observation in the hospital, but as soon as the immediate symptoms have subsided it will be probably only necessary to give very small quantities two or three times a week; and as the drug is cheap and easily obtainable, it is not a great matter if he has to continue it all his life. In the early days of thyroid administration a mistake was made on the side of giving too much rather than too little. It seemed such a harmless thing to give, but, as we know now, it is by no means the innocuous preparation one then imagined. I suppose we have all seen cases in which it has produced distinctly unpleasant symptoms, certainly I have on more than one occasion, and I always give strict injunctions to patients when ordering it for them.

But besides myxoedema in adults and infants, there are certain other conditions in which the administration of thyroid is more or less beneficial. So far as my own experience goes, they may be divided into four: (1) Psoriasis, (2) ichthyosis, (3) obesity, (4) goitre. As regards psoriasis, I happened to be visiting Edinburgh at the time that Dr. Byrom Bramwell was treating his case of psoriasis, on the strength of which he suggested the use of thyroid in these cases. Since then I have systematically tried it in every case that I have seen at the Skin Department of the Sheffield Royal Hospital and in private. Of these a certain very small percentage benefited markedly, and in one case the patient was rapidly cured of four attacks during the last few years by thyroid alone, without any other treatment, local or general. Seeing the great convenience of such a treatment, if successful, I make it a rule in every case to try thyroid extract alone for a short time if the patient consents, and if the result is negative at the end of that time, I give it up entirely and commence local treatment. It was a curious accident that one of the first cases on which it was tried should have been one of the very few that did respond. I am not aware that there is any means by which one can tell which cases will and which will not be benefited. In ichthyosis, thyroid is distinctly of use, but in my experience the effect soon wears off if it is discontinued. As regards its use in obesity, one must remember that this may arise from widely different causes, not all of which are likely to be amenable to any one form of treatment, but I can certainly recall three cases in which the diminution in weight on thyroid alone, without any dieting, was very marked. One man was so stout that he was unable to work, and could hardly get about in comfort, and in a few weeks he got down to quite a reasonable weight, which he has maintained ever since. As regards the value of thyroid in goitre, my experience is very limited, as such cases do not come under the physician in hospital practice. I happened to be treating a patient for psoriasis who had a large goitre, and after she had been taking thyroid for about a fortnight, I asked her how she was, and she said her rash was no better, but that her neck was getting smaller, and that she was able to fasten the collar of her dress, which she had not been able to do for years. I measured the neck regularly during the next few weeks, and it certainly decreased in diameter, but I unfortunately lost sight of her.

NOTE.—April 4th, 1902. The child is now in hospital, and taking thyroid extract. He is daily becoming brighter and less swollen.

MYXOEDEMA IN MOTHER AND CHILD.

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THE occurrence of myxoedema in mother and daughter may be a coincidence, but it seems to me very possibly to show an inherited susceptibility of the thyroid to toxic influences. Mrs. G. had till 1895 practically never known a day's illness; she was then seized with a very severe and persistent attack, of which diarrhoea and vomiting were at first the prominent symptoms and later phlebitis. Removal from Ealing to Malvern led to improvement, but a return to Ealing brought on recurrence of the symptoms. The impression was that the severe toxic condition which undoubtedly existed arose from some sanitary defect in the house at Ealing, and so it was finally given up and the patient removed to Croydon. Before removal tachycardia and palpitation had become established as the leading troubles; the thyroid was noticed to

be much enlarged, indeed its immediate removal was at one time urged. In Croydon, however, the symptoms slowly improved under palliative treatment; the diagnosis was then Graves's disease. The whole illness, till comparative health was restored, lasted about three years—1895-98—but ever since then severe palpitation has given much trouble. The thyroid is hard and enlarged on one side, the hair has fallen out to a considerable extent and has quite changed its texture; the skin has never been moist with perspiration except just at the nape of the neck, and has become harsh, especially in the palms of the hands, where it has often been so severely cracked as to lead to bleeding. Since taking small doses of thyroid for three months, all these symptoms have so rapidly improved as to leave no doubt that the case was one of myxoedema.

In 1899 Mrs. G.'s first child, a girl, was born. Up to a year old the child was perfectly healthy; she was exceptionally forward in walking and talking. When just a year old, and on a visit to London, she was seized with "dysenteric diarrhoea," large quantities of blood being passed. The attack began with drowsiness and feverishness, several other children in the neighbourhood suffered similarly at the same time, and as influenza was epidemic it was suggested as a probable cause. The child wasted with startling rapidity, and nearly died of exhaustion. It was removed to Malvern as a last resource, and immediately began to improve; but for three months there were recurrent attacks of jaundice, and the child was so weak as to be unable to sit up. From this time flesh was put on again, but there was a palpable alteration in the child, she was unable to speak or walk, and the whole appearance was strange. From a bright, nice-looking child she became a typical cretin, as the patient was pronounced to be by Mr. Charters Symonds in January, 1902.

