anterior chest wall, and they continued to increase in number. Injections of 12 c.cm. were now given at intervals of one week, and in addition small injections were made locally into the cancer nodules. Again the cancerous nodules began to show what I regarded as a reactionary stage, the nodules gradually becoming red in colour, then pink, and, later still, pale and glistening. A marked diminution in size was obvious, and they ultimately disappeared altogether. The pain had gone from the chest, and she could breathe and swallow with comfort.

I continued the injections monthly for four months. Then three small nodules reappeared in the scar. The period between each injection was shortened again, and the nodules began to go through the same reactionary changes as before. In consequence the intervals were lengthened, but apparently they were too long to keep the cancerous nodules under control, as these increased in size and number. Again weekly injections were given, and it was necessary to persevere in this treatment for a further six months before all the nodules disappeared for the third time.

What appears to me to be the most striking fact in the course of the treatment of this case is that undoubtedly the cancerous cells can be definitely influenced and controlled for a considerable period by the injections of collosol lead. As soon as the injections were diminished, either in amount or frequency, then did the cancerous growth regain its activity. In this particular case the effect of the injections on the cancerous nodules was apparent and clearly demonstrated.

During the whole period of twenty-seven months the total amount of lead injected intramuscularly was 804 c.cm. (or 12 grains). No albuminuria occurred at any time. So far there has been no further recurrence of the nodules in the skin, although only three injections have been made during the last two months, but her weight has decreased 6 lb. Whether the progress made in this case can be maintained remains for the present a matter of doubt.

The second case has been even more striking in view of the vast general improvement noted in the patient's health and appearance.

CASE II.—*Carcinoma of the Rectum.*

In October, 1926, the patient, a woman aged 41, was found to be suffering from an advanced carcinoma of the rectum. The surface of the growth was excavated and involved the whole circumference of the bowel. Its edges were raised, everted, and indurated, and bled when examined. The growth was high up in the rectum (5 in. from the anal orifice) and the surrounding tissues were infiltrated. Marked cachexia was present, her weight being 7 st. 10½ lb. There was a definite trace of albuminuria.

In November, 1926, I started a course of intramuscular gluteal injections of collosol lead, commencing with 5 c.cm., and a week later giving 10 c.cm. These were repeated about once a week, the amount varying from 8 to 14 c.cm. Occasionally the patient complained of slight abdominal pain of a colicky nature. Sometimes the injections were followed by a small increase of the albuminuria. With the occurrence of slight abdominal discomfort or an increase of the albuminuria the amount of the lead injected was decreased, or the interval between the injections lengthened. By this means she was enabled to take the injections without any real discomfort. At the end of six months' treatment the patient had gained 14 lb. in weight. She said she felt very much better, and certainly her statement was supported by her general appearance. Her appetite improved and the abdominal pain was practically absent. There had only been slight haemorrhage from the bowel. Examination at this stage indicated that the edges of the ulcer were softer, the rectum itself could be moved more freely and it did not feel so fixed as formerly. The ulcerating process had extended downwards an inch further in the rectal wall, and the lumen of the bowel directly above was narrowed and fibrosed. In addition to the intramuscular injections the patient was instructed to inject into the rectum two drachms of the lead solution with a urethral syringe, this to be carried out once a week. During the first six months 300 c.cm. of lead solution were given intramuscularly.

The patient was very satisfied with her progress and anxious for further treatment. The very definite improvement in her general health and appearance, and consideration of the rectal condition still present, encouraged me to persevere. The injections were omitted for one month, and then continued, varying the interval between each injection, or the amount given, according to the response.

The patient has been under treatment for twenty-two months and has gained 24 lb. in weight. The improvement in her looks has been so marked that some of her friends scarcely recognized her as the same woman, and she is now able to perform her household duties.

Rectal examination indicates that the ulcerated edge of the growth has extended downwards much further, and practically involves the anal canal. The lumen of the rectum is greatly reduced and is about the diameter of a lead pencil. The rectal wall itself appears to have been replaced by a solid mass of fibrous tissue. The rectum is not so fixed as before and can be moved more freely over the sacrum.

The question which arises is: Will the growth be defeated and exterminate itself when it reaches the anal margin? Should this be the case and the glandular involvement

(which undoubtedly must have been present earlier) have been influenced in a similar manner to the rectal growth, then one might look hopefully for a cure of the condition. It seems remarkable that with such diminution in the size of the lumen of the bowel the patient has not developed obstructive symptoms. With this in mind she has been kept on a modified though nourishing diet, and has taken regularly sufficient cascara and liquid paraffin to ensure a daily action of the bowels. There have been no bladder symptoms. The amount of albumin in the urine has varied slightly from time to time, but even now is no greater than when the treatment was begun. General tonic treatment has been given in the form of syr. ferri iod. and syr. glycerophos. co. The total amount of collosol lead given intramuscularly to date is 632 c.cm., or 10 grains of lead.

