normal reflex mechanism again with the act of defaecation and a minimum usage of the inhibitory bed-pan, should lead quickly to the re-establishment of normal bowel action.

It gives me pleasure to state that I have valued greatly the suggestions made by Mr. H. Freeman, F.R.C.S., who kindly vetted my manuscript, particularly where it impinged on clinical medicine and on surgical technique.

**SCLEROTIC THERAPY IN PRACTICE III**

**HAEMORRHOIDS . . . THEIR TREATMENT BY INJECTION**

By R. R. Foote, M.R.C.S.

The sufferers from piles form a vast legion who frequently receive but little relief from the care of the medical profession. A box of ointment from the general practitioner, or the somewhat doubtful honour of being the last on the operating list of the surgeon (often practice for the new house surgeon) is their not uncommon fate. Twenty-five consecutive patients at my out-patients had not even had the privilege of examination prior to being sent up to hospital . . . why is it that piles are thought to be so boring by the average practitioner?

I hope to show that the cure of haemorrhoids is a very interesting subject, and that the relieved sufferer is not the least grateful of patients. He has, as a rule, hidden his troubles from his doctor for a long time . . . he has often become introspective, nervous, and ill from worrying. Rational treatment in the comparatively early stages may save him from continued worry with inevitable surgery later on in life.

Nearly all cases of piles can be relieved by proper injection therapy, and a vast number can be permanently cured. As already mentioned, over 98 per cent of first degree piles remained permanently cured after a five-year period, subsequent to injection treatment at St. Mark’s Hospital. A proctologist of great experience told me that he “injected over 70 per cent of pile cases for one reason or another.” It is possible that this figure is higher than it should be owing to various factors such as bed shortage, but even taking this into consideration the figures impress the importance of this therapy, which in my experience is so much neglected by the average practitioner.

*The contra-indications* for this treatment are few and obvious.

1. **Inflammation.**—Any inflammatory condition associated with piles is an absolute contra-indication to injection. Thrombosis and strangulation must be allowed to settle down before treatment.

2. **External piles.**—Surgical treatment under local anaesthesia is necessary. The diathermy knife may be used for such cases.

3. **Pregnancy.**

5. **Advanced general disease.**

6. The *patulous anus* with a weak external sphincter muscle.

7. **Rectal neoplasm.**

8. **Anal stricture.**

Relative contra-indications are the presence of advanced third degree piles, and those cases in which a rapid recurrence has followed injection treatment.

The presence of an anal fissure delays the commencement of injection therapy, and in my opinion the presence of an anal fistula negates injection. Kasper Blond does not agree with this latter statement, and claims success in a large series of cases in which he has treated the fistulae with injections followed by sclerosing treatment of the piles. I should personally be afraid of the associated sepsis and the risks of septicaemia.

It should be noted especially that the injection treatment is of great value when dealing with bad surgical risks, such as in the cases of the diabetic, consumptive, or senile patient.

The treatment of the sufferer from piles must entail the following considerations:

1. The taking of a complete and thorough history.

2. Careful examination, both local and general.


4. The right solution to be put into the right place in the right amount.

The only way to learn the details of injection treatment is to do a large number of cases and to learn by means of “trial and error,” since the injection of an occasional case will not teach the operator the correct dosage or the finer points in technique. Complications in the shape of abscess formation and septicaemia are not as uncommon as is generally supposed. The scope of this article is limited by space, and can but serve to offer a few suggestions to those who are fortunate enough to be able to gain practical experience at a clinic devoted to the subject.

All cases presenting themselves for treatment should have a very careful cross-examination regarding their symptoms. The questionnaire used at St. Mark’s Hospital is very thorough and will often give a diagnosis before the examination of the patient has been undertaken. The character of the pain, the degree of prolapse, the state of the bowels, and the type and time of haemorrhage together with any pruritic symptoms are all carefully analysed. A general examination is then
PRACTICALITIES

I. GABRIEL SYRINGE

2. GRAEME ANDERSON SYRINGE

3. RECTAL SPECULUM OF THE GABRIEL TYPE

4. TILLEY’S FORCEPS

With acknowledgements to Messrs. John Bell and Croyden and Messrs. H. K. Lewis for permission to publish these illustrations and for supplying the electros.
made with especial reference to the condition of the liver and to any of the causes of portal congestion.

