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1853.

Treatment
Of
Organic Stricture of the Urethra.

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March 1853.

Having as a student in the capacity of Clinical Dresser & Non-resident Clerk had at least as many opportunities of observing the treatment of Stricture of the Urethra, especially by external incision, as any one who can graduate this year, and having become thoroughly convinced of the superiority of the new mode of treatment over all others, in cases of inveterate Stricture, I feel it my duty on every fitting occasion, to give my humble testimony in its favour. In any new operation I should do so. But especially in this operation do I feel called upon, seeing the undue opposition it has encountered from many quarters, & being satisfied that it is only necessary that those, who have, by observation, become convinced of its advantages, should record the grounds of their conviction, in order that the time when the operation shall be generally adopted may be hastened, & thus much bodily suffering spared

spared, much mental distress removed, and many useful lives saved to Society.

By Organic Stricture of the Urethra is now universally understood a contraction in the urinary canal by chronic structural change arising from a narrowing thickening of the lining coat condensation of the submucous areolar tissue, from lymph effused into their interstices having become organized. This is true Stricture; and what some have described as inflamed Stricture Spasmodic Stricture &c. are merely different stages or aggravations of the disease. Like the results of other inflammations Stricture may occur in various forms & degrees, and thus we have what are called, undilatable, dilatable, resistant & contractile Strictures, all which are Organic Stricture variously modified in different constitutions

Stricture may occur any where in the course of the canal. Its most common sites

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are at the bulb; where the urethra becomes pendulous; at the neck of the glans & at the orifice. It is rare, if ever, found in the membranous portion behind the bulb. It usually occurs near the orifice as a direct result of gonorrhœa or injection; and at the bulb the canal besides being naturally narrower than the rest, is also more liable to inflammation from being the seat of a peculiar sensibility intended to govern the action of the muscles in the neighbourhood. Besides, there seems to be a sympathy between the two ends of the canal. For, as in irritation near the neck of the bladder, we have pain at the point of the penis, we observe the inflammation of gonorrhœa near the orifice exciting the canal near the bulb, which we have seen to be a peculiarly sensitive spot. In a bad case there are generally several strictures.

Stricture may arise from all the causes of special inflammation, whether

caused

caused by irritation from within,- from the bladder,- or from without. Some of its causes are little known; but it generally results from gonorrhœa or the treatment for its cure, from blows or accidents to the parts, from cold & damp, from calculus in the bladder, from improper diet, masturbation, excessive venery, especially, as in the East, where the disease is very common, when that excess consists of unnatural prolongation of the act.

Its symptoms generally come on gradually. 1st The urine is voided with difficulty & the stream is seen twisted, forked or small, with oftentimes an involuntary dribble at the end. 2d There is pain, distinguished from that arising from diseased bladder, which is before micturition, from that from stone, which is after it, by occurring during the emptying of the bladder. 3d Frequent calls to make water, especially during the night. This may probably arise

from

from the heat of the bed, from the irritability of the bladder in disease & from the weight of the bladder pressing more in the recumbent than in the erect posture on the sympathetic nerves & thus more readily exciting reflex action. The effect of this pressure is not seen in health, because the parts not being irritable do not call for relief with sufficient urgency to awake the sleeper. The chief sign of stricture is that a medium sized catheter does not pass into the bladder. As the disease advances these symptoms become aggravated. The water is made painfully by drops, & that often requiring the aid of a milking-like manipulation of the penis: often, too, the dropping is involuntary,- the patient being unable either to make or to keep his water. There is pain in erection & emission. The pain extends down the loins & thighs, the testicles swell, the lining membrane of the urethra long dilated

dilated by accumulated urine becomes perforated by ulcerative absorption, giving rise to urinary infiltration, abscess & fistula in perinæo. At the same time, the patient suffers from frequent retention, and, especially on exposure or irritation, there are constantly recurring irritative or inflammatory fevers, much resembling ague, while the digestive system is impaired, the constitution undermined, the body debilitated & the mind prostrated.

These effects are so grave that the patient, as he feels them increasing, usually applies early for assistance. And this brings us to consider the aid to be rendered,- the Treatment of Stricture.

Treatment of Stricture.

In the treatment of Stricture medicine has no curative power. In preparing the patient for surgical interference, however, in mitigating such effects as retention, pain &c. assistance & relief may frequently

frequently be afforded by means perhaps not purely Surgical. And in that modification of Structure, called Spasmodic, Opiates Antispasmodics are of the highest advantage. Before any Operation is undertaken, the system shd, as far as possible, be put in a favorable condition by purgatives, sedatives, antispasmodics, baths &c. From these only temporary relief will be obtained, until, by Surgery, the irritating exciting cause be removed. This is accomplished by Operation. Many have been proposed, all of which are founded on these three principles,- causing absorption by pressure, by Dilatation,- destroying morbid Structure, by Escharotics,- Opening up a passage, removing irritation & promoting vital absorption, by Incision

It is curious to remark, as bearing upon the causes of Stricture, that this is about 15 years after we find the first mention made of Gonorrhoea.

Dilatation.

Stricture seems to have been quite unknown to the Ancient Physicians, no mention being made of such a disease under any name, before its treatment is discussed by two Italian Surgeons, André Lacuna & Alphonse Ferri, about 1550. Alexander Trajanus Petronius of Castile, in 1565, after describing the affection, recommends for its treatment a wax candle or bougie, not indeed as a curative agent, but as a swab to "clean" the urethra, & as a vehicle for conveying caustics to the obstruction. With the view of more effectually & safely applying these, the vehicle was gradually improved, by Ambrose Paré & other Surgeons, who were in the habit of using leaden rods, which they passed through the stricture; as large a rod being used as the passage w. admit.

The first use of the bougie, as a curative agent, seems to have been made by Wiseman, Serjeant Surgeon to Charles II.

&c

He introduced a tapering wax candle, which he tied down so as to prepare the obstruction removed only when the patient made water; - a process still, as we shall hereafter see, frequently employed with advantage, & sometimes termed "tunnelling". But the treatment by caustics continued the recognised mode, for upwards of 150 years after the affection was first described; i.e. till about 1740, when Savoyard, Le Dran, Astruc, Sharpe & other eminent surgeons of that day, convinced of the unavoidable dangers & positively injurious effects of caustics, strongly reprobated their employment, declared they should be banished the practice of Surgery, and advocated the use of the simple bougie. This they found to be as efficient as caustic, while free from its dangerous & dreadful consequences. By their efforts, authority & example, the treatment was for some time entirely confined to the simple bougie.

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It was at first supposed that the action of the instrument was merely mechanical, causing dilatation as if by a wedge. It was, however, soon discovered & generally admitted, as it is now universally recognised, that the good effects thence resulting are chiefly, if not entirely, owing to the vital action of absorption of the lymph effused into the interstices of the textures, caused by the instrument, directly by pressure, & indirectly as the result of acute congestion. If the instrument had acted as a wedge, it would never have come into general use. For the wedge acts by tearing, and tearing can never, in any living tissue, be productive of any thing but harm.

The canal has been occasionally dilated by the introduction of a piece of small intestine through the stricture, - the inner end being tied & an injection thrown up, - and by instruments constructed, ingeniously enough, on

on this principle. Brunnenhausen mentions cases where he succeeded by making the patient try to expel his water forcibly, while he firmly pressed the point of the penis.

Dilatation is now sought to be attained by bougies & catheters, of different construction & materials, & applied in various ways. These may be divided into soft or flexible and rigid, - continuously applied & applied at intervals. The flexible are composed of various gummy substances, the rigid of various metals. Any metal will do, provided it be malleable, take on a fine polish & be not liable to rust, - Silver or Berlin silver are perhaps the best, but steal is cheaper & answers very well.

