

labour pains in induced premature delivery and in treatment of abortion. The quinine seems to make the uterine musculature more sensitive to the action of the nerves. It failed to show any influence in 17 cases, probably either because the musculature was abnormally weak or the dose too large, paralyzing instead of stimulating. About 1 gm. (15 grains) was given by the mouth and this dose repeated in two, four or five hours as the effect subsided. In very few cases was as much as 3 gm. (45 grains) required. About 11 hours had been the previous minimum duration of induced premature delivery in the clinic with the hystereurynter. As a rule, 1 gm. (15 grains) of quinine is given and, if no effect is observed, 0.5 gm. after an hour and 0.5 gm. half an hour later."

Yours, etc.,
I. M. S.

[Will some of our Medical Officers of Maternity Hospital in India give us their views on this practical point?—ED., I. M. G.]

THE RADICAL TREATMENT OF HYDROCELE.

To the Editor of "THE INDIAN MEDICAL GAZETTE."

SIR,—I was interested in reading Dr. Fink's paper on the cure of hydrocele by eversion of the sac. Hydroceles of the tunica vaginalis seem to divide themselves for treatment into (a) those with thick-walled sacs, (b) those with thin-walled sacs.

For the former, tapping and injecting with iodine, carbolic acid or any other substance is, I believe, absolutely useless; one has only to do a radical operation to realize the futility of expecting sufficient adhesions to form to cure hydroceles of this kind; the sac is more or less rigid and there is a large cavity.

I have had no experience of the method of introducing catgut into the sac.

The treatment therefore divides itself into the operation of excision of the parietal part of the tunica vaginalis, or eversion of the sac (Pratt's operation).

I have until lately excised the sac but recently tried eversion. From a very limited experience of eversion it seems to offer several advantages over excision, viz., easier and quicker to perform, no hemorrhage to check, less after-pain, and the ultimate result appears to be equally good.

In excision the time is taken up in stopping small oozing points in the cut surface of the thickened tunica, the complete checking of which, before returning the testicle to the scrotum, is the most important part of the operation. In eversion it appears to be advisable to put in a catgut suture at the neck of the everted sac to avoid the possibility of the sac reverting to its former position by any movement of the patient; I also put in a drainage tube in both excision and eversion for 24 hours.

After excision, I believe, instances have been recorded, although, no doubt rare, of the formation of a spurious sac resulting in a recurrence of the hydrocele. I do not know if there has been any instance of recurrence after eversion. For those with thin-walled sacs, as patients are usually adverse to anything more radical, I first try tapping and washing out the sac thoroughly with 1 in 20 carbolic lotion before withdrawing the cannula as much of the lotion as possible is expressed; there is very little pain, the carbolic acting as a local anæsthetic.

It is impossible to estimate the percentage of cures by this method amongst hospital patients; those benefited rarely return. I have never seen any bad results such as sloughing of the scrotum, abscess, etc., which do sometimes occur after iodine injections.

I cannot see any advantage in iodine injection; it is useless in thick-walled sacs, and in cases with thin walls it gives rise to a great deal more pain than either excision or eversion, the pain often lasting for days; it incapacitates the patient for as long a period as the radical operations with ultimately a slight prospect of cure, or perhaps another injection.

Eversion seems to be the best treatment for thin-walled hydroceles, but it remains to be proved whether, when compared over a long series of cases, it will be as successful as excision in those with very thick walls.

Perhaps some of your correspondents may be able to give a series of the two operations for comparison.

Hydrocele is common in Nepal, but the practice of tapping and injecting has been carried out for so many years that it is often difficult to get patients to submit to a radical operation,

NEPAL, } Yours faithfully,
13th May 1907. } P. CARR-WHITE, M.B., F.R.C.S.E.,
MAJOR, I.M.S.

THE RADICAL TREATMENT OF HYDROCELE.

To the Editor of "THE INDIAN MEDICAL GAZETTE."

SIR,—With reference to an article by Dr. Fink on radical cure of hydrocele by incision and eversion of the sac in the May number of the *Indian Medical Gazette*, that officer is a little mistaken in his belief that this method of dealing with hydroceles has not been used in Burma before 1905.