The first patient had very small and insignificant superficial veins of the arm, and it would not have been possible to give a prolonged series of injections, so the intramuscular method was substituted. This patient stood the procedure so well that I decided to repeat the method with the second case. Both patients stood these injections well, and by giving them alternately into either buttock no untoward results occurred locally, except that the site of injection sometimes remained a little indurated. Occasionally slight tenderness was complained of for a day or two. The patients were treated at the surgery, and were advised to rest quietly for twenty-four hours, after which time they went about as usual.

Generalization regarding two cases only is not possible, but the results achieved and the observations made in the case of the secondary carcinoma of the breast, where the growth could be kept under direct observation, emphatically proves that lead has a very definite and detrimental action upon cancer cells. Intramuscular injections appear to produce the desired effect without causing acute toxic symptoms, and the patient can be brought more gradually, and with greater safety, under the influence of lead.

The encouraging response in these cases appears to warrant a more general consideration of the treatment. The lives of these two patients have been undoubtedly prolonged and made more comfortable and hopeful. One can only trust that by reporting these cases a little further encouragement may be given to the pioneers in the fight against cancer with lead salts. Moreover, the treatment does not appear to merit such wholesale condemnation and adverse criticism as it has recently received.

TREATMENT OF HAEMORRHOIDS BY THE GALVANO-CAUTERY.

BY

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In October, 1925, I read a paper at a meeting of the Harveian Society on the treatment of haemorrhoids by the galvano-cautery. A synopsis of it was published in the *British Medical Journal* of November 28th, 1925 (p. 992), and attracted a good deal of attention. It seems advisable, therefore, that I should make public the new experiences I have encountered during the past three years, with notes of exceptional cases.

My records during this period are in entire accord with the opinion I expressed in 1925—namely, that the method I then advocated is the best means of curing haemorrhoids known at the present time; it has been adopted by many of my colleagues in the treatment of their own patients.

The subject-matter of this communication falls into three categories.

General Observations.

The rotating speculum, made to my design by Messrs. Allen and Hanburys, has proved of inestimable value. It ensures quick, accurate, and neat work. It is not necessary to withdraw this speculum and reinsert it, as had to be done when the older patterns were used. The cut-away gap can be revolved in a second to catch any portion of protruding mucosa which may drop into it.

I find, however, that for some cases in which haemorrhoids are high up, above the internal sphincter, it is

necessary to use a 3-inch speculum. The original one was only 2½ inches in length; the extra half-inch makes all the difference. The cautery burners will last for months if care be taken to prevent them from being overheated; they will stand a bright red heat, but not a white heat.

In those patients who have a very rigid external sphincter it is necessary to dilate the anus gently before introducing the speculum, for reasons given later. I am unable to understand the assertions of those who state that the rectal mucosa is insensitive. The comment of a great physiologist may be recalled; though his wording was more blunt and humorous, the gist of what he said was as follows: It was a wonderful forethought on the part of Nature to endow the rectal mechanism with such a delicate sensitiveness that we are able to distinguish between gaseous and solid matter.

Recently, when cauterizing a portion of the mucosa, 2½ inches above the anus, in a highly strung lady, she flinched at every puncture and complained of pain, although I had previously given an injection of eucaine and adrena-line. I admit that the rectal tissues are extraordinarily insensitive in some people, but in very few.

Patients who show a tendency to arterial spouting during treatment should be carefully questioned as to any haemophilic history, such as is evidenced by free bleeding after dental extractions, and precautions similar to those mentioned later should be adopted. When the puncture caused by so fine a point as a Schimmel's needle excites arterial bleeding it is obvious that one must be on the look out. It does not follow that blood coagulates inside the vessel because it is seen to clot outside.

Uncommon Varieties.

The Congenital Pile.—This is not a true haemorrhoid, but is of the nature of a polypoid growth. It is covered with adventitious tough epidermis showing sebaceous follicles, and is usually about the size of a small walnut; there is a long thin pedicle which arises from the mucosa above the internal sphincter. It is extruded before each defaecation and causes great distress, but it does not bleed. For such a condition I use a flat-bladed cautery burner, and cut through the pedicle as near its base as possible; there is no bleeding, and a perfect cure is effected immediately. I have seen three such cases since 1925.

