

## **Practical observations on the nature and cure of strictures in the urethra.**

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### **Publication/Creation**

London : Callow, 1809.

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*from*  
*Mr Delina*

Practical  
OBSERVATIONS  
ON THE  
*NATURE AND CURE*  
OF  
STRICTURES  
IN THE  
URETHRA.

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BY  
WILLIAM WADD,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS  
IN LONDON.

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LONDON:

PRINTED FOR J. CALLOW, MEDICAL BOOKSELLER,  
CROWN COURT, PRINCES STREET, SOHO;  
BY J. AND W. SMITH, KING STREET, SEVEN DIALS.

1809.

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*Price Three Shillings.*





## ADVERTISEMENT.

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*IN the following pages it is proposed to bring together the various improvements in the application of caustic substances, in the cure of strictures of the urethra. Also, the advantages and disadvantages of the common bougie—to shew the difficulties and dangers of the former mode—and the extent of the relief to be expected from the latter. By these means, the author hopes he may enable the reader to form his own opinion of the comparative merits of each mode of practice.*

*Park Place, St. James's Street,  
Nov. 28, 1808.*



## ADVERTISEMENT

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In the following pages it is proposed to bring  
together the various experiments in the  
action of certain substances, in the case of  
structures of the intestine. Also, the nature  
of a new kind of disease of the same organ  
—to give the full details and progress of it  
—to show the extent of the trouble  
be expected from the latter. The three papers  
the author hopes to give under the title  
form his own opinion of the comparative results  
of various kinds of practice.

Wm. B. Jones, M.D.  
1852

## OBSERVATIONS,

&c. &c. &c.

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THE miseries endured by those who suffer from diseases of the urinary organs, especially such as arise from contractions of the urethra, are so frequent, that we might naturally conclude there could be no subject in surgery, in which the profession would be more decidedly unanimous, as to the mode of cure. The contrary however is the fact.

During the last century, the barbarous practice of former times—the caustics and cauteries of our forefathers, were banished, by common consent, from general use, and more particularly from diseases of the



urethra. — “ Callosities and Caruncles ” were no longer sought after, and surgeons were contented with relieving obstructions of the urethra, by the simple, and, as it appeared, efficacious means of the bougie. This was the accredited practice, when Mr. Hunter, whose life and writings form an important æra in surgery, revived the old method, by the introduction of the lunar caustic. He recommended it however in a very limited degree—applied it with great caution, and in those cases only, which were decidedly beyond the reach of the common means. What he thus cautiously advised as an experiment in extreme and difficult cases, has, since his time, been carried to an extent he could not have anticipated. Almost every case is indiscriminately attacked with caustic, as if the question *how* and *when* it should be used, were no longer an object of enquiry.



Having hitherto never committed myself as an advocate for either mode of practice, and having had great opportunities of seeing the effects of each, I shall make no other apology for the following observations:—in which I shall endeavour to shew, that where the bougie is inadequate to restore the urethra to its natural state, but little can be expected from the caustic; and that it is a question for the patient, and the patient only, to decide, whether he will hazard that chance, at the risk of greater ills, and perhaps of life.

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The urethra is lined with a membrane that in many respects resembles the membranous lining of other parts of the body, but differs from them, according to the generally received opinion, in the power of contraction and dilation. It is at the points, where the urethra is supposed to



have the greatest degree of contraction, that strictures are most commonly found, viz. at four inches and a half, and at six and a half, from the external orifice. They are seldom found beyond this. Mr. Hunter says, he never saw a stricture in that part of the urethra which passes through the prostate gland.\* Mr. Abernethy, however, has met with cases where all the symptoms remained, arising from a stricture at the neck of the bladder.

The contractile power of the urethra, when in a healthy state, is a gentle and uniform action of its fibres; but when too frequently repeated by the excitement of any stimuli, the action becomes spasmodic, and may produce the disease in question.

The causes of contractions of the urethra, has been a subject of general dis-

\* Hunter's Treatise on the Venereal, p. 114.



cussion. We are led to believe, that in certain constitutions there is a greater disposition to the formation of strictures than in others; where this happens, it is easy to conceive that occasional attacks of spasm, arising from any source, may produce this disease. The most commonly implied cause was neglected or mismanaged gonorrhœa. Mr. Hunter, however, has taught us to think differently. Nor does gonorrhœa seem instrumental in producing strictures, excepting in common with other inflammation;—the seat of gonorrhœa and of stricture being rarely found the same. The formation of strictures has also been attributed to astringent injections used in the cure of gonorrhœa; on which account Mr. Home has, we find, entirely given them up, rather than incur a risk, however small it may be, of producing so seriously distressing a complaint. This does not accord with the general practice, nor



with what Mr. Home afterwards observes of the natives of India, three-fourths of whom, of any rank, we are informed, are troubled with strictures, attributed to the effects of gonorrhœa, for which no local applications are used. Sir George Baker observes, “ It is generally to be wished, that all the injections commonly ordered for disorders of the urethra were gone into disuse; since every day’s experience testifies, that such injudicious applications are, in the event, frequently the parent of obstinate and incurable obstructions of that passage.” \* Various other causes have been assigned, as the gravel and stone. They have also been known to arise from piles, and in some cases, from the temporary irritation of the parts following the use of a blister.

Strictures are varied in their form and

\* Med. Trans. Coll. Reg. Vol. I. p. 448.



structure ; those most commonly met with, are small ridges projecting into the canal, and forming a half circle ; sometimes they are continued and form a circular band, not more in breadth, than if the part had been surrounded with a piece of pack-thread. Some are contracted for above an inch in length, which Mr. Home accounts for, by two strictures forming within an inch of each other, and the space between them becoming narrower than the rest of the canal.\* This may happen, but I have seen a thickening and contraction of the urethra to this extent. Sometimes two or more strictures are on the same side, the other being perfectly smooth. Very frequently there is a gradual contraction of the urethra to and from the stricture, so as to form a cone in the anterior and posterior part of it. Mr. Cooper, in "First Lines of the Practice of Surgery," de-

\* Home, p. 22.



scribes the shape as resembling two long cones, with their points in contact. He adds, "I am perfectly convinced that this is the case which frequently baffles the operation of caustic, and which receives most benefit from the employment of the common bougie."\*

When strictures have been of very long standing, the whole urethra becomes contracted, and very often the orifice itself, which is so small in some cases as to admit only the smallest sized bougie. There have been instances of part of the urethra being obliterated; then there is no relief, but in an operation.†

\* First Lines, p. 423.

