Classic Articles in Urogynecology

On the Treatment of Vesico-Vaginal Fistula*

J. Marion Sims
Montgomery, Ala.

Vesico-Vaginal Fistula: An abnormal communication between the bladder and vagina, allowing an involuntary discharge of urine – is produced generally by tedious labour. The impacted fetal head, jamming the anterior vaginal parietes against the symphysis pubis, obstructs the circulation of the parts, which results in a slough of greater or less extent, according to the degree and duration of the impaction. Almost the only hope of preventing so serious a disaster under such circumstances is the timely resort to instrumental delivery. By this means I have seen the slough confined to the vaginal mucous membrane, where, otherwise, it would unquestionably have extended entirely through the vagino-vesical septum. It occurs principally in first labours where the pelvis is small, the soft parts unyielding, and the fetal cranium large; but I have seen it in those advanced in life, who had given birth previously to many children. Authors are disposed to attribute the accident, in many cases, to the awkward use of obstetrical instruments; but, from a careful analysis of these cases, and from my own experience, I am well satisfied that for one case thus produced, their judicious application has prevented it fifty times.

Other causes produce it occasionally, such as a prolonged retention of a pessary in the vagina, a calculus or other foreign body in the bladder, abscesses, venereal ulcerations, &c. I have seen one case where the whole base of the bladder was destroyed by a corroding ulcer, which, originating in the cervix uteri, extended forward to the urethra. Whatever may be the cause of this distressing affection, it is a matter of serious importance to both surgeon and patient that it be rendered susceptible of cure.

Its diagnosis is sufficiently easy. Incontinence of urine, following a tedious labour after a lapse of from one to fifteen days, will always prove its existence. But to determine the exact size, shape, and relative position of the artificial opening requires some nicety of examination. The consequences of the involuntary discharge of urine are indeed painful. The vagina may become inflamed, ulcerated, encrusted with urinary calculi, and even contracted; while the vulva, nates, and thighs are more or less excoriated, being often covered with pustules having a great resemblance to those produced by tartar emetic. These pustules sometimes degenerate into sloughs, causing loss of substance, and requiring a long time to heal. The clothes and bedding of the unfortunate patient are constantly saturated with the discharge, thus exhaling a disagreeable effluvium, alike disgusting to herself and repulsive to others.

The accident, per se, is never fatal; but it may well be imagined that a lady of keen sensibilities so afflicted, and excluded from all social enjoyment, would prefer death. A case of this kind came under my observation a few years since where the lady absolutely pined away and died, in consequence of her extreme mortification on ascertaining that she was hopelessly incurable.

The relative position of the fistula has served generally as the basis of a classification. Thus we have:

1. The urethro-vaginal, where the fistula is confined to the urethra.
2. Those fistulae situated at the neck of the bladder, or root of the urethra, destroying the trigonous vesicalis.
3. Those of the body and bas-fond of the bladder, of which, Velpeau says, ‘there is no fact, up to the present time, which proves indisputably that they have ever been cured.’
4. The utero-vesical, where the opening communicates with the body or cervix of the uterus.

I have never met with one of the last-named class; but of the others I have seen a great variety, embracing almost every possible shape and size.

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The position of the patient for the operation, the speculum, the means of vivifying the edges of the fistulous opening, the suture apparatus, and the catheter which I shall describe, are, I believe, original with myself, having been suggested by the peculiarities of individual cases. The final perfection of these mechanical contrivances has been the slow work of experiment.

At the first, I had three cases, upon which I operated about forty times, but failed in every instance to effect a perfect cure, though succeeding so far as to encourage me to persevere. Now, I think I may say that almost every case of this hitherto intractable affection is rendered perfectly curable.

Before detailing my operation, it may be interesting historically to take a brief survey of the surgery of this disease up to the present time.

For the last half century, though surgeons have laboured assiduously to cure it, they have almost always been unsuccessful. Cases have, now and then, been remedied, but they were so few that no general principles of treatment could be established, and, consequently, no certainty of success, in any single instance, could be predicated.

The suture was, of course, the first surgical appliance that suggested itself to the mind of operators. It was used in all its various modifications without success. The great difficulty of applying the suture, and its signal failure, caused surgeons to invent a number of instrumental apparatuses, all of which are clumsy and complicated.

As a curiosity, let me here introduce a description of the apparatus of Lallemand, the distinguished professor, of Montpellier:

'It is composed - 1st, of a large canula about four inches long; 2d, of a double hook, which is moved in the principal instrument by means of a stem, in such manner as to push it out, or to make it enter its sheath; 3d, of a circular plate which terminates the other extremity of the canula, and which would hinder, if necessary, this latter from penetrating too deep into the urethra; and, 4th, of a cork-screw spring, intended to draw forward the small hooks as soon as they are inserted in the posterior lip of the fistula. The canula, being passed into the bladder, allows of our pushing the two small hooks into the vagina through the vesico-vaginal septum, which latter is supported by the left fore-finger. By making a turn of the screw, they are kept in this position; a pledget of lint, or fine linen, designed for protecting the tissues, is then placed between the front part of the urethra and the external plate of the canula; finally we relax the spring in such manner that there will only result from it a moderate degree of pressure, though sufficient for bringing the two borders of the fistula in contact.'

(Velpeau, vol. iii. p. 852.)

The apparatuses of Lewski, of Dupuytren, of Laugier, of Fabbr, and others, are equally complicated, quite as unfit to fulfill the proper indications of treatment, and, by experience, have proved as wholly worthless.

Others have attempted to improve different stages of the operation. Thus Colombat praises his spiroidal needle for passing a whip suture in longitudinal fistulas, and M. Sanson has proposed to enlarge the urethra by a double lithotome for the purpose of carrying the finger through the urethra into the bladder, merely to depress the fistula toward the vulval opening; while Wutzer proposes, and performs in a great number of cases, the high operation of paracentesis vesicle, confining his patient for several days on her abdomen, by means of cushions, straps, and buckles.

These are referred to as historical facts, and not for any good that could possibly result from them.

While all these formidable contrivances, and the suture, have failed so signally, cauterization has but little more to boast of in the way of success. Very small fistulous openings have occasionally been reported as cured by the application of the nitrate of silver, a catheter being retained in the bladder; but, in fistulas of any size, it has proved entirely abortive.

To show how utterly hopeless have been all our efforts heretofore, we may allude to the suggestion of some of the French surgeons to apply the Tallicotian method of anaplasty to this operation, which has actually been repeatedly performed by Roux, Jobert, and others; and, also, to the operation of M. Vidal, for an 'obturation of the vulva,' whereby the bladder and vagina become a grand compound receptacle of the urine and menstrual secretion. It is an idle waste of time to dwell longer on means so perfectly ineffectual, not to say mischievous.

But have no useful, practical suggestions been made, as yet, by any one on the treatments of vesico-vaginal fistula? Yes: two names stand out in bold relief amongst those who have devoted some time and attention to this subject. I allude to our own countryman, Mettauer, who uses leaden sutures; and to the indefatigable Jobert, who is the author of the operation of autoplastie par glissement. The first, by his plan, has cured several cases; while the latter has achieved a greater degree of success than any other surgeon.

Thus, all that we know on the subject worth knowing is due to America and France; while German and British surgery have done comparatively nothing for the amelioration of this loathsome and troublesome disease.

Many of our systematic works pass it over in silence, or dismiss it with a few remarks discouraging all attempts at treatment. Samuel Cooper, in his great Surgical Dictionary, does not introduce the subject even by name; while Liston devotes less than a page to it. Alluding to the application of the heated wire, he says: 'By this means a small opening may occasionally be made to heal up. But when the communication is to a