– Thesis – George Dixon.

On Vesico-Vaginal Fistula.

Of the three forms of Fistulæ which may occur in Females, I have thought proper to select that form known as Vesico-Vaginal; although this is a subject concerning which there is little room for any original views on my part, especially when it has been so fully investigated, & treated with such success by my respected teacher Professor Simpson, yet I deemed it proper to attempt as far as I can to prove the utter uselessness of the forms of treating this complaint as set down in books, being fully convinced of the superiority of Professor Simpson's method of treating these cases above that recommended by other gentlemen. Having now stated my views (multum in parvo) respecting this troublesome complaint, it will be as well for me to state what the complaint is, its Causes, Symptoms, Diagnosis, Prognosis, Treatment & Results.

Whatitis. It consists of a perforation of the walls of the Vagina anteriorly produced by causes to be subsequently mentioned. It is one of the most troublesome complaints, to which Females are liable, & has long been considered as one of the most troublesome complaints with which Obstetric Practitioners have to deal, & formerly all such cases were generally considered incurable. It is a complaint which causes the greatest annoyance & inconvenience to the sufferer, not only as regards herself, but also to those around her, until at last she ceases to mingle with her friends & society, & in fact leads the life of a recluse.
With all these distressing symptoms which are causing not only pain but great mental anxiety to the Patient, we cannot imagine, with what joy the poor sufferer hails the glad tidings that her complaint can now ~~treat~~ be treated, & not only treated, but brought to a successful issue.

We have indeed to thank Professor Simpson for the great improvements he has made in alleviating the torture of these poor sufferers, for as I shall be able to show, that in adopting his method of treatment, nearly the whole of his cases have been cured; with these few remarks regarding what it is, I will now pass on to state the Causes which may give rise to this complaint.

Causes. There are several causes which may give rise to this complaint, such as;
(a) Either wall of Vagina may be wounded, accidentally, or on purpose by cutting instruments. Such has been the result of criminal attempts to procure Abortion; in these cases, however, a cure often takes place spontaneously.
(b) The long retention of a Pessary in the Vagina, may give rise to inflam-

-mation & ulceration of the Vaginal tunics, & ultimately to perforation of the Bladder or Rectum; this however, seldom occurs, & then only in aged Females.

(c) In powerless or difficult labours, when the head of the Child is long retained in the Pelvis, & by its pressure upon the soft parts, the Vagina may be the seat of inflammation, ulceration & perforation, involving either of the subjacent organs, more especially the Bladder.

(d) A maladroit use of instruments, may occasion this injury.

(e) Retention of urine during labour will generally involve more or less pressure upon the Bladder, if within certain limits, perforation will be the result of subsequent inflammation.

(f) The Bladder is occasionally lacerated in rupture of the Uterus, though there may not necessarily be perforation of the Vagina.

(8) A pelvic abscess may open into the Bladder, Uterus or Rectum, or into more than one of these cavities, & the opening may remain fistulous, as, in the cases published by Dr. Simpson.

<u>Situation</u>. Urinary Fistulæ in the Female usually implicate the base of the Bladder where it rests on the Vagina, sometimes high up, or low down.
The shape of the opening may be round or oval, or very irregular; in the form of a rent running longitudinally from before backwards, or transversely.

<u>Symptoms</u>. These depended primarily on the cause of the Fistula; & secondarily, upon the escape of the contents of the wounded organ.
The Urine dribbles through the preternatural aperture & is generally continuous; although, if it be situated

far back behind the orifices of the Ureters, it may be somewhat intermittent, the escape taking place as the lower portion of the bladder fills. The incontinence of Urine thus produced gives rise to irritation & excoriation about the Vagina, external parts & Thighs, & occasions a strong ammoniacal odour to hang about the Patient.

<u>Diagnosis</u>. In some cases there is very considerable difficulty in making out the diagnosis of Vesico-Vaginal Fistula; the most common cause of prevention being the existence of cicatrices in the Vagina, otherwise we can generally ascertain with tolerable certainty the true nature of the case, by passing a Catheter into the Bladder & then introducing one finger up the Vagina, until we feel the end of the Catheter touch the finger.

We can also arrive at a tolerably correct diagnosis by injecting a little milk & water into the Bladder, (having previously introduced a Speculum into the Vagina) & then observing at what point the fluid makes its escape into the Vagina. Several forms of Speculum have been recommended for the purpose of aiding us in our diagnosis, but that invented by Professor Simpson is in my humble opinion the best; it consists of a Metallic Spatula (Silver) bent in ~~f~~ the form of the letter S, or probably not quite so much curved; I can best explain my meaning by making a rough sketch of the Instrument.