† An ingenious method for ascertaining the extent of a stricture has been lately adopted by Mr. C. Bell. He has a series of silver probes, with circular knobs, varying from the full size of the urethra to what will pass the narrowest stricture. By successively introducing smaller balls, he is enabled to judge of the nature of the contraction, by the resistance he meets with in withdrawing them.



There are other causes producing obstructions of the urethra, namely, tumors in the cellular substance, that surrounds the urethra, sometimes occasioning a complete obstruction in the course of this canal, and an enlargement or fulness of the corpus spongiosum urethræ. In some cases, this affection extends a considerable length; in others, it is confined to a single spot: sometimes it attacks different parts, leaving the intermediate spaces perfectly sound. An enlargement of the prostate gland, is also, a very common occurrence, and is perhaps the most irremediable, and distressing impediment, to the free exit of the urine.

The old notions of caruncles, callosities, and spongy excrescences, are now laid aside. But formerly, when all obstructions of the urethra were attributed to these causes, it was not uncommon to



make an opening into the passage to look for them:—"Quelques uns ont ouvert l'urethere sur la sonde canulée pour découvrir les caroncles ou carnosités, et de les détruire on les consommer avec des remèdes convenables."\* Mr. Hunter, who opened more urethræ after death, where there were obstructions, than any of the authors who have written on the subject, was of opinion, that they wrote from imagination only.† Mr. Benjamin Bell, however, informs us, he has often observed warty excrescences within half an inch of the extremity of the urethra, similar to those frequently found on the glans penis.‡

The first approaches of stricture are generally so obscure, that they are frequently found to exist without any evident

\* Cours de Chirurg. par M. Elie Col de Vilars.

† Hunter's Treatise on the Venereal, p. 111.

‡ Bell's System of Surgery, Vol. II. p. 191.



symptom that should lead the patient to a knowledge of it. The first circumstance that attracts notice, is most commonly a slight diminution of the stream of urine; but as this is unaccompanied with pain, it is very seldom attended to. In this state the complaint may remain, till some irregularity of living, or accidental exposure to wet, and cold, produces an aggravation of the symptoms. When this is the first intimation a patient has of requiring surgical assistance, he may consider himself fortunate, if the affair terminates favourably.

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Having thus shortly stated the nature of this miserable disease, I shall now consider the different means that have been resorted to for its cure, since Mr. Hunter revived the use of the caustic, and at the same time gave the world a more rational



account of the nature of strictures. In doing this, I shall have occasion to dwell, chiefly, on the works of Mr. Home, to whose experience and rank, I most willingly pay every deference; and on Mr. Whately's improved practice. With all due respect to the character of these gentlemen, I shall take the liberty of making such remarks on their practice, as the documents given to the public in their treatises on this subject, may warrant.

The use of caustic in the cure of strictures, was certainly familiar to the old practitioners, but renounced (to use Mr. Sharp's words) "from the difficulty and almost impossibility of properly directing the instrument." Under the auspices, however, of the late Mr. John Hunter, this practice was revived; but in a very limited degree, and only in cases of extreme urgency. That it was sometimes ac-



accompanied with success, there can be no doubt; yet, notwithstanding the favourable result of some cases, it has been suspected, that Mr. Hunter's good opinion of the practice did not keep pace with his experience. This suspicion is confirmed by an observation of a gentleman of high character and reputation, (Mr. Carlisle) in a paper on the use of bougies, in which he states,\* " I have reason to believe, that his (Mr. Hunter's) expectations, were, by no means, so sanguine towards the end of his practice." †

As the difficulties attending the introduction of the caustic into a passage, so peculiarly constructed, were obvious to

\* Med. and Phys. Journal, Vol. III. p. 289.

† Mr. Hunter's first attempt was in the year 1752. He applied to the end of the bougie some salve, and dipped it into red precipitate. This, as might be expected, brought on great inflammation. To prevent this, he afterwards passed it through a cannula, but did not succeed in getting through the stricture, which led him to try caustic.



Mr. Hunter, he did not venture to revive the old practice without some modifications, and what he considered improvements. He adopted the use of a \* silver cannula, first suggested by Wiseman, but its unyielding materials were found ill adapted to the flexible canal of the urethra; and that the middle of the stricture, the part intended to be destroyed, was frequently left untouched, whilst only the angle, between the stricture and the side of the urethra, was exposed to the caustic. These objections, we are informed by Mr. Home, did not escape Mr. Hunter's penetration. He not only saw them, but devised a mode, by which they might be removed. This improved method was the

\* A method, similar to this, has been proposed by Mr. Cartwright, substituting the flexible gum cannula for the silver. This appears the only safe mode of applying caustic, excepting Mr. Whately's first improvement, of securing a small portion of powdered lunar caustic at the end of a bougie, by means of glue.



armed bougie. The account given of it is as follows:—"Take a bougie, of a size that can readily be passed down to the stricture, and insert a small piece of lunar caustic, but surrounding it every where laterally by the substance of the bougie." This Mr. Home considers a very valuable instrument, on account of the facility and safety, with which it conveys the caustic to the stricture; and, indeed, he adds, "the *quickness* with which it passes, prevents any injury to the membrane, where it is accidentally brought to oppose it!"\*

There are, however, objections made to this instrument by those who think, that the facility with which a bougie passes, depends upon the roundness of its point, and the smoothness of its surface. Some have even gone so far, as to think it the worst instrument for the purpose, that

\* Home, first edit. Vol. I. p. 126.



could have been devised. This is the opinion of Mr. Whately, whose work I shall notice hereafter, who, as a great advocate for the caustic practice, ought to be attended to in this instance. His observations are strong, and to the point: —“ For my own part” he says, “ I think that a worse mode of applying lunar caustic to a stricture, in the curved part of the urethra, could not have been invented; every one who has had much practice in passing a bougie into the urethra, knows, that unless *its point be round*, and the whole bougie smooth, it passes along this canal with great difficulty, and not without giving pain.\* As, therefore, the extremity of a bougie, thus prepared, cannot be made round, I consider it an instrument very unfit for the purpose; to say nothing of the caustic stone, dropping from the bougie while in the urethra.”

