as being present. Vision was obscured to about $\frac{1}{2}$, and the eye was quiet. When Haab's magnet was in close approximation to the eye a sudden pain was manifested.

Any procedure with the big magnet being out of the question, on November 8th, under cocaine and adrenalin, an antero-posterior incision was made in the sclerotic, about half an inch in length, well behind the ciliary region, midway between the insertions of the outer and inferior recti muscles, and the small sterilized point of the electro-magnet inserted right into the vitreous. Considerable difficulty being experienced, the incision through the sclerotic was slightly enlarged backwards. After several trials the magnet brought out the foreign body, which proved to be a cylindrical piece of steel $\frac{3}{16}$ in. in length and 2 mm. in diameter. There was no escape of vitreous.

A couple of sutures in the superficial structures closed the wound, which healed quite satisfactorily, and he went out of hospital within three weeks with no untoward symptoms.

Dr. Paton sent him to see me on May 18th, 1916—that is, over six months from the time of the operation, and his vision was $\frac{3}{4}$ and J. 2. He was able to work. The media were clear, the pupil reacted to light, and tension was normal.

The result in this second case was eminently satisfactory when it is borne in mind that this was the patient's only good eye, and taking into consideration the relative magnitude of the injury itself and that caused by the surgical procedure. The future may naturally involve degenerative and other changes.

A CASE OF ACTINOMYCOSIS SUCCESSFULLY TREATED BY VACCINE.

BY

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THE case of actinomycosis reported by Dr. Malcolm in the BRITISH MEDICAL JOURNAL of October 7th, 1916, and the remarks he there made as to the importance of recording even a single case which has been treated by vaccine prompt me to give my own experience.

A boy aged 18 years, a farm labourer, was admitted under my care into the Royal Lancaster Infirmary on August 2nd, 1916, suffering from a swelling in the left parotid region. No history was given except that the swelling had commenced six weeks previously, had gradually increased, and was supposed to be an abscess due to a decayed tooth. The bones did not seem to be involved, the swelling being fairly movable over the surface; pus was oozing from two sinuses on the outside of the cheek, which on being explored led into pockets containing thick pus and debris. After I had opened these cavities the swelling decreased somewhat, but shortly afterwards fresh swellings appeared, and I then began to be suspicious of actinomycosis.

The pus and debris were examined by Dr. Gough of Leeds, and the ray fungus was found. Two carious lower molars were extracted, but they seemed to have no connexion with the growth. I put the patient on large doses of potassium iodide (gr. 15 thrice daily), and although he took it continuously during the whole of the treatment it produced no symptoms of iodism. I may say there was not the slightest reason to suspect syphilis, the patient being a particularly healthy, robust, and intelligent country boy.

I then wrote to Dr. Leonard Colebrook of St. Mary's Hospital, who gave me many valuable suggestions as to treatment. He has very kindly allowed me to quote from his letter. He says:

I have had very satisfactory results with vaccine in a number of cases, particularly those of the jaw, but only if combined with efficient drainage. And may I add a point that seems to me of great value in the surgical treatment—namely, the advantage of curetting with a dry swab as opposed to a sharp instrument, and I advise it for this reason—the infected tissues in this disease seem to be sharply defined, and with a dry swab they can frequently be removed entirely if the focus is small, leaving a clean boundary of apparently uninfected tissue, which heals straight away. With a sharp instrument there is, I think, more chance of spreading the infection. It is a point that is not sufficiently recognized. I use the vaccine in doses of 3 to 10 million fragments about once a week.

I carried out Dr. Colebrook's suggestions as to surgical treatment, but I am afraid I gave the vaccine in much larger amount than he advised. I gave 25 million fragments as an initial dose on September 18th—inadvertently, I will admit, but as nothing happened beyond a rise of

temperature to 100° the following night (it fell to normal in twenty-four hours), I continued the same dose once a week for a month with absolutely no ill effect to the patient, and the temperature did not go up again. The boy is, as far as I can tell, now perfectly well, the wounds are healed and the swelling has quite gone down; the only thing left is a slight oedema of the cheek, as if from some obstruction to the lymphatic return, due to very firm contraction of the healed tissues. The seventh nerve does not seem to be at all involved.

Dr. Colebrook suggests that in this particular case the tissues above the parotid were the parts affected and not the gland itself. He is probably right, as there were no signs of the gland tissue being implicated. He tells me that he has not himself met with a definite involvement of either lymphatics or salivary glands in this disease.

What I have written contains nothing new beyond the fact that in some cases, at any rate, the initial and subsequent doses of vaccine can be very largely increased beyond those usually given with apparently the best results. The last dose of 25 million fragments was given on October 9th. It had no effect upon the well-being of the patient, and I am sure was really superfluous, but I gave it to make assurance doubly sure. I think the potassium iodide had little or no effect, but improvement was most marked on giving the first dose of vaccine.