Having formed the diagnosis that it is a Vesico-vaginal Fistula

with which we have to deal, the next step is, how are we to remove this painful & distressing condition. It will be useless to speak of any palliative treatment, as it will not afford the slightest relief, & therefore we must have recourse to operative measures; & it is very seldom that Patients will show any reluctance to this proposal.

Prognosis. Till lately most Obstetricians & Surgeons despared of being able to do anything in the way of a cure, in fact some Obstetricians used to speak of such cases as utterly incurable, & declared that all reported cases of cure were misrepresentations, but matters are now however I am happy to say entirely changed.
The results of Treatment in pro-

-ducing a cure will depend upon the situation & duration of the lesion, & also upon the cause of the accident; If it has been produced by a sharp cutting instrument ~~they~~ it often heals up of itself without any treatment at all being required; the probability of cure also depends upon the situation. When the fissure is far back & there is considerable loss of substance, success seldom attends the efforts used; but when it is near the neck, there is a better hope of success.

Treatment. I shall now describe the different modes of operating that have been ~~a~~ tried, & the one that is the most successful at the present day.

(1) One mode of Treatment consisted in introducing a Catheter into the Bladder, (at the same time plug-

-ging the Vagina), as soon as possible after the Fistula had formed, so as to divert the discharge from its unnatural channel, in the hope, that in the contraction which ensued after the sloughing the Fistula might close up. Cases of success from this treatment have been reported by Desault (who first proposed it) & others. Chopart succeeded in curing a case by this means, where the wound was in the neck, but failed where it was in the body of the organ. Dr. Churchill reports a case in which one of his Patients derived much relief from the operation, by being ultimately enabled to retain her Urine for two hours, without dribbling, though the wound did not entirely close. This method however is in some cases impracticable owing to the irritability of the Bladder, to con-

tinue the Catheter in the Urethra.
(2) Caustics & the Actual Cautery have been frequently used, but with a success which is usually only temporary; the escape of the Urine may be restrained so long as the swelling of the margins produced by the application of the Irritant continues, but as soon as this subsides the case becomes as bad as ever. Successful cases are reported by Dupuytren, Liston, McDowell & Kennedy; Dr Churchill says he witnessed a successful case treated by Dr O'Ferrall, he also ~~tried~~ tried it himself in one case under his care but failed. Professor Simpson mentions that he has seen the Treatment applied by Liston & others, & as having adopted it himself, but never once saw it succeed in effecting a complete cure.
Galvanism has also been tried

but with very partial success.
Blundell relates a different
mode of Treatment where the
Fistula at the neck of the Blad-
der was cured by ~~opening~~ lay-
ing it open into the Urethra,
& then healing up the wound
in the same way as a Fistula
in Ano. Mr. Porter of the Meath
Hospital performed this opera-
tion which turned out well.
Suture. This method has long
been put in practice & is the
one universally received at the
present day; the merit of its
introduction is said to be due
to Roonhuysen a Practitioner
of Amsterdam in 1663, whose
name is connected with other
suggestions in Operative Mid-
wifery; he first proposed to cure
Vesico-Vaginal Fistula on the
same principles as Hare-lip, viz,
by paring the lips of the Fistula,
& then bringing & keeping them

raw edges together with stitches of Silk.
It is not mentioned whether Roonhuysen ever put this, his own proposition into practice, but it is known that some of the Continental Practitioners were the first to try this Operation, but failed ~~them~~ to cure their Patients by it, when the Operation fell into disuse & no notice appears to have been taken of it until Naegelé again brought it before the Profession about the beginning of this century, since when it has been used with varying success by many eminent Surgeons.
Different ways are recommended for performing this Operation with the Suture.
Mr Jobert of Paris & most of the continental Surgeons use Sutures of Silk, the way in which the former Surgeon performs the Opera-

tion is this, he pares the edges & surrounding surface of the Fistula, & then paring the side of the Uterus, he brings the denuded surface of the Bladder on to the denuded of the Uterus, & keeps them in apposition by the interrupted Suture; this method of operating is not a very satisfactory one, for there does not appear to be many successful cases stated by those who have performed it, most of them being either only relieved, or not at all benefited.