The change since then on thyroid is just such a dramatic occurrence as Osler describes. In six weeks from the commencement of treatment the child was reduced to not much more than half its previous bulk, walking was resumed after two years' interval, but the reawakening of intelligence, with a corresponding change of expression, and the resumption of speech, were the most striking and the most gratifying features of the recovery.

Nine or ten years ago I recorded two cases of myxoedema in adults, the one in a man in whom the establishment of the myxoedematous state was subsequent to and apparently a direct consequence of a severe influenza. In the other, severe and continued haemorrhage at and after confinement established a profound state of anaemia, and the symptoms of myxoedema were gradually grafted on to those of anaemia; the cirrhosis of the thyroid apparently resulting from the toxic state of the blood associated with the anaemia.

In all these four cases the myxoedematous state was clearly secondary to some pre-existing toxic condition: it was an incidental symptom-group, not a primary disease. They emphasize the fact that both scientifically and practically it is inadvisable to attempt to localize diseases instead of tracing them to their causes. In the case of Mrs. G., for instance, although looking back all her ailments have been due to an original toxæmia, the diagnosis has passed through "dysenteric diarrhoea," "phlebitis," "Graves's disease," and "myxoedema." Early recognition and, at least in some cases, prevention—as, for instance, in the anaemic case above-mentioned—would be more probable in cases of myxoedema if we recognized that the detection of "symptom-groups" is not any more the making of a diagnosis, properly so-called, than the now generally discredited method of naming symptoms apart from their causes.

THE DIAZO-REACTION AS A METHOD OF DIAGNOSIS IN CLINICAL MEDICINE.

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THE actual value of a clinical test depends upon its applicability to every-day work. Should it prove to be a method which can be easily employed in routine practice, and if it be granted that the results obtained are reliable, then can there be no doubt that the test has come to stay.

Much has been written of late upon the value of the diazo-reaction as a test for enteric fever, but it still seems that opinions are by no means unanimous as to the worth of the test in the diagnosis of this disease; and it has certainly been proved that the reaction occurs in maladies other than enteric fever, of which diseases tuberculosis is the most important. Acting on the above principles, I have examined the urine in 125 cases of all kinds and descriptions for the diazo-reaction. The cases have not been selected in any way, but the process has been applied in the out-patient room and the result noted.

Of these 125 cases in which the urine was examined, 5 only gave a positive reaction. In 120 instances no result whatever was obtained. Amongst those patients whose urine gave a negative result were instances of diseases of the lung of various kinds—phthisis, heart disease, gastric ulcer, bronchitis, etc.

The 5 cases were classified as follows: One was a case of acute tonsillitis, another of lobular pneumonia, two were cases of enteric fever in an early stage, and one was suffering from acute tuberculosis. The last patient was thought at first to have enteric fever, and this from a general consideration of history and symptoms. The occurrence of a positive reaction with the colour test not unnaturally tended to strongly strengthen this view of the nature of the case.

Nevertheless, the event proved that the diagnosis was incorrect. Thus the diazo-reaction broke down just at the very point when it would be of the greatest possible use. The extreme difficulty, even the impossibility, of differentiating typhoid fever from tuberculosis is generally admitted, and it is unfortunate that this test, so promising in many ways, should fail us in making a very important and difficult diagnosis.

Three other cases of enteric fever were carefully tested, but they all gave negative results. These cases were all in a more or less advanced stage of convalescence, which does not, however, render the occurrence of the reaction in any degree unlikely, for many cases are recorded in which the result was positive months after the attack of enteric fever had been recovered from.

I have also, subsequent to the above observations, made many examinations of the urine of patients suffering from typhoid fever, for the purpose of finding the diazo-reaction. Speaking generally, I have found that at some period of the fever the result was nearly always positive, and this usually at an advanced stage of the malady—that is to say, at the end of the second or early in the third week. Positive results were always most freely obtained when the temperature was high and the symptoms severe; in other words, they were always most obvious in well-marked and anxious cases.