\* Whately, second edit. p. 103.



The bougie thus armed, according to Mr. Home's method, is applied to the stricture every other day, where the circumstances of the case, and the feelings of the patient admit. It has however in very obstinate cases, been applied every day. The first effect produced by it is thus described:—"As soon as the caustic begins to act, the surgeon who makes the application is made sensible of it by the smaller arteries of the parts beating with unusual violence, which is very distinctly felt by the finger and thumb that grasp the penis."\* It needs no remark, that the surgeon is not the only party, under these circumstances, made sensible of its action.

The pain this operation produces, differs in almost every patient, both in degree and duration. In some it goes off in a few minutes, in others it remains many

\* Home, second edit. p. 166.



hours, and even the whole day. In several instances I have known it produce diarrhœa; and in one person where this happened, it was five weeks before I could venture to proceed with the use of the bougie. A paroxysm of fever, or an ague fit as it is termed, is a very frequent occurrence; and I have often been questioned, whether “the caustic was strong enough”, where it failed to produce shivering. Others have been so determined to be pleased with what was to make them well, that they have expressed the utmost disappointment when this did not take place. Nay, we find on one old gentleman, of seventy-six, the caustic produced “rather a warm and pleasant sensation.” \*—  
De gustibus non est disputandum!

When caustic is employed with the intention of destroying a stricture, it can

\* Home, second edit. p. 401.



only accomplish that end, by inducing slough on the surface of the membrane, or by producing ulceration of the part; the extent of which must depend on a variety of circumstances. It has been proved, that the twelfth part of a grain of lunar caustic, produces a *slough* the size of a seven shilling piece.\* Mr. Carlisle is of opinion, that this substance seldom produces an eschar in the urethra; but he adds, “When, however, the caustic has the effect of producing a slough, I fear it will be found to extend further than the surface touched; and a large part of the urethra will mortify, so as to endanger the life of the patient. This calamity,” he adds, “I understand, has happened more frequently than is consistent with the unlimited recommendation of such remedies.”† There are very few, I be-

\* Whately, first edit. p. 25.

† Med. and Phys. Journal, Vol. III. p. 290.



lieve, who will not accord with this feeling; nor does the following circumstance, detailed by Mr. Home, tend to lessen it. "There is," says Mr. H. "a substance which in some cases comes away after the application of the caustic, either the same day, or the day following; it is dark coloured on the outside, and of a light colour within; is tubular, and of different sizes. In general, the portions are too small to afford any information respecting it; but in one instance, I procured a portion an inch long, and have preserved it in spirits. It is evidently the cuticular lining of the urethra. There is sometimes a succession of these cuticles brought away." \*

These are some of the most obvious inconveniences which may be always apprehended from the introduction of the

\* Home's Obs. second edit. p. 171.



lunar caustic; but we shall see, that these are not the worst. Inflammation, abscess, strangury, retention of urine, and hemorrhage, are by no means uncommon. Mr. Home mentions two cases in which a swelling in the perinæum followed the application of the caustic. I have met with this circumstance several times; once in a case that nearly terminated fatally, and to which Mr. Home was a witness. The case I allude to, was a gentleman of respectability in the city, who applied to me in the autumn of 1800. He had a stricture near the bulb of the urethra, to which I used a full sized armed bougie. Two days afterwards it was repeated. The next day I was sent for in consequence of his having been in constant pain in the part where the caustic was applied; in the evening he had a rigor; the pain increased; a swelling began to appear in the perinæum, and his water came away



with great difficulty in a very small stream; during the night he was so much worse, that his physician was sent for, and the next morning we met by appointment. In the course of the day he continued much in the same state; and on the following morning, he was so much worse, that I thought it prudent, with the consent of his physician, to propose farther surgical assistance. In consequence of which Mr. Home was sent for, and when he arrived, the swelling in the perinæum had very considerably increased. Mr. H.'s opinion was so unfavourable, that he recommended an opening into the tumor, which was accordingly made, and a quantity of fœtid matter, mixed with urine, escaped. This gave the patient some relief. Poultices and fomentations were applied, and in seven or eight days the patient was considered out of danger. The urine, however, came through the



opening for some weeks; after which the sloughs came away, and the parts healed. The patient then went to Bath, and, I believe, has since trusted entirely to the common bougie for the alleviation of his complaint. A similar case occurred to a medical friend of mine. After the third application of the lunar caustic, inflammation came on, accompanied with excessive pain in the part, and rigors. A large abscess formed in the perinæum, and the greatest part of the scrotum sloughed away, leaving the testicles completely bare. Sometimes an abscess has formed of less extent, and opened itself into the urethra, leaving a depending cavity, from which matter is constantly secreted. Mr. Primrose informs me, he has a very distressing case of this kind, at present, under his care, in a gentleman, who had the caustic applied to a stricture by Mr. Home. An abscess formed near the bulb of the ure-



thra, which burst internally, and discharged itself by the urethra. Mr. Cline was consulted, but no relief has been as yet obtained. Every other week there is a considerable discharge, which then ceases, till it re-accumulates. In this state it has remained twelve months.

That those who are afflicted with strictures, are liable to inflammation, from exposure to wet, and a variety of other causes, is well known; or, that these symptoms may arise from inattention, or improper conduct, on the part of the patient. Can we then doubt, that they may be produced by caustic application, even in the hands of the most skilful anatomical surgeon? It is no uncommon occurrence for the armed bougie to burn through the stricture, and some distance into the corpus cavernosum in a straight line; but this, like other difficulties, is



considered of no consequence; and we find even Mr. Hunter stating, "it does as much good as if it passed into the bladder:"\* and he adds, he has known several cases, where the bougie appeared to have the same effect, as if it had passed on to the bladder.

