A.M. on August 31st the temperature had reached 105°. The child was sponged with tepid water and one grain of antitoxin was given. This quickly brought the temperature down, until at 4 A.M. it was 103.8°, when another grain of antitoxin was administered. This had the desired effect, and by 6 A.M. the temperature had fallen to 101° and it never again rose above that point. Thinking that the oxygen might be helping to keep the temperature up its continuous administration was stopped and it was only given when it was thought necessary, judged of either by the colour or the breathing. By 9 A.M. the

child was much better. The pulse was quite regular and countable at the wrist, the colour was better, and the breathing, although still shallow, had quite lost its irregular nature. He seemed out of danger, but after the fright that he had given us I still considered it necessary to have him watched continuously by a medical man. He was now screaming incessantly and he seemed to have much colic. The motions remained very offensive, so he was given 10 drops of fluid magnesia every two hours. As he still did not seem to take the breast properly all idea of bringing him up in that manner was abandoned and it was arranged for the Walker-Gordon Company to send down a supply of their milk every day. After a restless morning he became quiet about 2 P.M. and dropped into a sleep. Soon after the breathing became more and more shallow and the face again became cyanosed, but on allowing the inhalation of oxygen for a few minutes the respirations quickly improved. This happened three or four times during the afternoon, but beyond giving oxygen nothing more seemed necessary until 4.30 P.M., when suddenly, without the slightest warning, and after one or two catches in his breathing the respirations stopped entirely. I immediately began artificial respiration and turned on the oxygen. Fortunately this attack only lasted a few minutes. After this, beyond the most constant care and watchfulness, there was no further anxiety, and the little patient is now an ordinary baby of the age of three months. Indeed, it would be impossible to tell from his looks and his general condition what an alarming and dangerous illness he has been through. The manipulation does not seem to have injured him in any way. It was simply marvellous to see how quickly the marks resulting from the prolonged movements disappeared from his chest, abdomen, and arms.

It is not possible for me to come to any definite conclusion as to the reason why the breathing ceased for so long, nor have any of my friends been able to give me a reasonable explanation. Probably it was caused by a combination of the chloroform, the shock, the hæmorrhage, and the disordered stomach, but what part each played in the pathological condition it is difficult to determine.

There were several astonishing features about the case. The amount of brandy which the child required was, for his age, enormous. A smaller amount than 20 drops every hour was tried and the same quantity at longer intervals, but the result under both conditions was the same—he at once seemed to lose ground. The brandy was never at any time thrown off by the lungs; at least it was never noticeable in the breath, so that it is probable that the child used it all up in the struggle which he made for his life. It is also wonderful that this small child, only a week old, was able to stand the manipulation. He was not spared in any way; the urgent thing was to get him to breathe and no thought was given as to how he would be affected if he recovered his breathing powers. It may seem strange that I could keep up artificial respiration for over 14 hours with only occasional breaks, when my nurse did it; but after a time the action became entirely mechanical, and though I was thankful to stop I was not so exhausted as might have been expected. It may be added that the nurse has worked for me for some years and that she was of the greatest possible assistance.

Charles-street, W.

CLINICAL NOTES ON THE RESULTS OF A PURE PROTEID FOOD IN FIFTY- FIVE CASES (VARIOUS DISEASES).

By R. E. WILLIAMSON, M.B., C.M. EDIN.

AMONG the many foods on the market at the present time there is some difficulty for the busy general practitioner to make a selection of one useful for all-round purposes as an adjunct to ordinary dietaries in sickness and one at the same time within reach of all classes. There are many that have valuable qualities but there are few that do not possess some material drawback—e.g., some disagreeable taste or difficulty of preparation—or that the price does not make them prohibitive to one's poor brethren, so that when such a one is found, which on extended trial seems to answer and maintain its position, I feel it is sufficient apology for giving one's experience. Exact scientific experiment in semi-country

practice is impossible, and these notes only pretend to be those of ordinary clinical observation.