Both Major Duer and myself operated on a large number of hydroceles in the above manner when at the Rangoon Hospital quite 10 years ago, and I believe that this method has given such satisfactory results that no reason has been found to alter it as a routine practice. I quite agree with what Dr. Fink has to say about the ease and satisfactoriness of the operation in a large majority of the cases. In the case of hydroceles with very thick and stiffened walls, however, the case is different. The question of dealing with this class of hydrocele is an open one and I should be glad of the experience of other operators. Personally I have found that whenever the sac of the hydrocele has been too thickened and stiff to fold up and lie comfortably amongst the other tissues of the scrotum that the best results have been obtained by removing it as completely as possible.

These thickened sacs are often badly nourished and I have seen them slough completely after they had been separated and everted.

As regards the operation I have found one stitch sufficient to keep the sac satisfactorily everted. At first I used not to put any stitch in, but I found one case in which the sac managed to resume its normal position and the hydrocele recurred. Since then I have used one catgut stitch posteriorly which has proved sufficient. This method of operating on hydroceles has proved so satisfactory and so simple in a large number of cases that I always perform it except in the case of patients with very thickened sacs.

MAYMYO, }
17th May 1907. }

Yours, etc.,
C. BARRY,
MAJOR, I.M.S.,
Civil Surgeon, Maymyo.

THE RADICAL TREATMENT OF HYDROCELE.

To the Editor of "THE INDIAN MEDICAL GAZETTE."

SIR,—Dr. Fink writes enthusiastically in your May issue of the *Gazette*, about the eversion of sac method of radical cure of hydrocele. The enthusiasm is natural to any one who adopts this method after he had operated in the old ways. I first came to know of this operation from an article by Dr. Manna Lal in June 1901, and immediately took to it, seeing the great advantages it offered on the older methods. I wrote my first paper on the subject in September 1901 (published in the *Grant Medical College Magazine* of Bombay). There I discussed the disadvantages of the other methods and compared them to this new operation. I gave a few details of the operation, as I noticed them in my cases, which may possibly differ from those in the original operation. I had done only seven operations then.

Subsequently I had a much larger number and wrote my second paper, also published in the *Grant Medical College Magazine* for March 1903, where I gave some more details from my further experience (60 cases) of the operation. All these were not done by myself but some by my Hospital Assistants under my supervision. Since that second paper, 54 more operations were done at the Jayaji Memorial Hospital, Gwalior, while I had charge of it, up to October 1905, by myself, three other Assistant Surgeons, and 1 Hospital Assistant who were on duty at different periods. All of them were successful as to result, i.e., there was no mortality from any cause, as in the one case recorded by Dr. Fink. That death was evidently due to the ligature used in fixing the everted sac to the cord, which interfered with its circulation. Probably, on account of this unfortunate result, Dr. Fink recommends that 'it is preferable to form a loose collar round the cord by stitching the cut edges of the sac, one suture in front, and one behind the cord.' As I mentioned in my second paper, this suturing is quite unnecessary. I used it but once, and that was in my very first case. I never used it again. I have seen other operators wishing to use it at their first operations. But my experience is that if the upper blind end of the sac is completely incised, there is absolutely no tendency to inversion, unless the sac be thick, or if the everted sac is allowed to be thick by superlying fascia, by not properly shelling it out. In the latter case, separation of the sac proper from the fascia (which really should have been done before) is sufficient to correct the tendency. In the former case, if the sac is too thick, it had better be partially excised. For otherwise, although it is possible still to keep the thick everted sac in the scrotum without any suture, it leaves a heavy mass of large size, which is inconvenient to the patient and for which indeed he sought relief.

Apart from thickness, partial excision of the sac is also required when the surface of the tunica is not quite healthy, e.g., friable or degenerated. In such cases, I have found it possible to scrape or to strip away a few layers in pieces (the unhealthy portion peels off), leaving healthy tunica behind, which unites very well after eversion. In such partial excisions, there is liability to some bleeding, which must be stopped, if union by first intention be aimed at. This is a point which I brought out in my second paper, and which, as I have found out in the subsequent cases, is very liable to be overlooked. This leads to effusion of blood under the sutures with all its train of symptoms, thus falling short of

the goodness of the result of eversion method of operation. Occasionally even in ordinary cases, some large vessels are cut, and require ligation. In partial excision, there are more bleeding points, all of which must be stopped efficiently. I say, 'efficiently,' because, in a case operated on by my assistant, I have seen the subsequent vomiting efforts of the patient bring on such bleeding, that the sutures had to be taken off and the bleeding point secured.