The circumstances attending a return of this complaint, after the cure by caustic, are always of an aggravated nature, and admit of very little relief. I have a man now under my care, who was relieved three years ago by the lunar caustic, on whom the smallest sized bougie can only be passed, nor does the rigidity of the stricture seem in the least to yield. Mr. Whately has witnessed these effects in many of Mr. Home's patients; one of these cases he states was truly distressing. Mr. Home had succeeded after fifty

\* Hunter on the Venereal, p. 127.



very painful applications of the caustic, in procuring a passage for his bougie into the bladder; “but in less than twelve months the stricture had again so increased, that it was with difficulty a fine bougie could be passed through it; and the patient was in extreme misery, from frequent and painful evacuations of urine.”\*

Dr. Andrews mentions the case of a patient who had six strictures, which were removed by fifty-four applications of the caustic. In twelve months four of them returned, and were again destroyed by fifteen applications of the caustic.† The mischievous consequences arising from the application of an extra quantity of caustic is very forcibly illustrated by some cases of Mr. Whately's, of stricture within a quarter of an inch of the external orifice of the urethra, in which Mr. Whately could observe the progress. “In one of

\* Whately, p. 114.    † Andrews's Obs. p. 116.



these cases (says that gentleman) I applied a larger quantity of lunar caustic, than I have usually employed. This produced a considerable slough; part of which was very visible. The application of the caustic was followed by a discharge, attended with considerable inflammation, around the orifice of the urethra, and an uncommon tenderness and irritability in the strictured part. The stricture was at first enlarged by the caustic, but in a few days it began to contract again; and, in the course of a week, the contraction was so great, as not to admit a bougie of much more than half the size it received before the application of the caustic. I endeavoured to prevent the contraction from becoming permanent by passing a bougie daily, and afterwards by directing one of these instruments to be worn for a certain length of time every day; but such was the uncommon irritability of the part, that in



the mean time the irritation and secretion were kept up, so as to prevent a perfect cicatrization, and the parts were not restored to their former quiet state, till nearly a month after this single application of the caustic. When the irritation ceased, I expected that the stricture would return to the state in which I found it before the caustic was applied; but in this I was disappointed; it was much narrower, and would not admit so large a bougie as I had then passed.\* After this the stricture was touched with kali purum, but without any amendment. The same consequences followed in another case, from an extra quantity of kali purum.

From the circumstances attending these experiments, we may easily conceive what effects a large piece of lunar caustic, when left in the urethra, would produce. We

\* Whately, p. 115.



are told, however, that this is an accident of very little consequence. Dr. Andrews, says, “ it is a fact of considerable importance to be known, that if the caustic should get loose, and be left in the urethra, it is not productive of *inconvenience*.”\* It would have added greatly to the importance of the fact, if Dr. A. had detailed some of the circumstances attending the accident that occurred to him.

It has been said, that the hemorrhage, which sometimes ensues after the application of caustic, is more alarming than really dangerous. For the extent, however, to which it continues, I need only refer to Mr. Home’s treatise, and the common experience of every surgeon who has used the caustic. In the perusal of Mr. Home’s works — “ the parts bled freely ;” — “ it continued for hours ;” — “ the

\* Andrews’s Obs. p. 125.



quantity lost we supposed to be several pounds;" \*—are expressions to be met with in several pages; and in one case it is observed, "the bleeding and pain continued several days." These are circumstances that are not regarded as objections to the practice, and the indifference with which they are viewed, is considered by Dr. Andrews, as the result "of cool and steady conduct." † He admits, however, "that if it (hemorrhage) was, *in a great proportion of cases*, to terminate fatally, it would then be a strong objection to the practice; but this (in a great proportion of cases) we do not find by any means to be true." This would, indeed, be a very strong argument against the practice; but admitting, as may be fairly inferred even from this account, that some instances have terminated fatally, surely, it is at least a strong objection, and enough to

\* Home, p. 325—464. † Andrews's Obs. p. 102—109.



justify Mr. Whately in complaining of the levity with which these objections are treated, as well as expressing his astonishment, at the coolness with which a surgeon views a chamber pot full of blood, and the ease with which he calls for another.\*

Mr. Carlisle speaks of it as one of the most dangerous consequences following the application of lunar caustic, and mentions a case in which the hemorrhage continued seven days;† in the two first the patient lost four pounds of blood, and nearly as much afterwards.

The frequency of this occurrence, (which from the structure of the corpus spongiosum, and the thinness of the partition interposed between that, and the mucous surface of the urethra, is accounted for,) in addition to the various circumstances

\* Whately, p. 119.

† Medical Journal, Vol. III. p. 290.



already enumerated, long since determined me to trust to milder means: and, fortunately, I have not to lament a fatal termination in any instance from this cause; yet I have to recollect much painful anxiety from the apprehension of it. In one case, after the eighth application of the caustic, on withdrawing the bougie I was instantly covered with blood, which came out, with a jet, nearly equal to the flow of urine. I must confess, whatever those accustomed to such accidents may think of it, that I was greatly alarmed; and as it happened in my own house, it was the more embarrassing: pressure and cold applications were used in vain; and it was some hours before it became sufficiently moderated, to allow the patient to be carried home in a sedan chair. The bleeding continued, at intervals, for several days; and it was five months before the patient, who was foreman in a manufac-



tory, recovered his strength sufficiently to resume his station. In another case, repeated hemorrhages had taken place, but had generally ceased after a few hours. One day, however, it continued to flow so copiously, that I was sent for. At the same time Mr. Heaviside was called in. Iced water was recommended, and pressure made on the part; by these means the bleeding was at length stopped. The man remained in a very feeble state for a long time, nor did I think it prudent to use the armed bougie on him afterwards.\* I could enumerate a great many instances where the hemorrhage equalled what is related of the preceding cases, were it necessary; but the fact is too notorious to

\* A colonel in the army was under my care last autumn, who came to town with a brother officer, under the same circumstances, who was recommended to a surgeon of great and deserved reputation; but, perhaps, too fond of caustic. The invalids frequently compared notes, and I had the detail of the " bleedings and pain," which sometimes caused a suspension of operations for many days.



require it. Of its importance, every man can judge for himself. Thus much I will say, that however far habit may teach a surgeon to regard these circumstances with indifference, he will not so easily succeed in making the patient, or his friends, believe, there is no danger, and that extreme debility is a matter of no consequence.

