

**SOME POINTS IN PRACTICAL
SURGERY SUGGESTED BY
THE STUDY OF THE LIFE AND
WORK OF JOHN HUNTER**

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Reginald Harrison

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Some Points in Practical Surgery suggested by the Study of the Life and Work of John Hunter.

Being the Hunterian Lecture delivered before the Hunterian Society
of London, February 26, 1902.

BY REGINALD HARRISON, F.R.C.S.

MR. PRESIDENT, when your predecessor asked me to deliver the Hunterian Lecture this year, I felt less diffidence in accepting the honour than I should otherwise have done, because I knew that your Society had never ceased to show its reverence for the illustrious man whose name it bears, in the most practical and useful forms.

Thus I ventured to hope that, though unable to do justice to the memory of Hunter in fitting or adequate terms of oratory, I might, as a humble follower of the founder of scientific surgery, pay a modest tribute to the far-reaching application of his example and teaching, and to their undying influence on our practice and progress.

I am taking for my subject some points in practical surgery suggested by a study of the life and work of John Hunter.¹ It would be difficult to find a more agreeable or improving occupation than that of recognising and tracing how much we are indebted to him for the

¹ "John Hunter: Works, with Notes," edited by Palmer, 1835.

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rapid strides our art has made in almost every direction. Though Hunter did not give us anæsthetics or antiseptics, he prepared surgery, by placing it on a scientific basis, for the reception of these two grand discoveries of this age.

Upon the subject of hydrocele Hunter writes: "I believe I am the first who has taught that the radical cure is performed by inflammation, suppuration, and granulation. The most simple mode recommended for obliterating the cavity consists in making a small opening into the sac, and introducing an extraneous body to prevent union by the first intention." Hunter does not refer to the injecting of fluids in this place, such as alcohol or other stimulants, but to the introduction and retention of what he speaks of as "a tent," which "gives the alarm to the whole cavity," and thus secures healing by granulation.

Tapping and injecting with a strong solution of iodine, like the Edinburgh tincture, has advantages, but it is extremely painful, and often sets up an inordinate and prolonged inflammatory tension, which in some instances, I believe, is detrimental to the testicle, as happens occasionally in acute orchitis. Thus the gland may be rendered sterile, as the late Mr. Henry Smith pointed out some years ago.

Again, injection with iodine occasionally fails to effect a radical cure by reason of the extreme thickness of the sac, or the latter may be so capacious as to render it unsafe to excite an acute inflammation in this way in a confined area. Double hydroceles are not very common. Where a single hydrocele is tapped and injected, though the inflammation resulting may be very intense and damaging to the testicle, yet by reason of the opposite organ the power of procreation is not likely to be interfered with.

On grounds such as these some surgeons have more recently advocated the adoption of Hunter's method of

incising and opening the sac, and substituting a drainage-tube with antiseptic dressings for a solid tent, after tapping has failed to effect a cure. This plan has much to recommend it. It is painless after the anæsthetic has passed off, there is less risk of failure and damage to the testicle, and it makes little difference in the time occupied by the cure as compared with tapping and injecting iodine.

I adopted this method some years ago where I had to perform the radical cure for a recurring hydrocele in a middle-aged man with a single testis in the scrotum, who was contemplating marriage. For the reason mentioned I was unwilling to inject iodine or any other less certain irritant for fear of spoiling the solitary testis. The operation was successful and the union fruitful. Where the sac is thick and leathery, I sometimes cut out with scissors an elliptical portion of it on either side of the incision. I find this serves as well as removing the entire sac and considerably lessens the extent of the operation. In some cases of bilateral hydrocele with very thick sacs which had been tapped and injected frequently with iodine or carbolic acid, this method answered extremely well and was followed by permanent cures.

Hunter's observations on perineal urinary fistula are interesting. He says: "In whatever part of the urethra the disease is, the external opening seldom heals as long as the seat of the disease has no disposition to heal. Let us compare this disease (urinary fistula) with the state of parts after lithotomy. If the incision is made in sound parts, and the whole injury be a stone which is extracted, the parts readily heal in spite of the urine passing through that channel. This, then, shows that there is another cause of their not healing." Further he states: "To cure this disease it is necessary first to make the natural

passage as free as possible, that no obstruction may arise from that quarter—and sometimes this alone is sufficient—for the urine finding a free passage forwards, is not forced into the orifice and the fistula heals up. But the dilatation of the stricture is not always sufficient; it is often necessary to perform an operation on the fistulæ when they alone become the obstacle to the cure."

Here we have in a few lines the pathology and treatment of urinary fistula with a reservation for exceptional or complicated cases. There can be no doubt that in the larger proportion of cases where a stricture of the urethra co-exists with a urinary fistula, or is the cause of it, the removal of the stricture by some form of dilatation, with or without the retention of a catheter, as Hunter suggests, is sufficient in itself to effect a cure of the fistula, and so long as the patient is careful in keeping the stricture dilated such a consequence is not likely to recur.