I would emphasize the following points: that the patient had only four injections of vaccine in all, each of 25 million fragments; that the treatment by this method only lasted from September 18th to October 9th; and that I am convinced the last dose was unnecessary.

I have carefully examined the boy several times and can find no involvement of other parts.

HOME-MADE BREAD SUBSTITUTES FOR DIABETIC PATIENTS.

By FRANK NICHOLSON, M.D. LOND.,

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I HAVE read the article by Dr. Williamson of Manchester, in the JOURNAL of December 23rd, 1916, with much interest. Most of the diabetic and gluten flours sold to the public give a reaction with iodine almost as dark as ordinary flour. They are sold at all prices from 9s. to 40s. or more a stone; and I do not now order them. Gluten bread even from the best houses is not palatable, and cannot be cut in slices and buttered. Prolacto bread and casoid bread are satisfactory, but they are not very nice to eat, and are very expensive.

For some two years or so I have given up all these flours and breads, and I order a bread made of pea-nut flour and casein. This is made for me quite easily in the kitchen of the Hull Royal Infirmary, and my private patients make it quite well at home. It has the advantage of being very nice to the taste, and can be cut readily in slices even as thin bread-and-butter. I have now several private cases that have made the bread twice a week and eaten it regularly for a year or two, and they like it.

Receipt:

Pea-nut flour eight ounces.
Casein two ounces.
A pinch of salt.
White of egg twelve ounces.

The white of egg is beaten to a snow, and then the other ingredients (previously lightly mixed) are slowly added. The bread is baked in a sound oven in a tin.

Pea-nut flour is not expensive, and was offered to me a few months ago at 1s. 2d. for 3 lb. The pea-nuts, which are sometimes called monkey nuts, can also be bought. They should be placed on the top of the oven for a short time, when the husk can be rubbed off with the hand and the nuts ground in a small mill which can be bought for 2s. 6d. Casein can be bought anywhere. The whites of eight or nine eggs measure about 12 oz.; though they are just now dear, most good housekeepers have put down a number in waterglass when they could be obtained at sixteen a shilling; and these will do very well. The yolks come in for the patient, fried or in any other way, or they can be used in the kitchen for other things.

This bread when tested with iodine gives only the faintest blue reaction. If preferred, the yolks also can be used in making the bread, and then only half the number.

of eggs is needed; but the bread is yellow, and I do not think it is so nice. The pea-nut flour can be replaced by almond flour, but it costs more, and my hospital cases do not like it so much.

I may add that casein and cream, as suggested by Dr. Williamson in the JOURNAL a year ago, have been very satisfactory in my hands.

I have lately treated several cases on the alimentary rest scheme with very good results. It is sometimes called the starvation scheme, but this is a bad name, and one that does not commend itself (under that name) to private patients. I give four half-pints of black coffee in twenty-four hours, and nothing else; this I have found patients will take for three, four, or five days without complaint. By that time the sugar has disappeared entirely from the urine. I then gradually add cabbage 5 oz., and in a day or two an egg, and then half a pint of beef-tea, increasing each day or two (if no sugar appears), so that in ten or fifteen days the patient is getting meat 2 oz., casein 2 oz., cream 2 oz., beef-tea 1 pint, cabbage 10 oz. (or other green vegetable), eggs three, tea or coffee 2 pints, with cream, and some pea-nut bread with butter.

Rebuelus.

PARATYPHOID B FEVER.

AN elaborate study of paratyphoid B fever has recently been published by Drs. RATHERY, AMBARD, VANSTEENBERGHE, and MICHEL.¹ It is based on fifteen months' experience of the disease at Zuydcoote Hospital, where they dealt with 1,088 cases of the disease; 74 of the patients died—a mortality of 6.8 per cent. The *Bacillus paratyphosus* B was cultivated from the patient's blood in 314 instances; in the other 774 the diagnosis was made by agglutination tests. The chief symptoms and signs noted in the course of the disease are loss of appetite (which is constant), occasionally vomiting, diarrhoea succeeded by obstinate constipation, furring of the tongue with fibrillary twitching of its muscular bundles, some distension of the abdomen, swelling of the spleen (which is often also painful), headache, and pain in the back. Bronchitis often occurs, thrombosis of veins is common, renal complications are rare. The authors describe many varieties of fever charts in the disease. The fever may last for days or weeks, and may be continuous, remittent (this is the commonest type), or intermittent; in some cases there is no elevation of the temperature. Relapse after a week or two is not rare, and irregular rises or falls in the temperature are fairly often met with. The fever ends by lysis in most cases. Abortive forms of paratyphoid B fever are frequent, especially towards the end of epidemics of the disease; the case may undergo relapses of considerable severity. Asthenia rather than the classical typhoid state is characteristic of paratyphoid B fever, and also frequently is seen during convalescence from it.

Describing the skin eruptions observed, the authors state that they have met with a number of cases in which the characteristic rose spots came out in great numbers all over the body and limbs; in other instances the spots became purpuric, being the seat of haemorrhages; in others, again, they were morbilliform. In a few instances a scarlatiniform erythema appeared, either generally or locally—a sign of very serious import.