The Conglomerate Haemorrhoid.—This is the largest of all, being composed not of one but of many convoluted varicose veins, with an arterial supply in proportion. It arises almost invariably from the anterior wall, and has a wide base; it is irregular in shape, and is about the size of a large French plum. It comes down with every motion or with any strain during the daily work; replacement is difficult, and causes great distress. The cases which I have seen were in men with enlarged prostate; more rarely it is found in women with a retroverted uterus. In either case it is obvious that the pressure from above, by these organs, interferes with the venous return flow.

In one case, the worst I have ever seen, there were large oedematous masses of prolapsed mucosa surrounding the anus, which gave the appearance of a small jelly-fish. A large ulcerated pile was in the centre. The patient, a man aged 45, had had to wear a diaper for months owing to the constant profuse mucopurulent blood-stained discharge. His condition was pitiable, and it had affected his general health to a very marked extent; he was pallid, very anxious-looking, and was greatly distressed. I had grave doubts as to whether I could cure him; however, after firm pressure on the protruding mass, which reduced the oedema considerably, I was able to destroy the largest and the most ulcerated of the haemorrhoids. In this case I had to use the cautery on about a dozen different occasions, but the prolapse gradually subsided, and in two months the patient had completely recovered. Two years have elapsed, and he remains perfectly well.

Complications.

These, fortunately, are very rare. Until 1925 I had not observed any condition which could be called a complication; since then, perhaps owing to a large increase in the number of patients treated, I have noted the following.

Fissure.—It is a pity that this term is still used, for patients do not understand its very slight significance, and when told that they are suffering from fissure are apt to think that it is some horrible rectal disease; instead of

which it is merely a slight split like a cracked lip. I cannot understand why it should be considered necessary to magnify this condition into one necessitating operation, as is so frequently done. Three of my patients, complaining of considerable discomfort in the anal region, showed on examination after treatment that the pain originated from a slight laceration at the edge of the anus; all had very rigid sphincters. It is quite easily cured by gentle scraping after an application of cocaine and painting with the solution of crystal violet and brilliant green, or with scarlet red ointment.

Fistula.—One case, the only one I have ever seen, occurred about three years ago; the why and wherefore I am at a loss to know. If I did not use Schimmel's needles, and if I did not make it an invariable practice to sterilize my own hypodermic syringe, I should have attributed the infection to the injection of the local anaesthetic used. As I invariably employ glass ampoules of the latter, the anaesthetic itself could not be blamed. This fistula was very small and quite near the anus posteriorly. It healed at once after incision and scraping, and scrubbing with the crystal violet solution. This patient completely recovered forthwith.

Haemorrhage.—As a rule there is none, with the exception, perhaps, of a streak of blood during defaecation. I have, however, had three cases in which considerable secondary bleeding occurred. Such secondary haemorrhage is very worrying to the doctor and also alarming to the patient. In each of the three cases the bleeding started quite suddenly about the fourth day after the first application of the cautery. In one case there was a clear history of haemophilia, and I do not doubt that the other two patients had also haemophilic tendencies. Haemoplastin serum was given freely, and the rectum was packed. These measures proved successful, and there was no return of the haemorrhage. Since these cases occurred I have made it a practice to question every patient carefully, and, if considered necessary, to give a full dose of normal serum before treatment. Ernutin by the mouth is also useful, and measures may be taken to increase the calcium content of the blood.

Pain.—This symptom is only experienced in cases where the extremely sensitive nerve endings in the skin are involved, as in haemorrhoids which are partially covered, even ever so slightly, with perianal skin. When this condition is found the patient must be warned that there may be some after-pain, and a sedative suppository be prescribed. I advise the following:

Morphin. sulph.	...	...	...	...	gr. 1/2
Cocain. hydrochlor.	...	...	...	...	gr. 1/2
Gelatin. molle q.s.	ut fiat suppos. unum.				

Fig.: A whole suppository, or half of one, to be used when required.

The pain, in the case of accidental fissure, yields at once to cocaine ointment.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ABDOMINAL FRICTION IN PERITONITIS.

It does not seem to be mentioned in textbooks that in early peritonitis there may be a subdiaphragmatic friction exactly resembling the friction of pleurisy. The first time that I heard it was in a case of perforated duodenal ulcer, where there was no vomiting, but pain and a well-marked friction rub on the right side from the sixth rib down to the costal margin. This caused some delay in operating, being mistaken for pleurisy, but a few hours later the friction was replaced by silence and loss of liver dullness owing to gas from the perforated duodenum. Since then I have heard this abdominal friction on the left side over the stomach in a case of very acute cholecystitis, and, quite recently, on the right side in peritonitis due to a perforated typhoid ulcer; in that case the friction extended a couple of inches below the costal margin.

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