It is not a little surprising, considering the respect so universally paid to Mr. Hunter, that his doctrines on this important subject, should have been so soon departed from by his immediate disciples. Mr. Hunter states three cases only, in which he considers the application of caustic to be justifiable: \* “ First, where the stricture is so tight as not to admit the smallest bougie to pass. Secondly, where the orifice in the stricture is not in a line with

\* Hunter, p. 126.



the urethra. Thirdly, where the passage has been obliterated by disease, and the urine passes by fistulæ in perinæo.\* The first very rarely occurs," says Mr. H. "for if the passage in the stricture, be in a line with the general canal, a small bougie will commonly pass, and although it may not readily do so upon every trial, it will be sufficient to make way for another bougie, and THAT IS ALL THAT IS WANTED." It is evident, Mr. Hunter considered the remedy in the other two situations, as only a forlorn hope, when he says, that in cases of this sort, he has succeeded beyond his expectation. To the ordinary cases of stricture, the application of this violent remedy, must of course be more objectionable. We are told, that some trifling strictures have been removed by two appli-

\* Mr. Hunter, I am informed, used to shew a preparation of this kind in his lectures, always remarking, that had he attempted the caustic in that case, he should have made a new passage between the bladder and rectum.



cations of it, and some even by one. But to such cases as these, could it be necessary? The impediment which usually constitutes a recent stricture, is the contraction of a slender piece of the inner membrane of the urethra, only a few lines in thickness, and which may be broken down by a slight mechanical force. That the armed bougie is not in the least adapted for removing an obstruction of any extent, must be equally obvious. It could only act upon the anterior part of the stricture, without a prospect of burning the whole extent of the contraction.\* “Even could we imagine,” observes an ingenious au-

\* To a gentleman, with whom I was well acquainted, it was applied upwards of fifty times, to a supposed stricture near the neck of the bladder. When he died, the obstruction was discovered to have arisen from an enlarged prostate gland. The caustic had eaten an inch into the substance of the gland. Many instances of a similar kind might be enumerated, but it is not necessary, as they apply more to a want of professional discrimination, than to the point in discussion.



thor, " that it had this power; our judgment and common sense would revolt at the doctrine of this being the proper plan to be pursued." In all the other cases of obstruction, as tumors, enlargement of the corpus spongiosum, &c. it must be equally inefficacious and improper.\*

I shall now take leave of the armed bougie, fully and cordially agreeing with an opinion entertained by many others, that it is the most objectionable mode of applying caustic:—at the same time I am ready to acknowledge the obligation we are under to Mr. Home, for the exertion and talents with which, it is universally admitted, he has elucidated a difficult and important point of surgery.

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\* First Lines of the Practice of Surgery, p. 429.



In 1801, Mr. Whately's book, to which I have so frequently referred, made its appearance, in which he proposed to obviate these inconveniences, by securing a small quantity of powdered lunar caustic, at the end of a bougie, by means of common glue,\* which, when sufficiently hardened, was covered with a thin coating of bees wax. The advantages attending the bougie, prepared in this manner, are thus described:—"In the first place, the bougie may be of any size; and may be readily passed into, or a little beyond, such strictures as are extremely narrow. Secondly, from the protection afforded by the wax coating, no part whatever of the caustic touches the sides of the urethra,

\* A plan, similar to this, has been recommended by Mr. Sherwin. He advises powdered lunar caustic to be applied to the stricture, by means of a whalebone bougie, having a small depression at the point, in which the caustic is to be retained, by adhesive plaister, or any other viscous substance.



in it's passage to the stricture. Thirdly, a determinate quantity of caustic may be applied with certainty. Fourthly, the caustic cannot be separated from the bougie. Fifthly, the caustic may be made to act on the whole surface of the stricture at each application. Sixthly, where there are more strictures than one, the caustic may be directed and confined in its action. Seventhly, fixing the caustic with glue has this additional recommendation; we can attach it with safety to the very extremity of the bougie, and thereby apply it with more certainty to an impervious stricture, than is practicable with the common armed bougie." \*

However, these seven reasons, so systematically arranged, are insufficient to support the improved practice, more than three years. For in year 1804, a more

\* Whately, first edit. p. 68.



efficacious, less painful and hazardous remedy, is proposed. This remedy is the kali purum, or pure potass, once called lapis infernalis; and which is in common use for making the deepest slough. At first sight it appears strange, that the most ungovernable of the whole fraternity of caustic substances, should turn out to be an "easy, mild, efficacious remedy." The reader, perhaps, may be a little inclined to scepticism on this point, particularly if he should happen to recollect, that Mr. Home holds nearly the same language of the lunar caustic. But we are informed, that the kali purum acts upon different principles. It is true, the lunar caustic takes off the cuticular lining of the urethra: not so the kali purum—that only *abrades*—and the degree of abrasion is, moreover, under the control of the operator, whose business seems to be, to effect a sort of chemical combination between



the disease and the remedy. The mode of proceeding is as follows:—A bougie is chosen just large enough to enter the stricture with some degree of tightness; at the round end of which a small hole is to be made with a pin; into which a small portion of kali purum, less than half the size of the smallest pin's head, is to be placed; the hole is then to be contracted by the fingers, and the remaining vacancy filled up with hog's lard. The operator having oiled it, is to pass it by a gentle motion to the anterior part of the stricture, where it is to be kept for a few seconds, until the caustic begins to dissolve. It is then to be pushed forward about one eighth of an inch, and there retained a second or two, and then carried forward through the stricture. By this means, the kali being diffused over every part of the strictured surface, produces a slimy substance, compounded probably of the kali,



the abraded matter of the stricture, and the oil and lard used in the operation. In this manner, says Mr. Whately,\* the kali penetrates, and dissolves the hard and diseased surface of a stricture, with a facility, which no other remedy, that can be safely applied, will equally do. The safety, however, of this remedy, can only consist in the smallness of the portion of kali directed to be used; for it is hardly to be doubted, that if it be employed to have any efficacy as a caustic, it cannot be less injurious, or objectionable, than the lunar caustic.

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Having fully pointed out the dangers and disadvantages of the application of caustic in these complaints, I shall now proceed to investigate the merits and demerits of the common bougie. It should

\* Whately, second edit. p. 57.



be recollected this is only a comparative view.