I have used plasmon now in 55 cases in my own practice, and my friend and neighbour Mr. H. Hebblethwaite has used it in six cases, four of them of typhoid fever, one of severe anæmia, and one of obstinate and persistent vomiting, and he says that he has never had such a satisfactory diet for patients suffering from typhoid fever and that they did splendidly on it, that the recovery of the anæmic patient was most rapid, and also that in the patient suffering from vomiting it was the first food tolerated.

The cases in my own practice are as follows:—(1) acute gastritis, five cases, in one of which, complicated with cirrhosis of the liver, the patient had very severe hæmatemesis; (2) chronic gastro-intestinal catarrh, 12 cases, three of these patients after somewhat acute paroxysms had catarrhal jaundice; (3) gastric neurasthenia, five cases; (4) anæmia, nine cases; (5) erysipelas, one case; (6) phlebitis, one case; (7) puerperal septicæmia, one case; (8) influenza, five cases; (9) pleurisy, two cases; (10) operation for removal of tonsils and adenoids, four cases; (11) tuberculous diarrhoea, three cases; (12) acute diarrhoea (from errors of diet), three cases; (13) carcinoma of liver, one case; (14) diphtheria, one case; and (15) cardiac disease with gastric complications, two cases. I am not going to give a description of each case, but shall pick out cases which I think may serve as types of the efficiency of plasmon, and I may premise that it seems to be of the greatest use in diseases of the alimentary canal, acute febrile conditions (e.g., influenza, pleurisy, septicæmia, &c.), tuberculous and wasting diseases, and in one case I saw distinct temporary benefit in a case of carcinoma of the liver and a great relief of the painful gastric symptoms.

The first case in which I used plasmon was that of my wife who had been ill for three weeks, suffering from an attack of influenza complicated with gastro-duodenal catarrh and exhibiting some symptoms of a typhoid nature; she had a persistent rise of temperature, varying from 100° to 101° F. in the morning, rising usually in the afternoon to from 103° to 104°, and subsiding in the evening to about the morning temperature. She was most carefully dieted; peptonised milk and other peptonised foods, various special foods, and other preparations in turn were tried, but nothing seemed to agree—all caused nausea, flatulence, and general distress; and when a friend wrote to me and asked if I had tried plasmon, stating that he had derived much benefit from it personally, although I was thankful for the suggestion I fear that I was very sceptical as to the result. I gave it first dissolved in water and added to a little thin barley-water and only in small quantities, two or three teaspoonfuls at a time; this seemed to agree perfectly and so I increased the quantity. I then gave it in chicken-broth, then in milk, gradually increasing the amounts, all of which proved satisfactory. *Post hoc* or *propter hoc* the change was almost magical. The gastric symptoms subsided, the temperature gradually fell, and convalescence was rapid, and faith in the remedy is now so unbounded that she always keeps it in the house and if there are any symptoms of stomachic derangement she promptly goes back to it.

The next case I tried it in was that of sub-acute chronic gastric catarrh in an old gentleman, age 75 years, suffering from cardiac dropsy and with whom the taking of even the lightest forms of food caused distressing heart storms, usually only relieved by vomiting; he was put upon the plasmon on Dec. 10th, 1899, and it was given in a similar manner to that employed in the former case. There was a speedy abatement of the gastric trouble, a temporary attempt at cardiac compensation, and considerable lessening of the dropsy, but this was only transient, and the patient died on Jan. 6th, 1900, from gradual cardiac failure, but without any further return of his gastric trouble.

Of the acute cases of gastritis, all of which were alcoholic, I will mention one only—that of a female, aged 34 years. I had attended her frequently for similar attacks and she had also a cirrhotic liver. On April 2nd I was called up early as the patient was vomiting large quantities of blood; this continued for some hours at intervals. For the next two days she was fed per rectum, then plasmon dissolved in water and sweetened with saccharin was given in small doses, and as it agreed with her a similar course was pursued to that described in the former cases, and in spite of the tremendous loss of blood which had occurred her convalescence was more rapid than on any previous occasion, and up to the