The flexible instrument was first employed, & is still in common use. But, though often easier than the rigid in the hands of the inexperienced, or unskilful, the flexible is altogether

inferior

inferior to the rigid in certainty of introduction & in effect. By many, the flexible bougie is confined to exploration. The point is prefsed against the stricture, in the hope that, by obtaining a cast of the canal, after-treatment may be facilitated. But this hope is vain, and worse, the practice frequently proving the source of most serious error. For, in a case of bad stricture, the point may be caught by a fold of the urethra, or may pass into a false passage. This has occurred, & caustics being applied to the sinus, have led to the most lamentable consequences, even to death. It has happened that in reaching the stricture, the bougie has doubled itself up so as actually to present its point flattened longways at the orifice of the urethra. Now, had the bougie been withdrawn after being only a short time prefsed against the stricture, it would inevitably have given the erroneous idea of a

flat

flat opening in the structure. Besides, it is useless, as the information may, with more accuracy & certainty be obtained, by means of the common metallic bougie. The catgut bougie may, perhaps, from its firmness & fineness, be sometimes found useful, - not for exploration, but as an ordinary bougie. In the cases in which I have seen it tried, however, after bougies had failed, it never succeeded, and a very fine bougie has been afterwards passed.

The rigid metallic bougie or catheter, is the proper instrument for dilatation. Though not free from risk in unskilful hands, it is used with greater certainty & precision than any other, by a skilful surgeon, duly acquainted with the anatomy of the parts in health & disease. The modes of application may be divided into four. 1. Introducing graduated bougies, which are either immediately withdrawn, or allowed to

remain

remain some time. 2. Passing down a good-sized instrument & tying it so as to press on the stricture. - tunnelling. 3. Retaining silver Catheters in the bladder. 4. By Dilators.

1. Graduated Bougies.

The method of passing the bougie is described in all elementary works, & is so well known, that it is unnecessary to describe it minutely. The chief indications to be fulfilled are, to have the patient's constitution in a state as favourable as possible in the circumstances. Care should always be taken to promote an active secretion from the glands of the skin. The skin corresponds in function with the kidneys, in the elimination of salts. Now in bad stricture, these acrid salts which are always in excess, tend much, in passing through the already irritable canal, to keep up the irritation. By producing copious diaphoresis a large proportion of these salts are eliminated by

by the skin, the urine being thus rendered milder, the canal is less irritated. Chloroform, also, given a little time before using the bougie, is found of the very greatest advantage. It is frequently of advantage to keep the convexity of the instrument upwards, because the stricture is generally permeable at the upper portion; thus keeping the point gently pressing on the upper wall of the urethra, we are best able to avoid the formation of false passages. Sometimes it may even be useful in attaining this end to have the bougie curved as suggested by Sir Benjamen Brodie, thus ⟶. Above all the utmost gentleness must be used.

The bougie being passed through the stricture it is usual with most surgeons to allow it to remain for a time. I have heard M. Ricord tell a patient to amuse himself by holding one in his urethra for an hour or two. This continued pressure may cause much suffering to the patient,

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and aggravate, instead of relieving, the Stricture, by exciting too much action- inflammatory action, with interstitial effusion,- where all we wish is a slight effect to cause absorption. Besides it is not needed. For all the effect desired is obtained by the pressure & irritation of the bougie in passing through the Stricture. When the Stricture is dilatable by the graduated bougie, it will certainly dilate if treated in this way. I have seen many bad Strictures dilated with graduated bougies by Mr. Syme, & I never saw him allow them to remain above a minute, & then only when he was explaining some point in the case to the Clinical Students. After one bougie has been introduced a size larger is tried, and although it may not pass on that day, by being pressed for a little on the Stricture it does good & will most probably pass the next day the dilatation is re-

commenced.

recommenced. As the dilatation proceeds, it is of advantage always to commence with a bougie which passed easily at the trial preceding, to pass one or two larger. The intervals must be regulated by the state of the parts & of the patient. At first not less than four days should intervene. Dilatation is complete when the effusion is re-absorbed, - when the urethra has regained its normal size. Any further dilatation is unnecessary, & even injurious, as it can only be accomplished by absorption of sound texture or by lesion, rendering relapse certain.

This is the simple treatment by bougies, & it generally succeeds in ordinary primary stricture. But when the bougie cannot be easily coaxed to enter, we have another method of using it so as to get past the difficulty. This is by Tunnelling.

2. Tunnelling.

Here the principle is the same. It has just been said that good results from keeping the point of the bougie against the stricture, while using graduated bougies. In this process a medium-sized bougie is passed down to the stricture retained pressing on it, as long as the feelings of the patient will permit; the operation is repeated at the usual intervals. Thus we frequently succeed in making the passage patent for a good sized bougie,- which is the object sought; but more frequently we cause sufficient absorption to permit the passage of a small bougie, & the dilatation to go on more quickly & satisfactorily, because with less inconvenience to the patient, by the ordinary treatment,- by graduated bougies.

3. Catheters retained in the bladder.

Frequently the stricture is of a slight

tight, unyielding, resilient nature. In these cases, though we may succeed in the dilatation so as to pass a moderate-sized bougie, yet, on our next attempt, we find the stricture as tight as ever, & the dilatation has to be recommenced. In such cases it has been usual to retain Catheters in the bladder, as long as the system of the patient could tolerate them. A higher result than absorption is sought, - that of active congestion, whose resolution may carry with it not only its own exudation, but also the effusion deposed in former times, "somewhat in the same way as the injection of a hydrocele removes a redundancy of serum". Here the first effect of true inflammation is sought for, & doubtless, is sometimes attained. When, however, we consider the difficulty of limiting the inflammation caused by a foreign body on a surface exposed to the slightest touch, we will not be surprised that, in a urethra naturally & specially prone to inflammation, in which, like a blind

man

man with a stick, we must be guided solely by the sense of resistance communicated to the hand by a Catheter, - the inconveniences & risks of the operation should be considered to overbalance the benefit occasionally derived from it. Local irritation & pain are unavoidable; violent swelled testicle unsubdued by cold has followed; & constitutional disturbance can scarce be prevented. Still, with the alternatives until lately at our command, it was frequently judicious to subject the patient to those inconveniences & risks, rather than to incur the still greater & more unavoidable dangers resulting from the employment of Caustics & the unguided knife. Now, however, we have happily another operation at our command. That operation must hereafter be fully considered. It is sufficient at present to state a conviction that, in all such cases, it should be performed.

Occasionally the presence of the Catheter causes much pain & uneasiness to the patient. It has

has been suggested that these might be lessened by the Catheter being curved thus S; but as they are caused by the Catheter acting as a foreign body & keeping the canal rigidly tense, any modification of form, being inadequate to remove these, will not be found of service.

4. Dilators.

It has recently been proposed by Mr. J. H. Wakley of London to produce dilatation by means of instruments, of his invention, styled Dilators. By this mode, a Catheter is passed through the Structure, & then through it a steel director. The Catheter is then withdrawn & over the director, thin, hollow, silver tubes, progressively increasing in size, are passed through the Structure. When as large a tube has passed as is deemed proper at the time, with the object of keeping the passage free, a gum elastic Catheter is passed over the director, which is then withdrawn. This is then a combination of the 1st & 3d modes.

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The chief advantages claimed for these instruments are 1. Quickness of dilatation & 2. Avoidance of false passages.
In speaking in favour of these instruments, Mr. Gay, the friend of Mr. Wakley says that, they seem to act by breaking up the tissues forming the constriction. That the bleeding is but trifling. Thus, assuredly, the dilatation will be quick. This gain in time, however, will be bought dear by an aggravated re-contraction. For the bleeding shows that the walls of the urethra are wounded. This wound, called a breaking up of the tissue, is a tear. Now the cicatrix from a tear is, of all cicatrices, except that from a burn, the most contracted. On this ground alone the instruments shd be rejected, as necessarily producing strictures tighter than those they break up. Besides, though nothing is said of the pain, we cannot but believe that it is great, judging from the agony caused by the slightest irritation of other tears or fissures, as in fissure of the

of the anus & the nipple.

It is difficult to see the force of the second alleged advantage. For as the Catheter & Director must first be passed through the Stricture, & as false passages are made in efforts at introduction for the first time, the danger is not lessened, much less obviated, by retaining a Catheter in the bladder.

They have only lately been proposed, apparently with the sole object of avoiding the knife; which, for Stricture, seems to be greatly dreaded in London. But it will require strong arguments to convince any Surgeon that tearing is better than cutting,- & stronger still to prove that providing expulsion in a strictured canal, whence that expulsion can with difficulty escape, is better than making a free exit for it by external incision,- that it is not in truth a retrogression in Surgery,- a recurrence to the pernicious old principle of preventing escape of blood & serum from a wound by closely uniting its mouth,

instead

instead of providing a free external opening.