The introduction of the common bougie, may be considered as a very important improvement in the practice of surgery. The credit of this improvement appears to be due to Mr. Daran. Till his time, the treatment of strictures made little progress. The extensive employment of it, and the reputation he acquired by what he called medicated bougies, is well known. From this period, the common bougie, as at present employed, came into general use.

The principal objections to it are, first, that the cure is not so permanent as that made by caustic. Secondly, that the irritable state of the stricture is kept up and even encreased by it.—With respect to the first and most formidable objection, it



would certainly be a presumptive argument against the use of the bougie, if it failed oftener in this respect, than any other remedy; but this is at least doubtful, and we know that the consequence of a return, after the use of caustic, is a stricture of a more permanent and aggravated nature.—But admitting, that it did return oftener, it would then remain to be considered, whether it would not be better to submit to the return of a complaint, which could be relieved by the milder means, than secure the chance only of a longer respite by so painful, and sometimes, dangerous a remedy? In many instances we too well know, that the remedy is more injurious than the disease, and the patient is advised to submit to an evil, the inconvenience of which is ascertained, rather than risk the danger of loading himself with greater and uncertain ills. It is undoubtedly a melancholy fact, that where



the disease has existed a long time, no person is safe from a return of this complaint, whatever methods may have been resorted to in his cure. Mr Hunter says, "as strictures are diseases that commonly recur, no man who has ever had a stricture, and is cured of it, should rely on the cure as lasting, but should always be prepared for a return." \*

As to the second objection, that the irritable state of a stricture is kept up and even encreased, and that swelled testicle is sometimes produced by it. Can we in these cases believe, that the same or greater inconveniences would not have happened from the armed bougie? It should be recollected, that the same mechanical instrument is used in both cases, only one has the addition of a stimulating substance at the end of it. This sub-

\* Hunter, p. 124.



stance does not alter the shape or texture of the bougie. May we not rather attribute these circumstances, when they do occur, to the injudicious manner in which the bougie was introduced into the urethra? I have repeatedly seen surgeons attempt to force a full sized bougie down the urethra, before they knew whether the smallest would pass.\* Supposing, however, these derangements do occasionally occur, what are they in the balance, against the mischiefs, that are admitted to arise from the use of caustic—and with respect to the irritation and spasm that are sometimes met with in strictures, I have seen Mr. Howard's observations verified in many cases, where the symptoms have been greatly relieved by the

\* There is frequently the same want of caution in the examination for the stone: the iron sound is passed into the bladder without any previous investigation of the state of the urethra.



bougie remaining in the anterior part of the passage, for a few hours.

The following is Mr. Howard's account of the SPASM that occasionally takes place. "This disposition to contraction," says Mr. H. "originates from the stricture itself, and thence extends gradually to the bladder and contiguous parts, and anteriorly, in a less degree, to the urethra. To overcome or moderate this propensity in the first instance, there is a necessity for the means of producing anodyne relaxation, which need not be repeated. The second remedy for counteracting this obstacle, is to dilate the passage with a bougie; the simple introduction of which will give the parts on this side the stricture, the stricture itself, and the neck of the bladder beyond it, a disposition to open. And it is a singular fact, that it will frequently do this, although it be impossible



to pass the stricture; and when the irritability of the urethra at that part is so great, that it cannot bear the contact of the extremity of the bougie. Wearing a few inches of this application in the anterior part of the passage only, for a few hours every day, will sometimes mitigate the symptoms, and diminish both the difficulty and pain of discharging the water, more particularly when the urethra is very tender, or much contracted.”\*

It has been the practice with some surgeons to force a full sized bougie through a stricture, that only allowed a small one to pass. With this view metallic bougies are sometimes used. The late Mr. Cruickshank was in the habit of employing a large silver probe for this purpose. By this mode of proceeding, the stricture

\* Howard's Observations on the Venereal Disease, Vol. III. p. 158.



must either be torn, or violently stretched, so as to destroy its contractile power, independent of the inflammation that would probably ensue. I have known the catheter used with considerable violence to break down an obstruction, and repeated for several days following. This mode had been practised on a patient whom I saw a few weeks ago. The stricture certainly was broken through, and a full sized bougie passed into the bladder; but the urethra was in such an irritable state as to keep him in constant dread of making water for some months afterwards. Such rough treatment as this, does not differ many degrees from the practice already reprobated. It is by patiently persevering in gentle means, that success is to be secured or expected. “ The bougie should be increased in size according to the facility with which the stricture dilates, and the ease with which the patient bears the



dilatation. If the parts are very firm, or very irritable, the increase of the size of the bougie should be slow, gradually stealing upon the parts, and allowing them to adapt their structure to the increased size." \* This is well expressed by a French writer, who describes this gradual stealing upon the parts, as effected by "little and little." "La meilleure méthode est d'introduire dans la verge des bougies qui par leur volume et leur fermeté puissent écarter peu à peu les parois de l'urethre, et en même tems ramollir et relâcher ses fibres." †

With respect to the time a bougie ought to remain in the passage, that must be determined by the feelings of the patient; nor should it be laid aside for some months after it passes with facility: "quoiqu'on

\* Hunter, p. 121.

† Cours de Chirurgie, Vol. IV, p. 166.



urine à plain canal, il ne faut pas laisser de continuer l'usage des bougies tous les jours pendant quelques heures, ensuite toutes les semaines, et enfin tous les mois." \*

The good effects of stretching a constricted part is frequently witnessed in contractions of the œsophagus and rectum. A woman applied to me on account of an obstruction in her throat, producing a total inability of swallowing any solid substance; of which complaint her father some years before had died. With a view of knowing in what part of the œsophagus the stricture was, a probang was introduced. When it arrived at the obstacle, the woman was very desirous it should be pushed through by force. Several attempts were, however, made in vain: at last the woman declared she felt the part give way, when she applied her hands to

\* Cours de Chirurgie. Vol. IV. p. 167.



the probe, and forced it through. She was afterwards furnished with a proper bougie, by the daily and frequent use of which, in a few months she became quite well. I have seen several cases, of a similar nature, considerably relieved by these means. Mr. Home records one case of a lady, nineteen years of age, who was perfectly cured by it. Mr. Samuel Sharp was of opinion, with many others of equal character, that the mere stretching a constricted part, was not only equal to procure an abatement of symptoms, but to effect a cure. Speaking of obstructions of the urethra, he observes, "that it is very remarkable, in regard to many of these strictures, that the symptoms arising from them shall be extenuated by acting against the stricture, that is to say, by introducing a bougie big enough to distend the urethra, the painfulness of the stricture shall cease and the strangury



shall abate, so that a man who is accustomed to make water every hour, shall by wearing a bougie, retain it three or four hours."\* But, perhaps, the most unexceptionable authority is Mr. Hunter; every advocate of the caustic practice must pay deference to his opinion, and more decided language need not be sought. He expressly states, "*that if the case is such as to admit the end of a small bougie to pass, let it be ever so small, the cure is then in our power.*"†

The late Mr. John Howard, who published observations on the venereal disease, after Mr. Hunter had published his, strongly recommends the use of the bougie. He dedicates the work to Mr. Pott, to whom he had the good fortune to be confidential assistant for many

\* Critical Inquiry, p. 145.

