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.