Thus, of the four methods of dilatation, the 1st only is to be generally adopted,- the 2d may occasionally be useful, the 3d was, until lately, in some cases our only forlorn hope, but is now rendered unnecessary by an improved mode of warfare,- while the 4th is not likely to live in Surgery.

Dilatation in general.

The treatment by Dilatation is universally admitted to be palliative only,- relief only is expected. Ever after, the patient must be content with comparative ease, must submit to the periodic introduction of a protesting bougie. If he neglect this precaution, which even an intelligent patient will do, for the very reason which should encourage him to continue,- the great amendment in his case, he will be subject to all the dangers of retention in the intervals of dilatation. While, even with the precaution, he may not always escape

escape. In most cases, however, the benefit is very great; and, by dilatation, properly conducted, after the original inflammatory action has subsided, relief may be afforded, without pain, danger or difficulty. Such being the ~~case~~ fact, it is proper that, in every case treated for the first time, this method should be followed. If the Stricture be recent, Dilatation will generally be as successful as it ever is. For I believe a careful consideration of many cases of Stricture will show, that the advantage of the bougie is in an inverse ratio to the length of time the Stricture has existed. The more recent the Stricture, the easier the Dilatation. The reason of this is evident. While the effusion is recent, it is not highly organized, & re-absorption is readily caused by pressure. But, after it has been effused a considerable time, it assumes an almost perfect fibrous or cartilaginous Structure, which will yield to pressure, in no case without great difficulty,

difficulty; which, in many cases, will be quite unaffected by it. It has been thought that, in cases where there are several strictures, some other mode should be followed; from the belief that the anterior strictures always depend on the one most posterior, that the former will not yield till the latter be removed. But, though the posterior stricture is almost always the tightest, & the others commonly depend on it, yet neither of these is invariably the case. Often the original stricture is at the seat of a former gonorrhœa, within 1½ inches of the orifice, & the posterior arises, as has been said, by sympathy & the irritation of the obstructed acrid urine. In this case, the anterior may be dilated, sometimes though seldom, independently of the posterior. But in every case the dilatation of the anterior strictures may be effected, as far as to allow the bougie to reach fast on the posterior. Thus, the multiplicity of strictures does not in se contra- indicate

contra-indicate dilatation. In former times no other treatment was admissible. But now, as the patient thinks he has plenty structures when he has one, generally seeks relief before others have formed, and as I think dilatation should have one trial only, I would not, after seeing the advantages of incision, employ dilatation in a patient with several structures, unless I ascertained that he had never before been treated.

After the skilful & judicious use of the bougie, there is frequently a discharge of thick mucus. To this discharge, along with the absorption set up simultaneously, is the relief which follows the use of the bougie attributable. This mucus has been mistaken for pus, a mistake which seems to have given rise to the illogical opinion of Mr. Acton of London, that one curative mode of action of the bougie is by causing a flow of pus! But no pus can flow unless some of the tissues are lacerated, divided or destroyed; either

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of which occurrences will justly be considered by the Surgeon as an unfavourable accident, calculated to aggravate & reproduce the Stricture.

The advantages we have mentioned are great; but the picture has another side. Even when the bougie is handled in the most skilful manner, the pain is not unfrequently so great as to forbid a repetition of the attempt for many days; while the introduction is, in bad cases, exceedingly difficult. It will not then be wondered that the lining membrane is sometimes injured. And if, after this, the pressure is continued, or if the pressure is made into a lacuna or fold of the lining membrane, a false passage is formed. This implies unskilfulness in the practitioner. I will apply to the only other operation warrantable, a director through the Stricture being one of its essential principles. True, but after dilatation of such a Stricture it almost invariably returns as bad as before, when

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the risk of false passages has again to be run. This then is multiplied risk; which, in the alternative operation, is avoided.

But after the bougie has successfully cleared the strait the dangers are not over. After its use, some patients, especially those from warm climates, have regular paroxysms resembling ague and requiring the same treatment. All Surgeons meet occasionally with serious sequelæ. Many have recorded them. Mr. Syme mentions herpetic eruptions on the lips & face, painful swelling of the testicle, abscess of the scrotum. It occasionally happens that every introduction of a bougie is followed by a rigor, which frequently ushers in fever, sometimes so severe as to end in death. This rigor occasionally follows immediately on the use of the bougie. It is then most dangerous. The fever attending & following it has caused death in 48 hours. Generally, however, the rigor occurs after the patient first makes his water, when consequently, it is

not

not attributable to the direct & immediate effects of the operation, but to the urine passing through the newly dilated urethra. This is proved to be the case by the fact that if, after the bougie is withdrawn, a Catheter, through which the urine may flow, be introduced, no rigor succeeds. Now, although one rigor of this kind is of trivial importance, and may occur, from the same cause, after any operation, a rigor every day or two is a very serious matter; and the same argument already used again applies, - that there is no need of running repeated risks when one only need be incurred.

Besides these disadvantages, serious enough, there is yet another which is insuperable by Dilatation. There occur some forms of Stricture so tight, resilient & irritable that the bougie either cannot be persisted in, or proves absolutely inefficient & useless for their cure, & the symptoms are greatly aggravated

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by its use. Where it is confined some other means must be employed.

I think we are now warranted in concluding

1. That in ordinary cases, bougies are sufficient
2. That bougies sh^d be tried in all cases seen for the first time
3. That bougies relieve but seldom cure; That their use is not always free from danger.
4. That some cases cannot even be relieved by them.

II. Caustics.

As already indicated the use of Caustics is as old as the treatment of Stricture. Many different kinds, all more or less injurious, have been employed; they instruments variously modified & improved. A glance at their history will show the revolutions which have taken place among Surgeons as to their employment. Unfortunately, some, even in the present day, learning nothing, like the Bourbons, from past experience, will not allow their use to be a mere matter of History; but, by precept & practice, uphold this treatment & make it necessary to consider it here.

When Stricture first became known, its pathology, like that of every affection at the time, was very erroneous. It attributed the obstruction to the presence in the urethra of polypi, carruncles or warty growths, for the removal of which caustic was considered necessary. Petronius used precipitate applied by a bougie. Ambrose Paré used thin wax

candles

candles with a stiff wick, to introduce me-
dicated rags. The rag was wrapped round
the candle, by which it was conveyed
through the Structure, when, the candle
being withdrawn, the rag was allowed
to remain with one end hanging out of
the orifice. Other Surgeons, he tells us,
were in the habit of using leaden rods,
which, besmeared with "quicksilver oint-
ment" they passed through the Structure.
Wiseman used precipitate & a grain of
caustic. Dionis & other Surgeons con-
tinued this practice, which was general,
till, about 1740, its mischievous effects
became so alarming, that the greatest Sur-
geons of the day, awakening from their
apathy, took the lead in decrying it &
succeeded in banishing it from Surgery.
Savoyard says "the treatment by caustic
"ought to be banished the practice of
"Surgery."
Le Dran declares "I should absolutely
"reject the use of any caustic" "they serve
"only to eat into the canal."

A stone

Astruc maintains that "Catheretticks, which
"have force enough to consume caruncles, will
"at the same time, inflame, corrode and ul=
"cerate the sound part."
Sharpe tells us "the practice is universal=
"ly condemned."
Mr. Pott also reprobated it in the strong=
est terms; and, at this time, as has been
said, the practice was abandoned.