† Hunter, p. 118.



years. It was during that period, and from the opportunity afforded of seeing a great variety of cases, that the facts and reflections contained in it, occurred to him. It is a fair inference therefore, that this practice was approved by Mr. Pott, and, that had he given to the world his opinions upon the subject, as we are told was his intention, they would have confirmed it.

Mr. Howard states some cases of retention of urine arising from stricture, attended by Mr. Pott and himself, that were relieved by the bougie. In one case of a gentleman, fifty years of age, upon a consultation with Sir Cæsar Hawkins, Mr. Adair, and Mr. Pott, it was agreed, that the bougie should be used, after a preparation by the warm bath, &c. Mr. Howard continues the case as follows:—  
 “ Although the disposition to contraction



in the urethra in this case was strong, yet the irritability of the parts was not great, and he bore the introduction so well, that I was soon enabled to pass the bougie night and morning. The seat of the disease was in the bulbous and membranous parts of the urethra. In three weeks a very considerable progress towards the bladder was made, and in proportion to this progress, so his symptoms lessened. He had less mucus in his urine; the pain, irritation, and frequent desire to empty the bladder were greatly diminished, he slept better, and was evidently mended as to his general health. Three weeks after the first, a second consultation was held. I passed a bougie, and the gentlemen were all of opinion, as well as myself, that it had entered the bladder. There was, however, a circumstance still continuing, which was remarkable, namely, the disposition in the urethra to contract



on the bougie. Upon this Sir Cæsar Hawkins observed, that the medicine the patient had been for some time taking, namely, the bark, would frequently have the effect of encreasing this disposition; and he said further, there was every reason to suppose, from the rapidity of the cure, that notwithstanding the length of time the complaint had remained, the parts were not much diseased."

"It was in the month of August, when Mr. Pott generally went out of town, that this gentleman, among other patients, was left under my care. I was not a little surprised to find that the symptoms, although greatly lessened, did not go off upon the bougie (as we all supposed) entering the bladder, but I soon found I had a further progress to make; and luckily, having neither an irritable patient, nor a diseased prostate in the way, the obstacle was over-



come, and the bougie, at length, finally got into the bladder;—upon this the symptoms soon ceased, the parts recovering their long lost action, and the patient his former health.” \*

In another case, the patient was relieved by the warm bath and opium, but refused any further assistance. “ Although,” says Mr. H. “ this gentleman knew he had a stricture, and that his life had been put to the hazard, yet he would not submit to use *the only means* that could possibly serve effectually in future, — I MEAN THE BOUGIE.” †

Since this, Mr. Howard has published an appendix to his treatise, and in a clear and concise manner stated his opinions of the new practice; before the introduction

\* Howard on the Venereal Disease, Vol. III. p. 162.

† Id. Vol. IV. p. 154.



of which, he had long been accustomed to cure, by far the greater number of strictures, without the use of caustic; nor does he see any reason for using it, when they can be relieved with certainty in the old way. But it may, he conceives, be adopted under certain modifications, when that method fails. The application, however, should then be confined to strictures in the anterior part of the urethra; and the cure finished by the bougie alone. This he contends for as a leading principle; and he further adds, that “many thousands of persons have not only been relieved, so as to pass their lives comfortably, but cured by the old method of using bougies.”\*

In confirmation of these opinions, the testimony of Mr. Benjamin Bell, and many others of equal respectability, might be added; but I will not detain the reader,

\* Howard, Appendix, p. 427.



further than with some observations of Mr. Whately's, which are too important to be omitted.

Mr. Whately seems to have considered the common bougie as a much more efficacious, as well as safer instrument, than the caustic, in the manner proposed by Mr. Home; and surely whatever advantage may be derived from his improvement, no one will be hardy enough to propose a caustic of any kind, if the common bougie may answer the purpose. In the first edition of that gentleman's work is the following passage:—"Every one, acquainted with the use of bougies, knows their salutary effects in all recent strictures; nor are they less useful in a *considerable number* of those of longer standing; in many of which, only the smallest bougie can at first be passed. Even in those habits where the bougie irritates at first,



and cannot be kept in the passage for any length of time together, it is surprising to observe what may be done, by persevering cautiously and judiciously in its use. And although the cure of strictures by bougies is not always certain, yet, in many instances, the complaint does not return for a number of years, although no other means be employed for its removal. I have dilated strictures of the worst kind, by the common bougie, where the patients have remained well for five, and even ten years.”\*

Most of Mr. W.’s cases confirm these observations, particularly the first; part of which I shall take the liberty of quoting.—“A man, aged forty-six, had a severe gonorrhœa in the year 1770; for the cure of which he used no injections. The gleet (as he called it,) continued for

\* Whately, first edit. p. 63.



two years, and then ceased. About twelve years afterwards, he perceived the first symptoms of a stricture in the urethra; which in the course of years encreased so much, that it was with difficulty he could make water. At this time he applied to me. By an examination with a bougie, I found a stricture near the bulb; but so much contracted as not to suffer the finest bougie, I could procure, to go through it. However, I passed one as far as the strictured part, and retained it in that situation for some hours every day. At the end of a fortnight, the stricture dilated so much, as to admit a fine bougie to pass through. By persevering in this method, and gradually encreasing the size of the bougie, the passage was in a few weeks brought nearly to its natural width. The patient remained well about seven years. At the end of eight years he returned to me for the cure of his



stricture; which was again so contracted, as not to suffer one of the finest bougies to pass through it; but by following the same method as before, for six days, a bougie went through, and soon afterwards I succeeded in producing a sufficient dilatation of the stricture. After this, he remained well about five years; but was under the necessity of again applying in the year 1797 for relief." Mr. W. then goes on to relate, that the regular use of the bougie was interrupted by ill health, on account of which he went into St. Bartholomew's Hospital in February 1798.\* During his stay there, the caustic bougie was employed and persisted in nearly seven months, and applied sixty-two different times, without any progress whatever being made in the dilatation or destruction of the stricture. In this situa-