The local examination is best made in the genupectoral position in a good light. The following points are noted:

1. The condition of the peri-anal skin, evidence of pruritus, skin tags, etc.
2. The presence of discharge or of fistulous tracks.
3. Evidence of prolapsed piles and as to whether there is an anal fissure present.
4. Digital examination may reveal palpable lesions such as thromboses, scars, ulcers, infiltrations, and polypi.
5. Proctoscopic examination should follow on digital examination, and it should be noted that the mucosa of the healthy rectum is pale pink, and that it occupies very little space in the lumen of the speculum. Conversely unhealthy mucosa is of a darker colour, in some cases nearly black. This prolapses into the speculum and presents a more granular appearance than in the healthy state.

Finally, it is obviously safer to pass a sigmoidoscope so that a neoplasm out of reach of the speculum may not be overlooked. This is not always practicable however, and may have to be reserved for those cases which have given rise to suspicion. Similarly a Barium Enema is in some cases a wise precaution.

The results of these examinations taken in conjunction with the careful history should now tell us whether we have a straightforward case of piles before us or no. We should also have been able to determine whether the piles are of the first, second, or third degree. These artificial "degrees" were mentioned under prognosis, and it will be recalled that it is in the first degree state that the best results of the most permanent nature may be expected.

Piles of the first degree do not protrude from the anus on straining, and only make themselves known to the sufferer by means of the haemorrhage they produce. Such haemorrhage may lead to secondary ill-health and anaemia. Piles of the second degree protrude at the anus on straining, but unlike those of the third degree, they return spontaneously into the bowel as soon as the strain is relieved. Prolapse and pruritus with a usually lessened tendency to bleeding accompany second degree piles, whereas those of the third degree cause severe pruritus and troublesome localised peri-anal skin infection.

Having decided that the case under review is a suitable one for injection treatment, I find little difficulty in deciding the best solution for injection, since uniformly good results may be obtained from the use of the well-accepted and tested solution of 5 per cent carbolic in almond oil. As in the case of varicose vein injections, there are many solutions in use, but I can find no fault with the solution mentioned, and do not see why one should run the risks of cinchonism and of more readily produced ulceration from the use of the various quinine solutions. However, there are many enthusiasts who use this technique, and it may be lack of sufficient experience of this method which causes my criticism. In a few resistant cases it is justifiable to use a 10 per cent solution of carbolic acid in oil. Dosage must be carefully controlled however, and this stronger solution is seldom needed.

Morley's solution of 20 per cent carbolic acid in glycerin is of value, and I use it chiefly for touching up those parts of a pile which have failed to "take" following the high injection of the standard solution. In passing, it is to be noted that this stronger solution is injected into the neck of the pile, and is used in a maximum dosage of five minims.

There is very little new that can be said about the use of these solutions in the treatment of piles, and I only intend to give a few practical suggestions for those readers who have not had much experience of this useful form of therapy.

As in the case of varicose vein injections, there are many complicated syringes for the treatment of piles, and many original and often useless types of proctoscope. The simplest instruments are the easiest to use, and the following list is all that is required.

1. Haemorrhoidal syringe (Gabriel's) fitted with plug and bayonet catch. Capacity, 10 c.c.
2. Haemorrhoidal syringe (Graeme Anderson's), with a capacity of 10 minims.
3. A rectal speculum of the Gabriel type fitted with proximal illumination. It is as well to have the standard size, and also a small one for those cases which have much anal spasm.
4. A pair of angulated dressing forceps of the Tilley pattern.
5. A pair of long slightly curved artery forceps.
6. A supply of woollen swabs wrung out nearly dry in dettol solution.

I think that the best position for the patient is the genupectoral, with the left side of the face in the pillow, and the hands over the side of the couch or folded over the chest. This allows a better view and a more comfortable position for the operator. A suitably draped towel will satisfy the modesty of female patients.