Shortly after this time, the
great John Hunter pointed out the true
Pathology of Stricture, showing that the
contraction consisted of a thickening, in=
duration of the lining membrane, es=
pecially of the sub-mucous tissue, from
lymph effused there becoming organized.
One would have expected that this dis=
covery would have led him still more
decidedly to reprobate the caustic, still
more strenuously to enforce the use of the
simple bougie. But never having read
anything of the history of the treatment,
& having thought of the caustic as an
improvement on the simple bougie, he,

without

without adducing any new argument in its favour, adopted the practice in certain of his cases. His admirers & imitators, acting ex auctoritate, not possessing his discrimination but exercising what they themselves possessed, carried out in all cases the treatment by caustic, which he recommended for some varieties. Thus the simple bougie was for a time laid aside. John Hunter's pupil & connection, Sir Everard Home, succeeded him; & in his own cases, extended the practice. But the sun which had dazzled the eyes of the profession had set. The young Phaeton, who assumed his chariot, was unequal to its guidance. He endeavoured, by persistence & vehemence, to urge the professional wheels in the accustomed path. But the profession could now judge for themselves, & in the eyes of the great Surgeons of the day, he was tumbled from the position of authority on Stricture, which he had been allowed to usurp. As in the case of Cromwell, when the Dictator was dead, the hands

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of his successor were too feeble to hold the reins of power. Still, respect for the memory & opinions of the great one who had gone, & a want of moral courage to expose an error in science, fraught with suffering, danger & death to thousands, through fear of personal misconstruction, deterred many distinguished Surgeons, tho' disbelieving its efficacy, convinced of its dangers & appalled at its results, from publickly vindicating their opinion & their practice. That such misconstruction would have certainly followed their efforts will be apparent, from some recent animadversions on the publication of their opinions even now. In these remarks, it is stated, that, instead of being "men who had impartially tested the curative powers of caustic in Stricture, they were "contemporaries & rivals in practice" of Sir Ev. Home "who were opposed to his views & consequently used every possible objection against it"! But such misconstruction would be but temporary, for in such a

case

case, something is due to the profession & the public as well as to the practitioner himself. It is not sufficient for an authority on the subject, to refrain from following a bad example, which is leading many others astray. He is called upon to disclose the fountain of truth, & by his public censure, to choke up & destroy the poisoned well of error. From this backwardness, more than from any other cause, has Caustic maintained its place among operations for Stricture, been advocated & practised up to the present time. Lately, however, we have had an opportunity of knowing their sentiments from their posthumous letters. These letters by Bell, Pearson, Hey, Hawe &c. form an important link in the historical chain. In ordinary circumstances it would have been proper to have given quotations recommending Caustics from the work of Sir Everard Home; but after the revelations recently made as to his literary practices, no confidence could be

be placed in his statements, - no weight attach-
ed to them.

Mr. B. Bell says "I certainly think that
"caustic cannot be used with safety to the
"urethra, so as to remove any stricture that
"resists a proper application of mild bougies."
"The most dangerous consequences result from
"the use of caustic, such as excessive irri-
"tation, suppression of urine, fistulous openings,
"more permanent forms of stricture, even
"death itself."

Mr. Pearson styles it "a practice general-
"ly dangerous & unwarrantable"

Mr. Hey thinks "the mischiefs which
"follow from its application will bring
"us back to the use of a safer remedy;"
meaning the mild bougie.

Dr. Hare "can with great confidence de-
clare, that even in cases where real
stricture existed & where it (caustic) was
used with every precaution" he has "sel-
"dom seen it useful & often most pre-
"judicial"

We thus see that the

Caustic

caustic, even in the time it was most strenuously advocated, far from possessing the confidence of the most eminent surgeons, was most decidedly reprobated by them. After this time it again justly fell into disuse, in favour of the bougie. Sir Everard complains that this is going back a century & half in surgery; strangely forgetting that his great master, John Hunter, confessedly went back two centuries in recommending the caustic.

On the Continent, the caustic is still frequently employed, as will be seen from the Theses of Drs Keith & Pringle, who consider at length the opinions of the most eminent Continental surgeons. But, in this country, the most eminent surgeons are opposed to the practice, though they have sometimes been obliged to try it. Sir Benjamin Brodie, who was connected with Sir Ev: Home, as pupil & confidential assistant, & who, in that capacity, must have had at least as much opportunity of observing its

its effects as any one, who cannot be regarded as a prejudiced opponent of the practice, speaks most decidedly against it. He states that the process of destruction is tedious, difficult & dangerous; that there are very few cases in which a cure can be effected by the caustic alone, however long you may persevere in its use. And certainly no one can read the cases published by Sir Everard Home without becoming convinced of this fact. In one case where the caustic was persevered in for more than 16 years, it was applied upwards of 1250 times, before a bougie could be passed into the bladder. The patient gives the particulars in the following table.

In 1800 & 1801		233 times
— 1802	Spring & Autumn	95
— 1803	Do.	107
— 1804	Do.	97
— 1805	Do.	88
— 1806	Do.	79
		699 times

Up to	1806	Caustic applied	899 times
In	1807	Spring & Autumn	82
	1808	Do	93
	1809	Do	68
	1810	Do	66
	1811	Do	72
	1812	Do	77
	1813	Do	70
	1814	Do	49
	1815	Spring (when table stops)	12
		In all	1258 times

During this time the patient was about eight months of each year under treatment. Surely, this was giving the caustic a trial, which even its most strenuous advocate must have considered fair. Yet the patient continued such for three years longer, & then sunk, - from the effects of the stricture, according to Sir Everard, - from the effects of the caustic, according to all who consider the case. Here it is impossible to say, whether we should most admire the confiding endurance of the patient,

or

or wonder at the blindness of the practitioner, who could so long continue the application of a dangerous remedy in the belief that, at all events, he was affording relief.

These & other similar cases seem to have dimly shadowed out to Sir Everard himself, that some other treatment was requisite; for we find him hoping that some other escharotic may be found to be more effectual that the Nitrate of Silver.

This was thought to be discovered by Mr. Whately in the Potassa fusa, which, in small quantities, he strongly recommended. But in small quantity it mixes with the secretions of the urethra becomes saponified; when it is of no further advantage than any unctuous substance, rubbed over the bougie. The benefits which Mr. Whately ascribes to the caustic, were really due to the bougie; just as was the case when the armed bougie was first employed by Fevre, Petronius, Ambrose Paré &c.

The

The uselessness of small quantities was so evident, & the consequences resulting from the quantity being accidentally encreased were so disastrous, that the practice recommended by Whately never became general.
It remained for some Surgeons of the present day to bring the employment of large quantities into notice, on the occasion of the interest awakened on this subject by the improved treatment, introduced by Mr. Syme. These Surgeons recommend much larger quantities than Whately thought advisable, - quantities large enough to destroy the texture. And, inasmuch as destruction of texture is caused by caustics, no one, who is acquainted with the two escharotics, will doubt that this effect will be procured by the potassa fusa, more readily than by the Nitrate of Silver. For, while the Nitrate of Silver coagulates & forms a superficial slough, the potassa fusa deliquesces & sinks in to a considerable extent. But this advantage is more than counter-

balanced

counterbalanced by the difficulty of applying the potass so as to limit its action to the Stricture alone. Any one who has seen it applied externally, has seen with what difficulty it is limited to the spot desired. And, in the urethra, besides the impossibility of using means to limit its effect, there is another difficulty, arising from a law of hydraulics, in obedience to which the potass being deliquescent will flow to the lower part of the canal, & if in sufficient quantity will destroy it just anterior to the Stricture, by which it is dammed back. The consequence will be, either the formation of another Stricture, if the quantity of potass be small, or a fistula anterior to the Stricture, if the quantity be large.

Mr. Wade is the most decided in its favour; & as he is the most recent writer on it, I shall advert to his conclusions. The cases in which he thinks it ought to be used, are,—

1.

1. Strictures of a cartilaginous hardness impervious to instruments
2. Strictures of long standing, which, although admitting the passage of a small instrument, bleed more or less freely on its introduction.
3. Irritable Strictures.

1. Strictures impervious to instruments, for which he most strenuously advocates the potass, do not exist, as will hereafter be shewn.

2. When a Stricture bleeds, it is a sign that the canal is wounded, the bougie not being properly introduced. It is true that the bleeding may be prevented by the caustic; but only for a time. The caustic destroying the vitality of the part will prevent the bleeding, but when nature throws off the dead slough, bleeding will be apt to occur; viz, when partially detached, it be again touched by the instrument, bleeding will inevitably occur, and that in greater quantity, the wound being more extensive & affecting more vascular textures

Note. Homœopathy even details its cases by the hundred.

3. If the stricture prove to be of the irritable kind, on the introduction of mild bougies, it is difficult to imagine how that irritability can be diminished by arming the bougie with an escharotic.