Thrush, Vincent's angina, diphtheria, facial erysipelas, all occurred as important complications of the disease, and malaria was not rare; special emphasis is laid on the severity of a secondary diphtherial infection. Otitis media occurred as a fairly frequent complication; and colitis, whether of the mucous-membranous or of the dysenteric variety, is mentioned as occurring far more frequently in paratyphoid B fever than in typhoid. Peritonitis occurred fairly frequently, but jaundice was unexpectedly rare. As for the kidneys, no case of acute nephritis was met with; the urine was examined for *B. paratyphosus* B in 406 patients, with a positive result in no more than 8. Pulmonary complications were frequent and often serious; pleurisy was rare. Cardiac complications were frequent and often serious, though the cause of sudden death only in one

instance; myocarditis and cardiac irritability were frequent. Cutaneous suppuration in the form of boils was often seen during convalescence.

In their chapter on diagnosis the authors insist on the supreme importance of laboratory methods, particularly blood cultures; they give full details of the methods to be adopted here. As has been stated above, 74 of their patients died; the cause of death was cardiac failure in 30, pneumonia or bronchopneumonia in 11, intestinal perforation in 9, colitis in 3, pulmonary tuberculosis in 3, diphtheria in 3, parotitis in 3, tuberculous meningitis in 2, purpura and multiple haemorrhages in 2, otitis in 2. A good account of the pathological anatomy of the disease is given, with several illustrations; the lesions observed were very similar to those met with in fatal cases of typhoid fever.

As regards treatment, the authors pin their faith to hydrotherapy, cleansing the mouth, the administration of castor oil or sodium sulphate in constipation, and a copious fluid diet. A full discussion of the vaccine treatment in 147 cases is given, with details of its employment. The conclusion reached is that the treatment is useful and worth trying, for it almost always improves the general condition of the patient, often appears to shorten the duration of the fever, and never had any harmful results.

SURGERY.

UNDER the title of *The Student's Textbook of Surgery*² a new manual by Mr. H. N. BARNETT has recently made its appearance. The author claims that this is the first textbook in which the chapters dealing with special subjects have been written by specialists in those branches of surgery, and that all academic discussions and padding have been omitted, each subject being treated as briefly as possible. The general plan of the book seems excellent, and there is no doubt that at the present day it is difficult for a general surgeon to be equally well conversant with all the branches of surgery. A chapter on the surgical aspect of infective fevers brings into prominence the intimate connexion of enteric fever, diphtheria, and scarlet fever with surgical conditions, and should serve a useful purpose. The general production of the book is good, and there are many excellent illustrations. When the book is studied more closely it is found to be somewhat unequal, and it seems to have suffered in parts from the attempt at condensation. This compression has been attained by practically omitting surgical anatomy, and cutting down the description of operative treatment to a minimum. The author points out that operative surgery should be learnt from a special textbook. That may be so, but without doubt this process of division of labour can be carried to an extreme. There is sometimes a lack of clearness in the statements; for example, under the heading of intussusception we read that this condition is most common in "young males," but is it not a fact that intussusception seldom occurs save in infants under two years of age? If so, "young male" is rather too elastic a term. Whereas much of the book is good, in parts it is hardly sufficient to meet the requirements of a student for most examinations.

Emergency Surgery,³ by Dr. J. W. SLUSS, is written primarily with the idea of being useful to the general practitioner who is suddenly faced with some case requiring immediate operative treatment in circumstances where a hospital or other skilled assistance is not available. At the present day, when, in many cases, the need for immediate operation is recognized not only by the practitioner but also by the patient's relatives and friends, it becomes incumbent on the medical attendant, often in spite of adverse surroundings, to give his patient a chance. This does not mean that the general practitioner should lightly undertake the major operations of surgery; on the other hand, if need arise, either from the isolation of the patient or any other cause, there is no question as to what should be done. Considered from this standpoint, the book appears fully to carry out what is intended. The various surgical operations and manipulations are clearly

¹ *Les Fièvres paratyphoïdes B à l'hôpital mixte de Zuydcoote*. Par F. Rathery, L. Ambard, P. Vansteenberghé, R. Michel. Paris: F. Alcan. 1916. (Med. 8vo, pp. 248; 16 figures, 52 charts. Fr. 9.)

² *The Student's Textbook of Surgery*. By H. N. Barnett, F.R.C.S., Major Commanding 3/2 South-Western Mounted Brigade Field Ambulance. London: W. Heinemann. 1916. (Roy. 8vo, pp. 813; 79 plates, 143 figures. 21s. net.)

³ *Emergency Surgery*. By J. W. Sluss, A.M., M.D. Third edition, revised and enlarged. London: W. Heinemann, 1916. (Post 8vo, pp. 847; 670 figures. 17s. 6d. net.)