Dr. Fink mentions "old age, syphilis, and a debilitated constitution" as indications for caution in operating, and says, "in similar cases, after ascertaining the state of the cord and testicle, I shall prefer to do a partial excision of the sac." If it is old age, it is doubtful if a radical cure of hydrocele is advisable at all; for it is not by any means an operation of emergency, and an old man with hydrocele had better be left alone, or if the hydrocele is at all large and comes in the way of comfort, it may be simply tapped. For a similar reason, in a debilitated constitution, radical cure is not called for, neither does syphilis give any special indications for the operation. The unfortunate result in Dr. Fink's case was not due to any of these causes; if the testicle was found to be very diseased and cord felt soft and gelatinous, castration was advisable. I have had to do this in a case, where after everting the sac of a right hydrocele, and opening the left, I found it to contain blood with the surface of the sac calcareous, and testicles degenerated. Both the incisions healed up well simultaneously.

Besides the above, double operation was performed at the same time in two other cases, in this third series of 54 cases. In my second paper, I mentioned four; some of these double operations were performed by Hospital Assistants in my presence, and here I would like to raise a word of appeal to Civil Surgeons, to allow more operative work to be done by Assistant Surgeons and Hospital Assistants. After all, it is the Assistant Surgeons and Hospital Assistants, who reach the majority of the sick public, and if they are allowed chances of doing operations, surgery will be resorted to more widely than it is even now. I was very fortunate in that respect at the Jayaji Memorial Hospital, Gwalior, and I may mention that after satisfying myself that the operation in uncomplicated cases was perfectly safe, I gave my Hospital Assistants full opportunities to do the operation themselves, so much so that, out of the 54 cases spoken of here, as many as 38 were performed by them. So that they can now undertake this operation with confidence, in the district hospitals where they get transferred. This is possible, because the operation is ordinarily a one man's operation, and I have demonstrated it so and always insisted upon the Hospital Assistants doing it unaided.

In my second paper, I mentioned two interesting cases, where the scrotal hydroceles had abdominal limbs, which, of course, were not reached by the eversion operation. But the inflammatory process in the lower limb of the tunica evidently spread to the upper limb and caused a painful swelling, which gradually subsided. Thus there was recovery under aseptic conditions. But what the result might be otherwise, was illustrated by a case, admitted as for a scrotal abscess. The history was that three years back, he was hit on the right iliac region by his opponent in wrestling, which caused swelling locally as well as in the scrotum. These gave not much pain till three months ago, when they began to increase as well as became more painful. Leeches were applied with some relief, but ultimately he had to go to hospital. Besides the abscess in the scrotum, a large swelling 5" vertically and 7" horizontally was seen above the groin, almost reaching the umbilicus. An impulse was felt in the groin on coughing and the scrotal swelling would become more tense. On opening the lower abscess, it was found to be a suppurated hydrocele, communicating with the abdominal swelling, which contained pus and sloughs. Free drainage was established, but the man sank and died in 10 days.

All these were cases of circumscribed hydrocele, even with abdominal limbs. But one of my cases was particularly interesting, a 'congenital hydrocele,' inasmuch as the tunical cavity seemed to communicate with the general peritoneal cavity, into which the hydrocele could be thoroughly emptied by lying down or manual reduction, refilling on rising or on coughing. I performed the usual eversion, taking particular care for asepsis. The result was a success. The patient had been tapped twice outside, without any untoward result, so that, he must have been exceptionally lucky to escape infection, which often follows careless tapping. Infection in such a case would most probably have been fatal.

On opening the cavity of hydroceles, I have often found small warty exuberances on the tunica, mostly over the testicle, but also on other places. They could be easily snipped away. Seeing them I have wondered whether such warts are to be found on the abdominal peritoneum also. For it may be remembered that the tunica is but a sample of the general peritoneum. In cases of general diseases of the peritoneum, such as tubercle, it may be interesting to find out what the condition of the tunica may be, whether it corresponds to that of the general peritoneum, and if any correspondence

is discoverable, this may suggest a preliminary examination of the tunica, which is quite safe as a routine measure before the abdomen is opened. I merely give it out as a suggestion to Surgeons, who may have frequent opportunities for abdominal section.