The result of my observations, so far as regards enteric fever, is that the diazo-reaction is of little or no use in a practical sense. And this because it does not occur at a stage of the malady at which alone difficulties can really arise—the early stage. Further, the liability of a positive reaction to recur in cases of tuberculosis is a most serious drawback, and one which alone would tend to render the test valueless.

As regards the 125 cases, there was not once a positive reaction in the very numerous instances of gout and anaemia, and the same applies to diabetes.

It has been stated that in phthisis the reaction only shows itself in those patients in whom the malady is far advanced, and that, therefore, the fact of its occurrence should be regarded as a danger signal.

My experience of the diazo-reaction in phthisis is not large, but I have had the opportunity of applying the test in very advanced cases of the disease. My results do not in any way agree with those which would mark the diazo-reaction either as of usual occurrence in the later phases of the malady or, when it does occur, as being of any special significance. In ordinary cases of this description the result was negative, and when the reaction was positive there was no reason whatever to suppose that the case offered any special feature of gravity beyond that which is usual at the stage at which the affection had arrived.

It is worthy of note, too, in this connexion, that the case referred to above of acute tuberculosis, which was at first thought to be one of enteric fever, although showing a well-marked positive reaction, yet some months later was

in no worse condition, the disease not having made rapid progress.

My experience, then, of the diazo-reaction is that from a strictly practical point of view it is of very little value. When the result is positive in enteric fever the malady is so far advanced that there can be no possibility of error as regards the diagnosis. In the very early stage, when alone there may be some little difficulty in determining the nature of the malady, the test usually gives negative results, and even if this is not the case the positive reaction by no means excludes the possibility of the case being one of tuberculosis.

In my judgement far too much importance is at the present time attached to laboratory tests in clinical medicine. A reversion to the old-fashioned but sound, though laborious, manner of acquiring a knowledge of the symptoms and physical signs of disease is greatly to be wished, for it is by the cultivation of the senses at the bedside and in the dead-house, and in this way only, that a real and satisfactory knowledge of medicine can be obtained.

THREE CASES OF CEREBRO-SPINAL FEVER TREATED WITH ANTIPYRIN.

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By the kind permission of the Senior Medical Officer of Bermuda, I am enabled to publish the following cases of infective meningitis in the hope that further trial may be given to the treatment of this very fatal disease by antipyrin.

The disease broke out under the following circumstances: The transport *Montrose* left Durban for Bermuda on August 11th, 1901, having on board a detachment of 2nd Royal Warwickshire Regiment and Boer prisoners of war, of whom, including some embarked at Capetown, there were nearly 1,000. The *Montrose* is a large roomy ship with particularly airy troop decks, the height between decks being greater than usual, and she is furnished with large portways for cattle opening outward on each deck, which were kept open the greater part of the voyage. The prisoners of war embarked at Durban were recently captured, many of them emaciated and debilitated from the hardships of the field; their clothes were dirty, and scabies and pediculosis very prevalent. Old men and young boys were included, and all were suffering from mental depression, natural under the circumstances. The Capetown contingent, having been some time at Green Point, were in much better condition.

Measles broke out at the commencement of the voyage, as well as pneumonia of a particularly virulent type (39 cases with 13 deaths); influenza also ran through the ship. None of the troops, it may be mentioned, contracted pneumonia, and only one measles.

The weather was wet and cold from Durban half way to St. Vincent, afterwards mild and occasionally hot. The prisoners were not overcrowded, having more space than would be assigned to troops on a transport, but they stayed below as much as possible, and being accustomed to the veld felt the confinement of the ship a good deal. They were well fed, and suffered little from sea-sickness.

The first case of infective meningitis occurred on August 19th, and was rapidly fatal, the patient being brought into hospital in a comatose condition. The next case—that of J. de C., described below—was on August 23d. The third and fourth cases were among the patients isolated for measles, and both died on September 1st, after two and three days' illness. The fifth and sixth cases, H. J. C. and N. de B., were admitted on August 31st, and their cases are given in detail. No further cases occurred, and on September 1st the *Montrose* reached St. Vincent, between which port and Bermuda there was but little sickness of any kind.

The first, third, and fourth cases were treated on ordinary lines, and proved rapidly fatal; the remaining three cases were treated from the outset with antipyrin, and of these two, as will be seen from the following notes, recovered.

CASE 1.—J. de C. (Transvaaler), aged 19, was admitted to hospital on the ss. *Montrose*, August 23rd, in a semi-comatose condition, continually crying out, and complaining of intense pain about the nape of the neck. Temperature, 103°. Antipyrin, gr. x, was ordered at once, and to be continued thrice daily. By the 26th the temperature had fallen almost to