Such is an outline of the history of Escharotics,- substances which have been applied to the urethra not only for the cure of organic stricture, but even, by Sir Everard Home, for the cure of deafness & of gout in the great toe,- which, even when applied in the most judicious manner, have produced the most disastrous consequences. Cases, it is true, are constantly detailed in illustration of their good effects. When any good results from their use, it is due to the dilating power of the bougie conductor, & occurs in spite of the caustic conducted. The detail of such cases can have no weight, opposed as they are to reason, experience & common sense, & must be considered as delusions arising

from

from prejudice & frequent relation of the circumstance. In Scotland, long ago, it occasionally happened that old women so frequently deluded the ignorant by pretending to have dealings with evil spirits & the devil, that at last they deluded themselves & suffered at the stake for the delusion. Now-a-days they would be taken care of at the public expence. So much ingenuity, if not ingenuousness, is displayed by some of the advocates of Caustics, that we would be loath to recommend them to the care of their friends; & can only hope that they will shake off the delusion, & observe like sensible people.

On carefully analysing the cases in which John Hunter, Charles Bell, Sir Benj: Brodie, Mr. Guthrie & others recommend the caustic, it will be found that they are solely those which have been termed "Spasmodic Strictures", or cases of spasm complicating organic Stricture. It is then solely for spasm that the caustic is now recommended by the best authorities.

But

But caustic often induces spasm. And it is too dangerous a remedy for so slight an affection; especially when it may be more easily, & with much greater safety, removed by constitutional means, of which the best will be found to be Chloroform & Opium. If these two were combined, in some such preparation as a Chloroformic Tincture of Opium, I believe the preparation would prove a specific for spasm in general, & of course, for that of the muscles in the membranous portion of the urethra, to which alone spasmodic Stricture is confined.

Even the most strenuous advocates of Caustic confess that it occasionally fails, - that the Stricture frequently recurs, - & that the application is occasionally followed by unpleasant results. What these unpleasant results are is known to every Surgeon, - they are detailed in every work on Stricture & Surgery. They comprise all those we have seen to follow the careful use of the simple bougie, & in an aggravated form.

Even

Even in the most favourable cases, where it chances not to do harm, from the frequent halts required to allow the patient to recover from the effects of the application, the treatment is longer than by the simple bougie. It has been prolonged for between 20 & 30 years, the sufferings of which were ended at last by death.

Accidents frequently occur in applying the caustic. It has dropped from the conductor & eaten its way out. It has been seen on dissection after fatal cases, that the caustic has been repeatedly applied to a false passage, to the prostate, - the effects of which need not be dwelt on, as the fact that these accidents were only found out on dissection, tells the whole story.

After their use, retention of urine has come on, requiring puncture of the bladder for relief. Hemorrhage is a common occurrence; & that to such an extent, that the pulse has ceased to be felt at the wrist. Generally each application causes excessive pain. It is frequently followed

by

by rigors & "tremendous shiverings," lasting for 2 or 3 hours. Nor are these the worst:- perineal abscess frequently occurs, & a low fever, ending in death, not unfrequently sets in. Numerous cases of each of these are recorded by the greatest advocates of caustic. Well may the poor patients subjected to this treatment exclaim with the one under Sir Everard Home

"O passi graviora: dabit Deus his quoque finem"

But, if possible, a still greater than any of these, as it is very common, & indeed almost unavoidable, & frequently ends in death, is the return of the Stricture in a form so aggravated as to have been, until lately, intractable. It can scarce be avoided, because the caustics, if used as such, must burn a new hole as a passage. Now all burns, however produced, heal by the most contracted cicatrices which occur. In a canal so narrow as the urethra, when the contracted cicatrix is substituted for the original lining membrane, it cannot be

be otherwise than that such contraction will form a worse Stricture than an obstruction from indurated effusion, worse, because tighter & more extensive, & because, being of lower vitality, it is less amenable to treatment. I believe it will be acknowledged, by every Surgeon of experience, that the most inveterate Strictures he has been called upon to treat, have been previously treated by Caustic. On this ground alone the Caustic ought never be employed.

Some years ago, when there was only a choice of evils in the failure of the simple bougie, I should have excepted but a few rare cases, which are sometimes met with by Surgeons in extensive practice. But now, when we have an operation, which we shall see to be simple, certain, safe, speedy & effectual, I have no hesitation in expressing a conviction that the treatment of Stricture of the Urethra by Escharotics, should be banished from the practice of Surgery.

From

From what has been said I trust I have shewn grounds for concluding

1. That the application of Caustics to Stricture of the Urethra is a retrogression in Surgery.
2. That it is difficult, dangerous & deadly.
3. That it is the fruitful source of aggravated Strictures.
4. That, though formerly in some rare cases allowable, in no case wh. this treatment be now employed.

III. Incision.

The Knife has been long employed as a dernier resort in cases of bad stricture.

The first mention we find of it is by Wiseman, who employed it in a manner so free from a principle so erroneous as to preclude success,- the incision extending the whole length of the canal, being made without any guide to direct the knife in the canal alone.

Sir Benjamen Brodie mentions Stafford as inventing an instrument for cutting from within; a mode afterwards much in use, still advocated by many, especially on the Continent.

The method of cutting into the canal, behind the Stricture, has been long known, being, in truth, but an imitation of the operation of nature to relieve the bladder, by distending & opening the canal behind the Stricture.

Some years ago Mr. Syme tried subcutaneous incision, without success. But it led

led to the most fortunate result,- the idea of dividing the Stricture by external incision on a grooved director,- an operation in every way so excellent, as we shall see, that like other great improvements in Surgery, as in every thing else,- the wonder is it was not thought of sooner,- an event only retarded by the attention of Surgeons being turned to some complicated operation for the cure. This mode is so incomparably superior to the others, that it is not necessary to discuss these at length. But as they are operations still advocated & practised, it is necessary shortly to consider them.

The treatment by incision may be divided into two principles of operation. 1. From Within 2. From Without

1. Incision from within.

All Surgeons have for Centuries tried this method. All have occasionally succeeded in giving relief, especially when the

the Stricture was in the pendulous portion of the urethra; but, in general, the results led them to dread the necessity of having recourse to it. The usual mode of performing the operation was by a catheter, armed with one or more lancets. The catheter being introduced, the lancets were made to open with a spring, & the contraction was incised to a greater or less extent. Generally the incisions were neither long nor deep. In this way relief may sometimes be afforded. But the operation, always performed with difficulty in the dark, is never without imminent danger of causing hemorrhage. False passages, where they no external opening, infiltration of urine & even death. This especially happens when the condensation is great, in which case the most expert anatomist cannot be certain of hitting the urethra. The cicatrizations of the incisions also form more unmanageable Strictures than the ones they cut up. Sometimes the incisions are made of great

length

length & depth. Mr. Civiale, who is at present the great advocate of this operation, advises them to be made both long & deep. This he affirms has succeeded in many cases. The use of the bougie being kept up during granulation, it is possible that such incisions may, in some cases, remove the induration & relieve the stricture for the time. But in proportion as the incisions are extended & deepened, is the danger increased.

In this operation the stricture must first be passed by the Catheter & is consequently in most cases under the power of the simple bougie. In those inveterate cases, which either resist the full dilating power of the bougie or are aggravated by its use, it is an operation preferable to the use of the Caustic. But luckily neither is required. For, by reversing the principle of incision, we have such cases under our command.

II.

II. Incision from Without.

1. Cutting on the end of a bougie passed down to the Stricture; & cutting behind the Stricture.

These are the same in principle; modified to suit each individual case. It consists of cutting down in search of the urethra, & then passing a catheter through the wound.

It has often been performed by the most eminent Surgeons; and in London at the present day, it is still performed as the chief, indeed almost the only alternative, after the failure of dilatation.

It is sometimes attended with partial success: it is never performed without difficulty & danger. What has been said of the dangers & difficulties attending incision from within, applies with ten-fold force to this operation. The difficulty is so great that the operation sometimes lasts half an hour, when performed by the most expert operator: & after all, the patient is sometimes sent to bed without

its

its being accomplished. In this case, the patient is exposed to nearly certain death from extravasation of urine.