Gwalior, }
19th May 1907. }

Yours, etc.,
Y. G. APTE, B.A., L.M.S. (Bo.),
ASSISTANT MEDICAL OFFICER,
Gwalior State.

THE RADICAL TREATMENT OF HYDROCELE.

To the Editor of "THE INDIAN MEDICAL GAZETTE."

SIR,—Of all the operations for the radical cure of hydrocele, that by incision and eversion of the sac has become, of late years, deservedly popular, partly on account of its simplicity and easiness of performance and partly owing to the uncertain results obtained by the old method of tapping and iodine injection.

My experience of this operation is limited to about fifty cases treated by me during the last five years. Results in these cases have been on the whole satisfactory and encouraging. One or two points, however, I have noticed, which I should like to lay before the profession.

In the May number of the *Indian Medical Gazette*, Dr. Fink claims the absence of hæmorrhage as one of the advantages of this method. In some of my cases, however, hæmorrhage after the operation was noticed. In these cases the hydrocele was of the commonest type; acquired vaginal hydrocele, and the operation performed was 'incision and eversion of the sac' without even a partial excision, every care was taken to ensure that the everted sac and the testicle were not replaced in the scrotum and the external wound not stitched until all oozing had entirely ceased. At the time of the first change of dressings, the scrotum was sometimes found much distended on the side of the operation, so as to necessitate the re-opening of the wound to relieve tension by turning out blood clots.

In one of my cases, the patient was a Chaube Brahman, at 32 years, of exceptionally good health, a professional athlete, with no history of syphilis or any other constitutional taint. The hydrocele was one-sided, fairly large, of five years' standing, and it had been tapped from time to time. The operation was performed in the usual way: the sac much thickened was everted after being incised and kept so by two catgut stitches; no arterial spurting was noticed but general oozing from the cut edges in the incision was rather free and had to be stopped by pressure and the application of hot water; the testicle and the everted sac were replaced when bleeding had stopped and the scrotal wound was finally closed without a drainage tube being inserted. The wound healed by first intention. The patient was discharged from hospital on the 15th day after the operation, and beyond moderate painless swelling of the part, nothing could be noticed at the time.

He was advised to wear a suspensory bandage and avoid much walking. He returned to hospital after a fortnight. The scrotum now was found much distended; the patient was complaining of a feeling of tension and rather dull aching pain in the part. Careful questioning elicited that he had not walked at all while at home—had no 'fever'—and had received no blow. On tapping there was but a partial escape of brownish-yellow fluid, the cannula being blocked by debris of altered blood clots. The original wound was next opened and masses of fibrinous coagula removed; the cavity was then packed with sterilized iodoform gauze. The part healed without any further trouble in the course of two weeks, and there has been no recurrence.

A case like this brings to my mind the necessity of making provision for drainage for the first 48 hours at least, instead of closing the scrotal wound entirely. A piece of sterilized India-rubber tubing inserted at the bottom of the wound, the rest of which is closed, would not, I believe, interfere materially with the union of the part by first intention, provided it is removed by the third day or earlier than that when the dressings look dry. Apart from bleeding from the cut edges of the sac, the possibility of general oozing from the dilated capillaries in the serous membrane of the everted tunica owing to sudden relief of tension should not be overlooked. When the hydrocele is of moderate size and the sac does not show abnormal thickening, drainage may be dispensed with, as is ordinarily done; but here, too, I may be permitted to say that the insertion of a narrow strip of sterile gauze at the bottom of the wound (if removed at the end of the first 24 hours) is absolutely harmless.

Lieut.-Colonel W. Vost, I.M.S., Civil Surgeon, Muttra, insists on the necessity for drainage, particularly when dealing with a large hydrocele with thickened tunica. It is his practice to keep the drainage tube for the first 24 hours and then to remove it.

In hospital practice at least, a large percentage of cases willing to undergo a cutting operation for the cure of hydro-