2. Buy a small saucepan with a cover, and a small cheap cup. After you finish injecting (and also before you inject for the first time)—

3. Place the syringe and the cup in the saucepan and cover with a little water; raise the water to boiling point, holding the saucepan over a fire or spirit lamp.

4. Place the cover on the saucepan and put it aside to cool in a safe place.

To inject—

5. First pass water. Then take the cup out of the saucepan and empty it. Pour into it a little of the injecting fluid out of your bottle. Pick the syringe out of the saucepan and suck up the injecting fluid into the syringe. Place the nozzle of the syringe very gently inside the mouth of the canal. Fill the canal with injecting fluid, withdraw the syringe, and by means of the finger and thumb hold the fluid inside the canal for two minutes; then let it out.

6. Inject at least twice a day, and if you can possibly manage it, you will get well quicker if you inject three, or even four, times a day.

For private patients I have devised an injecting outfit known as my outfit A, and to be obtained at Wallas and Co., 36, New Cavendish Street. The box contains a glass tube with a rubber stopper. The syringe is placed in this and the tube filled with water. Tablets of corrosive sublimate are provided, one of which is also dropped into the tube and makes a solution of 1 in 1,000. This ensures that the syringe is always kept germ-free. Another space in the box contains a 4 oz. bottle of injecting fluid.

When the patient syringes he washes his hands and then passes water. He then removes the syringe from the tube, pulls back the piston and unscrews the nozzle of the syringe. He then fills the open barrel of the syringe from the bottle of injecting fluid, and screws on the nozzle. He then fills the urethra from the syringe, and holds the injection in for two minutes. He then drops the empty syringe back into the tube, corks the tube, and the sitting is over.

He should inject at least three times and better four times a day. Potassium permanganate is used in strengths of 1 in 3,000 for acute cases, 1 in 2,000 for subacute cases, and 1 in 1,500 and 1 in 1,000 for chronic cases. The syringe is of four-drachm capacity and has a smooth conical vulcanite nozzle which fits the urethra snugly and cannot damage it.

I cannot too strongly condemn those forms of syringe which are often recommended and sold especially by chemists where a catheter or long tube is attached to the syringe for passing down the urethra. These damage the inflamed urethra, and may lead to severe secondary infections. Syringes with a screw piston are unnecessarily complicated and expensive. I find the syringes in my outfit A were all made in Germany, so that it is not possible to obtain them now. Wallas and Co. are now making for me a two-drachm syringe with a rubber tip. This has to be inserted into the mouth of the bottle containing the injecting fluid, the bottle inverted, and the syringe filled by suction, not altogether an ideal method.

FLUIDS FOR INJECTIONS.

One recent book recommended something like fifty different injecting fluids. A man who needs to recommend a lot of fancy injections is a man who does not understand how to drive the lurking cocci out of its special lairs, such as the prostate, the glands of Littre, and submucous infiltrations. If your injections are not curing the disease do not blame the injections. Blame your lack of urethral knowledge. Try increased strengths of the old injections, and, above all, examine the prostate and use the urethroscope. If a man understands his job he will find that only a few different kinds of injecting fluid are required.

1. For acute cases and for most chronic cases there is nothing to be compared to potassium permanganate in strengths from 1 in 4,000 to 1 in 1,000, varying with the acuteness of the inflammation.

2. In the later stages an astringent injection may be used. The best is zinc permanganate in strengths of 1 in 8,000 up to 1 in 2,000.

3. In a few chronic cases silver nitrate may prove helpful as an astringent in strengths of 1 in 5,000 to 1 in 1,000.

4. In cases of secondary infection nothing is better than mercury oxycyanide in strengths of 1 in 2,000.

With these four injecting fluids I will undertake to cure almost any case of urethritis. Failure with these means failure to detect a soft stricture, an infected gland of Littre, or latent prostatic or vesicular collection.

I do not deny that there are many antiseptics that are useful, but what I strongly maintain is that these four are excellent antiseptics for urethral use, and that it is far better to familiarize yourself with a few simple formulae of proved utility rather than to be always changing your formula in the hopes of stopping a discharge. I repeat, if a discharge persists, it is not the fault of the antiseptic; it is due to your failure to detect a lurking cause of relapse.

My experience in practice is that preparations of colloid silver and iodine are not needed, and are sometimes harmful, especially as they are often prescribed in too great strengths. Protargol, for instance, stops the discharge, it is true; but I find that when prescribed, as it usually is, in excessive strengths it leads to soft strictures, which are very troublesome to cure. For this reason I advise you not to prescribe injections of protargol, argyrol, iodargol, and so forth. I am sure they are often harmful, as they are usually prescribed in excessive strengths, and are rather expensive.

While on the subject of injections I want to warn you against another practice, and that is the use of medicated bougies. It is so easy to prescribe these, and the patient takes to the idea of shoving strongly medicated substances up into his urethra. I quite agree that they may appear to diminish the discharge, but I find that they often lead to most troublesome soft strictures. But worse than that, I find that they may lead to severe forms of secondary infection, as it is not always possible to secure that their surface is kept clean before being thrust into the urethra. The point is that these patent antiseptics and medicated bougies are not needed at all in the cure of urethritis if a man understands his job. If a man knows how to use the simple injecting fluids I have mentioned, and if he knows how to control his results by observations on the prostate and urethra, then he will find no need for these makeshifts of the inexpert.

(To be continued.)

TWO CASES OF REMOVAL OF FOREIGN BODIES FROM THE EYE.

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The following notes concerning the removal of foreign bodies from the vitreous chamber of the eye will, I trust, prove of interest:

1. L., aged 32, an Italian employed in machinery work on the goldfields, came to the Perth Hospital stating that he was struck on the left eye three days previously by a piece of metal, probably steel. The eye was comparatively quiet, but on careful inspection a small scar was seen towards the outer part of the left cornea (the wound of entry), and behind and slightly outwards from it another wound of the iris. Vision was only slightly impaired, and after dilatation no foreign body or other disturbance could be observed by the ophthalmoscope except a slight haemorrhage on the outer side.

A skiagram gave a positive result, showing the presence of a piece of metal. After localization by the aid of the x rays and having regard to the oblique direction in which the steel had evidently passed, it was determined to perform a posterior sclerotomy behind the dangerous area through the insertion of the external rectus muscle. A preliminary trial with Haab's magnet gave no result at all. Under cocaine and adrenalin, after dissecting off the superficial structures, an antero-posterior incision was made through the sclerotic for one-third of an inch. The sterilized small point of an electro-magnet then introduced into the wound attracted the foreign body at the first attempt, and it was removed. It proved to be a scale of iron 2 mm. by 1 mm. There was no escape of vitreous.

The eye made an uninterrupted recovery, and the patient, when seen about two months after the operation, had vision 3 and J. 1, with no untoward symptoms whatever.

The second case I saw in consultation with my friend and colleague Dr. Paton, who asked me to admit the patient to the Perth Public Hospital. Dr. Paton was present at the operation and kindly assisted me.

2. W. L., aged 36, a machinist, married, was struck on the right eye by a piece of steel on November 1st, 1915. The left eye was blind owing to an injury received several years previously.

The foreign body had penetrated the upper eyelid at the junction of the middle and outer thirds, and about half an inch from the palpebral border. It could be seen after dilatation of the pupil by atropine as a long black object lying in the vitreous obliquely, there being very little haemorrhage to obscure the view. A skiagram showed a large piece of metal

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 $\frac{3}{8}$ 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.

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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