"Even in the most favourable circum-
"stances" says Sir Benjamen Brodie, "it
"cannot be otherwise than doubtful whether
"the stricture be properly divided; that
"is, whether the incision be passed through
"the narrow canal in the centre, or
"through the solid substance on each side"

So often is the canal missed or not accurately hit, that the re-opened canal is generally described as angular. Such being the case, it will not be wondered that the operation, when not fatal, generally gives rise to a re-formation of stricture of the most inveterate kind.

Professor Syme styles it "protracted, un-
"certain, dangerous & unsatisfactory."

M. Civiale in his late work on stricture mentions the dangers which accompany the two kinds of incision just discussed, under 9 heads, the enumeration of which,

would

would, in any ordinary case, be evidence sufficient for banishment, at least. They are

1. Pain
2. Hemorrhage
3. Irritative fever
4. Ecchymoses
5. Local Inflammation Rumefaction, with or without discharge.
6. Infiltration of Urine
7. False passages
8. Inflammation & Abscess in different parts of the body
9. Death.

These operations have, in general, been resorted to only in the belief of the Stricture being impermeable. Sir Benj: Brodie says "I suppose that no "Surgeon would think it right to recom- "mend such an Operation" (as the latter) "if "he were able to introduce any kind "of instrument through the Stricture into the "bladder."

This, the permeability of all Strictures, forms one of the principles in the new Operation for

for Stricture, and, as the threshold of the Operation, it must first be got over.

2. Syme's Operation.

This Operation consists of two stages, each of which constitutes a principle of the Operation.

The first is passing a grooved director through the Stricture.

The second is dividing the Stricture in the groove, by External incision.

For the first the Stricture must be permeable.

For some time back Surgeons have been verging nearer & nearer to the conclusion that all Strictures are permeable. Sir Benjamen Brodie says "there are very "few cases, in which, by perseverance & "patience, and dexterous, and, above all, by "gentle management, you may not at last "pass an instrument into the bladder." So decidedly is he of this opinion, that he records a case, in which he persevered in this management for a whole year, & at last

last, was rewarded with success! Few Surgeons indeed there are who would persevere for such a time, & fewer still in whom the patient would have such confidence as to give them the opportunity.

That all Strictures are permeable to a properly managed instrument is the result of the observation, experience & reflection of Mr. Syme.

Perhaps no fact ever stated in Surgery has been more contested than this. And for the simple reason, that the disbelievers in it are continually meeting with Strictures which defy all their efforts to introduce a bougie. But that it is a fact, that wherever urine can come out, a properly managed instrument may be passed in, cannot, in considering the whole question, be doubted. And this fact being established, the cure of Stricture is in our power. John Hunter says that a Stricture, which admits the point of an instrument, is completely under our command. Such having been believed to be the case in

his

his time, it will shortly be seen how much more it is so now. It is of the utmost consequence then to establish the fact, that there is no such thing as impermeable Stricture.

Setting aside the two most rare cases, where a man is dying from retention into whose bladder no instrument can be passed in time to save his life; and where the urethra is entirely united from disease, accident or the caustic, there is no impermeable Stricture. In the first of these cases, the Stricture is in reality never impermeable, though the consequence is the same as if it were; for it is impermeable at the time to the Surgeon present, the bladder must be emptied at all hazards. That it is not really impermeable is proved by the facts that, shortly before, the urine passed through it, & that, after the bladder is punctured, an instrument can be introduced.

In the second case there is no Stricture.

J.

It may have been a Stricture, but it is one no longer, in consequence either of accident, disease or treatment. If I were to stamp on the gutta percha pipe, which conveys gas to my burner, I would cause a Stricture of the canal, which could easily be remedied by the mechanical power of any dilating instrument. But if I armed that instrument, by making it red hot, & then applied it to the Strictured part, so as to burn it, the sides would run together, & it would be no longer a strictured tube, but a solid body. And so it is with the cases I have mentioned, - the wine having another outlet. These then must be excluded. And these excluded, there is no Stricture so tight that wine will not pass through it, - by dribbles or even by drops, it may be, & that effected by sedatives & antispasmodics, - still the wine will pass through. And if any thing will pass through a Stricture, that Stricture is not, & cannot be, impermeable.

But

But it will be answered, we mean surgically impermeable. Sir Benjamen Brodie, Mr. Guthrie, Mr. Aston Key & c have all met with impermeable Stictures, therefore what was found to be impermeable to such Surgeons, must be surgically impermeable. True, they met with rare cases, which they believed to be impermeable Strictures, because they believed such were to be met with, were prepared to meet & encounter them. This only proves that a Stricture has been thought impervious by some good Surgeons; not that it is surgically impervious. The name of Mr. Syme himself might at one time have been added to the list; for he used occasionally to meet with such Strictures, so long as he believed what he had been taught, that such might occur. To suppose that there can be nothing more or new besides what we have been taught, is the surest way to prevent any thing more or new from being learnt. Being no believer in this protectionist prin-

ciple

principle, he convinced himself that there is no such thing as impermeable Stricture, consequently, using greater care in looking for the passage, such Strictures have, since that time, disappeared from his practice.

In the days of Columbus, all men but himself despaired of finding the new world, because they believed it did not exist. But he, gifted with an intellect justly relying on its own great powers, which told him that what he sought for must exist, persisted in his efforts at discovery, finally saw them crowned with success.

And so it is here. These Surgeons do not believe every Stricture is permeable, & consequently cease desist from their efforts to find the passage; while the discoverer of this new Operation, continuing his patient, gentle & skilful efforts, at last invariably effects the passage, & thus has the Stricture completely in his power.

After Columbus had made his mighty discovery, many at first doubted; but shortly every one was able to verify its

reality.

Note * In the Lancet 1850. I. 453 it is actually stated "Mr. Syme's is an old operation revived." But that article bears internal evidence of utter ignorance as to what Mr. Syme's operation is. It is indicative, however, of the progress of the operation.

reality. Then, as in almost every great discovery, it was declared to be no discovery at all, but a fact of which many had been long convinced. But as truth is not the child of authority but of time, the merit of the discovery was soon settled. In the case of Stricture the first of these stages has passed; the second is passing. I doubt not the author, or the profession posterity, for him, will some day have to defend his title to the discovery.*

But, I would ask, if impermeable Strictures are so common as the opponents of the new operation assert, how comes it that no one of them will show that he believes what he says by proclaiming, in a certificate, to the medical world, that here is a case of impermeable Stricture; but the same time putting the patient & Mr. Syme into communication, that the profession may be able to decide the question, from the results of public treatment. I have myself seen many

Strictures

Structures, which various Surgeons had pronounced impermeable, – many of the men, otherwise able, had been dismissed the different services for incurable, because impermeable, Structure. After many trials, they could not be passed by the smallest instrument. But these very efforts made to effect a passage known to exist, acted on the living textures by causing interstitial absorption, and, at last, the Structure, without force, hemorrhage, unusual pain or any other untoward sign or symptom, was found to be permeable. I remember a case which was treated, while I was dresser. The patient, the finest specimen of a man I ever saw, had been dismissed from the Horse Guards, in which he had been Sergeant Major, on account of incurable, because impermeable, Stricture. For 8 or 9 years innumerable practitioners, civil & military, had failed in all their many efforts to pass an instrument into the bladder. Mr. Syme failed in his efforts 12 separate times.

Some

Some, who still doubted, began to think he had at last met with a real impermeable. But at the 13th attempt, he was successful in discovering the passage, while the patient kept exclaiming "That's it, Sir: That's it", he passed the smallest of his bougies fairly into the bladder.

Before Surgeons were aware that every Stricture is permeable, if properly tried, all these would probably have been treated as impermeable Strictures, & a most deadly operation performed in attempts at cure; instead of certainly accomplishing it by a simple, safe & effectual incision.

The fruitful source of impermeable Strictures is force in the use of the instrument. No force is required None will be tolerated by the parts. Whenever force is employed, there is imminent danger of tearing the lining membrane & thus making false passages. When these already exist, the instrument is apt to pass into them, unless the true passage is hit, after a few

Trials

trials, the Structure is pronounced impermeable, which it is to those surgeons only, that from their own impatience or want of Skill. Yet, as the human mind naturally seeks the cause of error every where rather than in itself, these Surgeons, no doubt, firmly believe & maintain, that they have met with impermeable Structures. This is no hypothetical case. We have seen that the Caustic has been repeatedly applied to a false passage, deemed an impermeable Structure; & in the case alluded to above there was at least one false passage.