Many improvements in the mode of operating & the materials used have lately taken place, which have given great hopes of success; the greatest improvement is that, owing to the introduction of Metallic Sutures instead of those of Silk & Hemp which were formerly employed. The great success which has attended the operation since the introduction of Metallic

Sutures is owing to their not giving rise to any appreciable inflammatory disturbance, as is the case with the Silk & Hemp Sutures.

A series of experiments performed by Professor Simpson proved the superiority of the Metallic over the Silk & Hemp Sutures, thus, having made corresponding wounds of various kinds, usually on directly opposite sides of the Body, he sewed some with threads of Silk & Hemp, & others with Metallic ones, & found that the former almost invariably began to inflame & suppurate along their tract a few days after their introduction, while the latter remained as it were quite passive in the lips of the wounds, without exciting either suppuration or ulceration.

Having now mentioned the meaning of the term Vesico-Vaginal

Fistula; its Causes, Symptoms, Diagnosis, Prognosis & the few different modes that were formerly used for treating this distressing accident, & also the improvements that have lately been introduced, I will now proceed, to describe Professor Simpson's mode of operating; Having placed the Patient on her left side, you introduce the Speculum, which is held in situ by an Assistant, three or four of whom will be required during the performance of the operation, one to hold the Speculum & when required to keep aside one of the Labia Pudendi with the finger, & also be ready to hold aside some of the ends of the wires, a second to keep aside the other Labium, & seize the ends of the wires on his side; a third to attend to the exhibition of Chloroform; and

a fourth to take charge of the Instruments. Having then introduced the Speculum & exposed the Fistula, you seize hold of the edge of the lower lip of the Fistula about its middle with a Tenaculum, & with a straight knife cautiously & carefully pare the edges of the Fistula taking care to bevel the edges off to a considerable distance from the Vesical margin; If any small vessels bleed profusely, usually, the introduction & pressure of a Sponge in the Vagina will suffice, or if not, they will be required to be seized & twisted with a pair of long Artery Forceps, having proceeded thus far the Patient may be allowed to rest a little.

The next step in the operation is the introduction of the Stitches, formerly this was found to be the

most difficult & tedious part of the operation, owing to the Metallic threads not being easily introduced with common Surgical needles which were always used, but Professor Simpson has removed this difficulty by inventing an improved needle; It consists of a hollow tube terminating in a fine point, & curved about an inch from the end, the Tube is fitted into a Metallic groove to which the handle is fixed, one orifice close to the point, & another near the handle; the wire which is iron is pushed a little way into the latter of the two orifices; the parts having been fixed & supported with a blunt hook, the Needle after having been passed through the margins of wounds, the wire is pushed right through & seized with a pair of long Forceps. The Needle having been withdrawn, the wire is left in its place, & can

be pulled through as far as required, taking care to use a director to prevent the wire from cutting the Mucous membrane.
The third step in the operation is that of bringing the edges of the Fistula together, in order to do this the wires passed through the lower lip of the wound must be seized by the fingers, & pulling tight each separate pair of threads, & then the whole together, at the same time pressing up below the lower layer of them in the inferior lip of the Fistula so as to press it against the upper one, & so as to bring the lips into perfect apposition.
The fourth step in the operation is to tie & fix the threads in such a manner as to favour a speedy union, & complete closure of the Fistula; in order to effect this an Iron wire splint has been invented by Professor Simpson, it is made

by twisting with the fingers 10 to 15 pieces of iron thread into a cord, the ends being doubled over each other & plaited into the form of a circle, through the corresponding openings made along each side in this instrument Sutures are passed; the Splint may be passed down to the wound & accurately adjusted either with the fingers or forceps; the Sutures are tightened & fixed by an instrument also invented by the Professor which consists of two extremely short & very fine tubes fixed on the end of a steel rod.

After Treatment

Immediately after the operation & before removal of the Patient, draw off the water that has accumulated in the Bladder by introducing the short flexible Sigmoid Catheter, leaving it there to drain away the constantly ~~secr~~

secreted urine; It must be looked at every ¼ of an hour to see that the water is dropping freely from it, & ought to be taken out & cleaned twice a day; Opium should be given to the Patient so as to keep her fully under the influence of the drug, the object being to subdue the movements of the Bladder, locking up the Bowels, & enabling the Patient to maintain for a long period the horizontal position. On the ninth or tenth day the Sutures may be removed, by clipping them through with a pair of sharp pointed scissors just below the twist, & close to the lower side of the Splint, which is thus loosened, & can be removed by carefully lifting it upwards; The Patient must wear the Catheter a day or two longer, & afterwards be gradually accustomed to retain the water first for an hour, then for 2 hours, &

afterwards for a longer period.