Always do a rectal examination before the introduction of the speculum, since this tends to relax the sphincter. See that the speculum is well lubricated, and that a slight corkscrew movement is imparted to it as it is pushed gently past.
the sphincter. At the same time tell the patient to bear down as if she wished to open the bowels. Never withdraw the speculum without the replacement of the obturator, otherwise the contracting sphincter may suffer a painful nip.

The most important factor in the injection is where it is to be given. The aim of the injection is to introduce the fluid submucously just below the level of the ano-rectal junction. At this level the injection is painless, provided dosage is not excessive, and provided it is not given too rapidly.

There is no difficulty in recognising this level. When the speculum has been introduced to its highest level, tell the patient to take a few deep breaths, which will serve to cause the walls of the rectum to fall apart. Note that the only wall visible is the anterior wall. Slowly withdraw the instrument, and in addition to the anterior wall the posterior wall will start to come into the lumen of the speculum. It is at this level that the ano-rectal junction has been reached (see diagram). It now but remains to give a submucous injection in the areas corresponding to the usual position of the three primary piles (two on the right-hand side and one on the left). I find it easier to use a straight needle, but many prefer an angulated type. The needle should be introduced up to its shoulder, and very great care should be taken not to transfix a fold of mucous membrane nor the muscular layers of the gut. By tilting the needle into various positions it is possible to determine where the point is lying.

Dosage is a matter of observation of the results of injection, and also a matter of experience. A lax mucosa with a large pile-bearing area will naturally require a larger dosage than when the converse is observed.

Excessive dosage will cause, in some cases, a stricture of the anal canal. It may also cause the formation of an ulcer.

As a rough guide it may be said that a dosage of 3 c.c. into the three separate areas, at each attendance, is not unusual. During the injection a careful observation of the injected area must be made. A bulge will occur, and the mucous membrane covering this swelling will become paler, and will sometimes show white striated lines over the oedematous surface. Complete blanching of the swelling should be avoided, and if it occurs the injection must be stopped. Should the needle have been inserted too shallowly, a white area will rapidly form at the site of injection. Persistence with this injection will cause subsequent ulceration.

Do not remove the needle too rapidly after the injection, and whilst withdrawing it allow a small amount of the solution to trickle from the point. There will be a lessened tendency to haemorrhage if these points are observed.

Injections are best given at a two- or three-weekly interval. A sufficient length of time must be allowed to elapse between injections, since otherwise a second injection may be given before fibrosis has developed from the first dose. An added risk of injection ulcer may be so occasioned. Special care must be exercised in the re-injection of a previously treated haemorrhoid, since its leathery state makes it easy for the operator to give a subsequent overdose, which may lead to necrosis. Soft spots in the lower poles of previously injected piles are best treated with Morley’s solution. This should be given into the neck of the pile, and the dosage should never exceed 4 minims. This is the only injection to be given below the ano-rectal junction.

All injections should be given slowly and without force so that pain may be avoided. Excessive dosage may not only cause necrosis, but may, in conjunction with the rough use of the speculum, produce a painful fissure.

After injection the patient should be warned that if prolapse occurs, the piles must be returned at once by means of digital pressure. Failure to perform this may result in strangulation of the injected pile.

After each series of injections the strength, amount, and position of each dose should be entered on a chart. The areas which have “taken” can be felt as being leathery, the lumen of the gut being temporarily narrowed by an elongated slightly tender ridge. The first session will often be sufficient to control the symptom of haemorrhage, and subsequent attendances will deal with the prolapse. Injections are best given in the clockwise direction, and the solution should be delivered into the areas between the primary piles at the second session. As a rule from three to four sessions are required for the average case.

These are the main practical points regarding pile injection as they strike me. The therapy is one with a fairly standardised technique, being well established. Care over the finer points, however, will produce the most gratifying results, and are well worth some thought and study.

REFERENCES
1. BLOND, KASPER (1940), Haemorrhoids and their Treatment. John Wright & Sons, Ltd., Bristol.

Morley’s Solution—
Carbolic acid, 48 grains.
Glycerin.
Water, 2 oz.

Phenol (5 per cent) Solution—
Acid Carbolic Pur., 21 grains.
Almond oil, pure, 1 oz.
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By F. R. Foote, M.R.C.S.

Taken from the text of the above article. Page 102 in the March number.

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