It is a curious pathological fact, that no Structure has ever been found impermeable after death. Even in those whose Structures had been most inveterate & the cause of death, & for years considered impermeable, by many different Surgeons, the canal has been found sufficiently large to admit a good-sized bougie. The impermeability during life arose from want of Skill in avoiding the false passages.

It

It has been hinted that the director may pass by the side of the Stricture, not through it; in other words, that it may produce a false passage. In answer to this it may be asked, - Is it likely the instrument would reach the bladder through a false passage; that too without pain, bleeding or other inconvenience? And, if it could so reach the bladder, would incision be successful if the spongy texture were alone laid open? For, if in passing the director pain is felt or blood seen, the instrument is laid aside till the irritation has subsided. I have never seen a drop of blood drawn, except in one case, where simple dilatation was going on; which blood, tinging the bougie, gave occasion to this rule being repeated to the class. Until these two questions can be answered in the affirmative, it is needless further to consider this objection.

But the opponents of the operation, like the Cossacks are no sooner

overcome

Posted in Lancet

overcome in front, than they form an attack in the rear.

The permeability being established, the objection is raised, - then, as John Hunter said, you can command the Stricture. This is now true, though not as they meant. Their own practice shows that there are some inveterate & peculiar forms of Stricture, distinguished by the tightness of "contraction, the resilient disposition displayed after dilatation & the great degree of irritation induced by attempts "to effect this," for which they employ some of the other means we have shown to be so inefficient & dangerous.

John Hunter preferred to the common bougie, was rash in his statement; which, however, is valuable, as shewing the great power he ascribed to the bougie. Now, however, we can confidently repeat: When an instrument is passed, the Stricture may be cured.

Besides, this limits the question to the comparative practicability & advantages of dila-

tation

dilatation & external incision. Both are good, - each adapted to its proper cases. In simple cases the bougie ought to be tried. In doubtful cases, the rule will vary according as the practitioner has seen the new operation performed & empties in it, or has not had opportunities of observing its effects.

In the former case, if, from the history of the stricture, careful observation of the symptoms & progress while introducing directors, there be considerable doubt about success by dilatation, the operation by incision will be performed with confidence in its safety & success.

In the latter case, the practitioner will act according to his knowledge, & give the dilatation a trial. After dilatation fails, on reasonable trial, & it will often fail, he has the consolation of knowing that by the alternative operation, a safe & effectual cure is maintained to be certain, by the first surgeon of the day, by many hundred practitioners; I mean, by all

those

those who have graduated in Edinburgh since this operation was proposed, by those who have seen its effects when fairly tested. He will then probably feel justified in performing the operation. Should he still doubt, I cannot think he would be justified in refraining from recommending the patient to a Surgeon, who can operate with confidence. But of this I am convinced, that the practitioner who does give the operation a trial, will, like an author after first publishing, soon perform it again, & will have less & less hesitation after each observation of its effects.

The greatest advocates of Caustics, internal incisions &c. readily admit that opening the urethra by the perinæum is an operation which will be occasionally required, & is a rational, Surgical & Scientific proceeding. This is readily admitted, when the old & highly dangerous "plunge of the knife" is preferred to. But

their

their language is changed, when the operation is proposed to be performed with the guide of a director. Then it is all but murderous. As well might they maintain that sailing without rudder, Compass or chart is a rational & scientific mode of proceeding; & that following the Chart, by helm & Compass, is dangerous & absurd. As well might it be contended that we should lay open a rock in search of a precious vein, instead of first sinking a shaft, as a director where to cut.

Most of the other objections to the operation, such as alleged pain, hæmorrhage, rigors &c, will be best answered in considering the effects of the operation itself.

Two others have been lately raised by Mr. Wade. These are

1st That the thickened texture is not removed by the Knife

2d That the natural urethral lining membrane forms only a small part of

of the passage, the greater part of the new channel being made through the condensed tissue.

These he has only asserted, without the slightest attempt at argument in their support. It must consequently be sufficient to state that they are both incorrect. In regard to the first, it would not be difficult to explain in principle how the thickened texture is removed by the knife; not indeed directly by cutting it out, but indirectly. That it is removed, however, will be more clearly shewn by analogy. In the case of Fistula in Ano there, is invariably great thickening of texture. When, however, the knife divides it, between the external & internal openings, all the thickened texture shortly disappears, & a rapid & permanent cure is effected. The same process is brought about by division of the thickened texture, in Stricture.

In answer to the 2d Objection, it may be stated, that the channel is not new, as Mr. Wade assumes. After the use of the caustic & other means, such as the incredible

one

me of forming a passage, by thrusting a trocar through the thickened texture, the channel may be new. But after incision the channel is the same as before stricture commenced, consisting, in many cases, entirely of the natural lining membrane, restored to health by absorption of the deposit in its interstices, by the contractions, resulting from that deposit, no longer existing, when it is removed. Where the channel does not consist entirely of the original lining membrane, it is in consequence of a still greater dilatation of the canal being effected, by the wound being caused to heal by the second intention, so as to let in a small piece of new channel, formed by the cicatrization of the granulations; the use of the bougie, in this case, being assiduously kept up during the cure, to prevent that cicatrization from contracting.

The operation is simple, certain, safe, speedy & effectual.

1. Simple.

1. The Operation is Simple.

Nothing can be simpler than this Operation in skilful hands.

It consists of passing the largest grooved director the Stricture will admit, cutting into the groove behind the Stricture & running the knife forwards, exactly in the mesial line, till the bow-gaps convergence at each side is divided. But though it is simple, it is not easy. The difficulties are great, & have been well enumerated by Mr. Syme. It is very difficult to pass a small director through a tight Stricture. Mr. Liston declared it the most difficult Operation in Surgery. It is difficult to cut into even a large groove in a thickened, indurated perinæum. By many it ~~this~~ is considered the most difficult step in the lateral operation for lithotomy, to cut even into the large groove employed. But these difficulties are not to be mentioned to the accurate Anatomist & skilful, experienced Surgeon.

2. Certain

2. The Operation is Certain.

It has now been performed by Mr. Syme upwards of seventy times. In no case has it failed. Accounts are continually being published of successful cases by other Surgeons, who approve of the Operation; and whatever the Opponents may say to it in other respects, it is impossible to maintain that it does not, in its very nature, remove the Stricture

3. It is Safe.

This is the recommendation which has been chiefly denied to it. When it is stated that it is perfectly safe when properly performed, it is but reasonable fair to except those unfortunate constitutions, in which even a scratch is not perfectly safe. If these be not excepted, it is impossible to state, with truth, that any use of the Knife whatever is safe.

It has frequently happened that venesection has induced phlebitis ended in death.

Prof.

Professor Simpson mentions having seen two such cases in one week. A butter next door (Dr Aikin's) died two years ago, from inflammation set up by a slight cut in the hand, while cutting bread. Deaths from hæmorrhage have frequently followed the bite of a leech & the extraction of a tooth. Yet no one will maintain that such operations are dangerous. The questions, which have been asked by way of objection, - "Who could ensure his patient "from the occurrence of erysipelas or phlebitis? "What degree of human care or foresight "could so brace up the cords of life to the "enduring point, as always to guard against "a fatal prostration"? are simply nonsensical rhapsody. When the operation is maintained to be safe, safety from the ordinary results of the use of the knife in operation can alone be legitimately understood. These results have been all attributed to it. The chief are pain, collapse, hæmorrhage and more constitutional disturbance

1.

1. Pain. This need not be much regarded, as it is usually very slight, and as, if the patient is very susceptible, he may be spared it by inhaling Chloroform. I have frequently heard the patients, who had declined the Chloroform, declare, that they had often suffered much more from the passing of a bougie.

2. Collapse is said to have occurred in London. It is never seen here: and I can only suggest in explanation of it, that the patient may have yielded into it through fright, from knowing what a dreadful operation it was considered by the operator this friends.