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In conclusion I will briefly take a retrospective view of the various modes of Treatment recommended for the relief & cure of this very disagreeable lesion; & after mature consideration must certainly say that I consider the method employed by Professor Simpson to possess many advantages over any of the others, & by referring to the Statistics the results of the cases treated by him will be found highly favourable.

(1) With respect to the Plug; my humble opinion would lead me to suppose that the amount of irritation caused by the constant employment of a Plug placed in the Vagina would be a source of much disagreeable sensation; and

although considerably better than having the Urine constantly dribbling away from the Bladder, yet, it would only be palliative & must be far eclipsed by the permanent relief afforded by the employment of the Metallic Sutures.

(2) Cauterization we are told does not often effect a cure, & the repeated application of strong Caustics, must be very disagreeable notwithstanding the employment of Chloroform, because the cure takes a much longer time & the results of the method are not nearly so favourable as in the employment of the Sutures.

The last mode of Treatment I shall mention is the use of the Actual Cautery, which may I think be employed with some amount of advantage in cases where the Fistula is small; if however of an extensive nature it is of no avail & in fact will do

more harm than good. Therefore I consider the best & most effectual mode of treating Vesico-Vaginal Fistula is by the employment of Metallic Sutures a description of which I have previously given.

— Statistics —

Vesico-Vaginal Fistula (simple forms)

Name	Date	Cause	First appearance	Treatment	Result
Mrs Gibb	Dec 23rd 1851	2 days Labour terminated by blunt hook	14th day	not operated on	
Margt Muir	July 11th 1851	In labour from Sunday to Thursday 12 hours impaction of Head	14th day	Cautery previous to admission	Relieved
Jane Orr	Sept 10th 1854	In Labour 11 hours Craniotomy	14th day	Galvano Caustic wire & Sutures by S. Wells & afterwards by Simpson	not Cured
Barbara Mac	Jan 1st 1856	no particulars			Relieved
Jane Paterson	May 24th 1861	In Labour 24 hours Footling – child removed roughly by Midwife	14th day	Cautery ineffectual Sutures	Cured
Anne Davy	May 11th 1862	In Labour 3 or 4 days Forceps – Craniotomy	3rd day	Sutures	Cured
Isabella Thompson		Deformed Pelvis		Sutures	Cured
Isabella Scott	March 13th 1863	In Labour 37 hours Instruments	3rd day	Sutures	Relieved to be tried again

Vesico-Vaginal Fistula Complicated

Name	Date	Form	Cause	First appearance	Treatment	Result
Mrs Gargan	Jan 20th 1860	Vesico Vaginal & Urethro Vaginal	In Labour 48 hours	14th day	Sutures	Cured
Emily Carse	Nov 18th 1860	Ves-Vag Recto-Vaginal Occlusion of Urethra	In Labour 84 hours – Crotchet	2nd day	Sutures	Ves-Vag first closed
Margt Wilson	April 1st 1861	Recto-Vag Vesico-Vag	In Labour 3 days – Forceps	7th day	Sutures	Ves-Vag Closed
Ellen Veitch		Recto-Vag Vesico-Vag	In Labour 3 days – Instruments	7th day	Sutures	
Martha McEwan		Vesico-Vag Contraction of Vag	Tedious Labour – Instruments	—	Sutures to close Vag	In progress
Mary Paisley		Ves-Utero-Vag	Length of Labour not stated Calculi in Bladder – Turning	–	Sutures	Cured

Cases of which the particulars are wanting

	admitted	Disease	Results	~~Cured~~ Date
Janet Nesbitt	Nov 7th 1859	Vesico-Vag. Fistula	Cured	Dec 6th
Ellen McKeay	Nov 21st —	Do	Do	March 23rd
Christi Sinclair	March 20th 1860	Do	Died	April 1st
Janet Laing	March 23rd —	Do	Cured	" 7th
Margt Monck	April 9th	Do	Do	May 4th
Margt Hayes	May 25th	Do	Do	June 15th
Helen Ferguson	May 26th	Do	Died	June 12
Margt Gray	Jan 18th 1861	— No record	—	
Susan Thompson	July 3	— no record	—	
Isabella Muir	March 21st	Vesico-Vag. Fistula	Not relieved	[illegible]
Catherine Lavary	July 17th 1861	Do	Cured	Aug 2nd

No pages

p. 1. [illegible]

Splint [illegible]

[illegible] — Measures