But this consideration by no means covers the whole ground. Water or urine will invariably escape through the easiest channel. Cases are frequently met with where it has thus been found impossible to heal up these sinuses, even though the stricture has been fully dilated. This would seem to imply that either owing to a state of urethral spasm, to which persons are more liable who have had obstructions of this kind, or, as Hunter suggests, to the precise manner in which the false routes communicate with the urethra, it is impossible to prevent some urine entering them during the voluntary act of micturition. Either of these reasons is sufficient to explain this difficulty in closing a fistula.

Then arises the question, What more can be done to bring about a closure of these fistulæ? for nothing can be more intolerable to a patient than having to go about with a leaking and discharging sinus that fails to heal. Hunter's

reference to the making of wounds which "readily heal in spite of urine passing through them," to use his own words, has an important bearing upon this point, for it will be recognised that their substitution for those which show no tendency to repair, but, on the contrary, to remain patent as suppurating and offensive sores, may often be advantageously utilised.

This point has frequently been demonstrated in practice, and proved the quickest and safest way of dealing with certain forms of urethral stricture complicated with one or more urinary fistulæ. Thus the secondary proceedings to which Hunter refers, namely, operations on the fistulæ themselves, may be obviated as unnecessary when the stricture is entirely freed and the urine so efficiently drained as to be prevented entering unnatural channels.

I will take a case in illustration, not because the principle is unrecognised in practice, but for the reason that there are at least two points which are paramount that I would like to emphasise.

The case is that of a man recently under observation, aged 25. His condition is outlined in the diagram, which is introduced for the convenience of description. It will be seen (fig. 1) that there is a stricture in the deep urethra, and in addition no less than five fistulæ opening externally, and directly or indirectly communicating with the urine passage immediately behind the point of obstruction. One fistula opens on the lowest part of the abdomen in front, another passes through the scrotum, whilst the openings of three will be found in the perineum. Under the act of micturition urine was expelled through all of them in addition to some suppuration, which was continuous. The cause of this trouble was a traumatic stricture of the urethra, which supervened upon an injury to this part, and the unhealed abscesses that had arisen out of this.

For the stricture and fistulæ, for something like eighteen months, many varieties of treatment were adopted, having for their object the cure of the stricture and the healing of the fistulæ, but without any avail. Dilatation with bougies, the retention of a catheter, and the scraping and slitting up of the fistulæ had all been practised, but

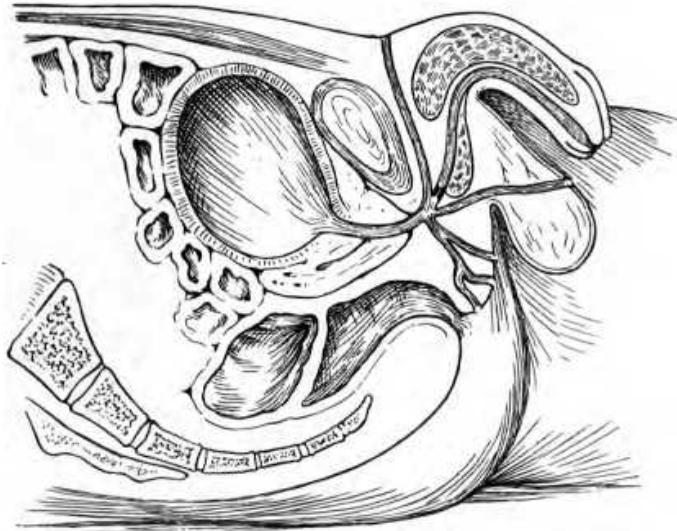


FIG. 1.

without leading to any permanent good. Hardly any urine escaped in the natural way, but under severe spasm a little was occasionally forced through the stricture, and was sufficient to indicate that the normal passage was not obliterated, as might have been anticipated. Without going into details, these fistulæ were all soundly healed within a month by means of an external urethrotomy or

perineal section, with proper provision for what Hunter speaks of as a "free passage forwards" for the urine, or in other words, for drainage.

And it is upon the two governing principles as laid down by Hunter in the passage quoted, as being generally applicable to this class of cases, that I would desire to lay stress. These are (1) the necessity for securing a free outlet forwards for the urine, and (2) the provision of a wound when required for this purpose, which will, as Hunter states, "readily heal in spite of urine passing through it."

I have already observed that in dealing with the expulsion of urine from the bladder it must be remembered its course is entirely determined by the degree of resistance that is opposed to it. If this is less in the case of a false or an unnatural route, it is certain to select this in preference to the natural channel, whatever may be the condition of the latter. Hence to divert the urine from these fistulous openings, and cause them to dry up and heal from want of use, it is a first principle to secure its escape by the natural channel, or if the latter is permanently damaged, by a substitute.

In the matter of urine-drainage much depends on the nature and position of the wound that is made for this purpose. We see this, for instance, in the case of wounds made for median lithotomy as compared with those made for a lateral lithotomy. The former will not drain thoroughly and incontinently without a suitable drain-pipe or other apparatus. The latter is entirely independent of all kinds of apparatus, and the drainage will be free and incontinent until repair has made considerable progress. I do not think sufficient has been made of this distinction.

In the days which preceded the more general adoption