3. Haemorrhage has been more insisted on than any other objection. Prof. Syme has not met with it. In the 20 or 25 cases I have observed, I have never seen an ounce of blood lost either before or after the operation: The usual quantity altogether does not exceed

half

half an ounce. When we see statements of frightful hemorrhage having occurred, we have a choice of only two conclusions,- either that he who makes them has applied to his imagination for his facts, or that the operation has been incorrectly performed. If the incision be in the mesial line, as it ought to be, how can Anatomy or Pathology explain where all the blood comes from?

4. Rigors & Constitutional disturbance. The latter I have never seen. A rigor does occasionally occur in the patient making water for the first time after the catheter is withdrawn. It has been already stated, that this sometimes occurs after each introduction of the simple bougie. When occurring after the operation, it has been attributed to the urine passing for the first time along the opened canal.

It may be accounted for otherwise, by a peculiar sympathy which seems to exist between the copulative apparatus & the

system

Lancet Ap. 13. 1850.

system, so that any lesion of the former disposes to a rigor. Professor Simpson says this rigor is a frequent occurrence on rapid dilatation of the os tincæ. While attending an accouchement lately, a grandmother expressed an ardent wish that the lady would soon "take a <u>good shiver</u>". Most young accoucheurs get a fright from a rigor occurring as the head clears the outlet. In these cases, as in the operation for Stricture, as the rigor does not recur it is not followed by any constitutional disorder, it is of no consequence, all that is required is, at most, some slight diffusible stimulant.

In Conclusion,- of upwards of 70 cases operated on by Professor Syme, not one has died: while the statement made, I believe by Mr. Acton, in the Lancet,- that all the cases of Syme's Operation, performed in London, had died,- most instructive as regards the old Operation, is utterly worthless in reference to the new; as it is afterwards stated, in the same article,

that

In 1844.

that, to his certain knowledge, it had only been performed where the urethra was "quite impassable"!!

4. The Operation cures quickly.

In inveterate Strictures, the time required for dilatation is often very long. I believe complete dilatation in such cases can rarely be accomplished in less than 2 months. The cure is generally complete in 3 weeks after the operation. This, of itself, is in many cases a great recommendation. Suggests the propriety of performing the operation in most hospital patients, for whom, as we shall shortly see, such a proceeding is, on many other accounts, desirable.

5. The Operation is effectual.

The passage is immediately rendered of its normal size; & after a fortnight it is generally entire. A considerable time has now elapsed since the first cases of Operation. Not one of these has

has had a recurrence of the Stricture.
So far as experience goes, then, it may be concluded, that the patient is as safe from Stricture as a man who has never been afflicted with it, need not fear a recurrence, unless he exposes himself to a cause, which would have excited Stricture in any other healthy man.

Such being the advantages of the Operation, it should be performed in all cases where, the bougie totally failing, the only other alternative is some one of the Operations shown to be so uncertain, dangerous & unsatisfactory. These are the cases for which it is proposed by Professor Syme.
I am inclined to think the practice might, with advantage & safety, be much further extended.
The bougie being always tried the first time a Stricture is treated; when the Stricture returns, it is a sign that it is not of the simple kind; & it is generally

aggravated

aggravated. In all such cases, I think the operation should be performed. If I had myself a Stricture, which troubled me by returning after dilatation, I should insist on the operation being performed.

In all cases where Caustics, internal incision &c have been used, it will be found the proper, and only effectual, cure.

The operation being proved to be safe, speedy & effectual, it comes to be a question, whether, in Hospital practice, we should not go a step farther, & at once perform the operation.

In Hospital patients, besides the ordinary disadvantages of dilatation, - its uncertainty, - its risks in unpractised hands & its affording no protection against relapse, - there are other reasons peculiar to the class, too often to the individual, which forcibly suggest the propriety of some more speedy & effective treatment.

They are impatient of delay, going out as soon

soon as relieved, before dilatation is complete, and then, led to neglect themselves longer by what should encourage them to continue it,- the relief obtained,- they seldom take the precaution to pass one. Too often, indeed, in their endeavours to make up for time lost in Hospital, to the wants of life or to pleasure, they expose themselves to cold, damp, excesses & other exciting causes. These speedily bring on relapse,- often with retention of urine, perineal abscess,- sometimes fatal affections,- & the patient has to be re-admitted in a worse condition than before. Such cases are recorded in all Hospital Reports, & the same tale is told by the History of any aggravated Stricture, frequently requiring dilatation.

The shortest time for dilatation being 6 weeks
The longest time for cure by incision is 4 weeks

It is frequently much longer before relief is obtained by dilatation.

The cure is frequently accomplished in 10 days after the Operation.

To

× their opinion of its advantages

To the former, few of this inpatient class of patients will submit; while to the latter few will object,- more especially as in the former, they believe themselves cured, when the urine flows in a tolerably good stream; whereas, in the latter, they remain till the wound is healed. Indeed, the patients themselves, who are under treatment in this Hospital by dilatation, seeing the superiority of the operation in this, as in other respects, give the very best evidence as to ~~the danger of it~~, by frequently entreating to have the operation performed.

It has been objected that the operation, even as proposed by Professor Syme, is too free a use of the knife,- that it is an unnecessary operation,- & that, as such, it will bring Surgery into discredit. Were this the case, it would never have been introduced would not now be advocated, by the Edinburgh School. But it is not an unnecessary operation. To show this, it will be proper

to

to endeavour to supply a blank left by the objectors, by giving an idea of what, though in one sense necessity has no law, we mean by the law of necessity of operations. Whenever, without present or future constitutional or local effects of counterbalancing evil, we can relieve pain, shorten, check or favourably alter the course of disease, or prolong life, by the use of the knife, the knife should be used & is only withheld by the timidity of ignorance or indecision. At least, I think it will be granted, that any particular operation which fulfils all these conditions is a necessary operation. In reviewing what has just been said it will be proved that this operation does fulfil them. Indeed, if the knife is objected to here, there are many cases of disease in external parts to which the objections will not apply more strongly.

J.A

Monthly Journal July 1852.

It only remains to consider the case of the Stricture being very extensive, that of several Strictures existing in the same canal.

In this country, the Stricture is very rarely so extensive as to require an incision of more than an inch for its complete division. When, however, as occasionally happens in the West Indies, the Stricture is extensive, the most interesting & instructive cases recorded by Mr. Fiddes, in which the incisions extended between 2 & 3 inches, show that the principle of dividing the whole contraction may be safely & successfully followed out. Such Strictures only occur in the membranous portion of the urethra, where there is a sufficient bed of soft parts to receive the effused reparative material. In the pendulous portion, where such a bed does not exist, incisions of this length would heal with difficulty, & fistulous openings would be common. But, as contractions of such length never occur there, it may be generally stated

that

that the whole contraction must be incised.

When there are numerous separate contractions it is generally found that the one most posterior is the most inveterate, and that when it is divided, the others quickly dilate.

Occasionally, owing to complications, incision is not to be performed. When Stricture & Stone exist together, as the irritation of the latter generally gives rise to, & keeps up, the former, if the Surgical principle of removing the irritation be followed, its effects will quickly disappear. In some rare cases, however, it may happen, that the Stricture is the cause of the Stone, the obstruction in the passage favouring the deposition of salts. Here, on the same principle, the converse operation is to be performed, but, as will be readily understood, it will not always prevent the necessity of an operation for removing the Stone.

When the danger of death from

from retention is imminent, & the bladder cannot be otherwise relieved, which is very rarely the case, the bladder must be punctured. The weight of evidence indicates the triangle behind the prostate as the proper place for puncturing.

Conclusions.

1. That Syme's Operation being simple, certain, safe speedy & effectual, is the only incision warrantable.
2. That it should be employed whenever the bougie fails
3. That there seems good reason to perform it in all cases of Hospital practice, certainly in all previously treated.

I have now concluded my task. I might have quoted many cases I had taken copious notes with that view. But cases have been published, in sufficient numbers to convince any one open

to

to conviction; while no arguments or cases will be sufficient to overcome prejudice or wilful blindness. If I should have pruttefully extended my paper, already longer than I could have wished. The opponents of the treatment, the benefits of which I have endeavoured to establish, looking through the distorting glass of their pre-formed opinion, will not believe what they see, because they have made up their minds that there is nothing to be seen, else they themselves must have long ago seen it.

James N. Currie.