\* He was admitted under the care of Mr. Long, who would not give his consent to the use of the caustic.



sion he applied to Mr. W. a fourth time in August 1799. After a few days a small bougie went through the stricture, but it was found impossible to dilate it, more than to admit a middle sized bougie. This determined Mr. W. to try the common caustic bougie, which he did three or four times without success. This failure gave rise to the experiment of passing into the stricture a small quantity of powdered lunar caustic on the point of a small bougie, made secure by a thin coating of glue. By this mode, some relief was obtained, and he was able to follow his employment, which he had not done before for more than three years.\*

In this case, and a worse is seldom met with, the stricture was dilated by a common bougie four different times, in the course of seventeen years; and I believe

\* Whately, first edit. p. 82.



no one will doubt, that had the man taken the least pains and attended to the occasional introduction of the bougie, which under such circumstances ought never to be neglected, he would have remained well from the period of his being first relieved.

It may not be improper to notice, on this occasion, the apathy with which persons afflicted with this complaint, too frequently view their situations. The medical practitioner, alive to the horrors of suppression of urine, and other miseries, attendant on diseases of the urinary organs, cannot fail to regard this indifference with astonishment; and unfortunately, too often are they called to witness its fatal effects. To this indifference—to a want of proper personal prudence, and in some instances, to a false delicacy, many valuable lives have been sacrificed. It has fallen to my lot to witness many unhappy in-



stances of this kind ; and I will relate one in private life, which, as it occurred to a person with whom I was acquainted, and was the cause of infinite regret to many of my most intimate friends, made a great impression on my mind at the time.

Mr. B. a gentleman upwards of fifty years of age, who had passed many years in a convivial circle in the city, was troubled in the latter part of his life, with great difficulty in voiding his urine. Although this infirmity was so distressing, as to have been notorious to all who knew him, he always treated it lightly, and never till within a few weeks of his death, understood its importance. In the summer of 1795, he went to Margate with his family, being in perfect health and spirits. He was on the water when a very heavy rain came on, which completely drenched



his clothes, and the next day he was seized with rigors. He nevertheless, went out for two or three days following, concluding the sensations he felt, arose from having caught a slight cold. The difficulty of making water he did not concern himself about, though there is every reason to believe, that a complete retention had taken place. His general illness caused medical assistance to be required; but no notice was taken of the urinary complaints, and it was not till twelve days had elapsed, that a discoloration of the skin, about the pubes, penis, and scrotum, led to a discovery of the real state he was in. My father was immediately sent for from London; when he got to his patient, he found all the parts above mentioned, in a state of sphacelus. The bladder had discharged its contents, which loaded the cellular membrane with urine, from whence it was dripping by twenty



orifices. Pain had ceased; and, although in the most deplorable situation imaginable, he had strength to support life nearly a month.\*

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From the complex nature of strictures, it must surely be admitted by every unprejudiced mind, that even presuming the situation of a stricture to be precisely ascertained, each different form of this

\* Since these pages were in the press, another instance has occurred to me in a near relation, a gentleman, about thirty years of age, whom I accidentally discovered to be in great distress from retention of urine. Finding him in violent pain, and enquiring the cause, he told me, "it was *only a strangury*," which of late years, always troubled him after taking a little more wine than usual. On examining him, two strictures were found, and the bladder was felt distinctly, above the pubes. It was with difficulty a small elastic-gum catheter was introduced, by which nearly three quarts of water were discharged. He had not voided more than a few drops of urine for four and twenty hours; and, though suffering extreme pain, was very far from supposing that any danger attended it.



disease, presents difficulties that must, with every improvement, render the direction of the caustic to the exact spot, a matter of great uncertainty. If then this end is still unaccomplished, the observations of Mr. Sharp remain in full force. "The objections," says he, "to the use of caustics where the difficulty and almost impossibility of directing them, so as to eat through all the diseased parts of the urethra, without destroying the sound part; the impracticability of *preventing the urethra from contracting when it healed, as much, if not more than it was, at the time of employing the escharotick*: and lastly, the pain was so excruciating, and perhaps the application so poisonous, that immediate mortification of the scrotum, penis, and bladder, were sometimes well known to ensue: \* upon these accounts, the use of escharoticks seems to have been

\* Critical Inquiry, p. 151.



entirely rejected.”\* There are few, I believe, who will not think this was sufficient ground for abandoning them; and viewing the fairest representations of all the improvements, suggested in the application of escharoticks to the diseases of the urethra, must we not still agree, that “ces remèdes enflammoient, rongeoient et ulcéroient ce conduit—et bien loin de procurer du soulagement, après la cicatrice, le conduit de l’urine se trouvoit encore plus étroit.”† That there are circumstances in which the application of the caustic may be attempted as an experiment, and under certain modifications, I am ready to admit; but I believe those cases to be

\* Mr. Bromfield was of the same opinion. “It is well known,” he observes, “that *caustics* and *escharotics* are applied with advantage to parts within our reach; but the uncertainty of their being conveyed immediately to the part affected in the *urethra*, and the injury they must do sound parts, has occasioned their being exploded.”—Bromfield’s *Chirurgical Observations and Cases*, Vol. II. p. 297.

† *Cours de Chirurgie*. Vol. IV. p. 165.



very few, and the prospect of success, as far as regards the cure of stricture, to be very precarious. Here, as in many other situations, where there is doubt as to the probability of success, and where the mode of cure proposed, is both painful and hazardous, the patient *only* ought to decide. It is for him to make his election, whether he will go through the new rough road, instead of the smooth old one. Every young practitioner will do wisely to act on this principle; for one unsuccessful operation may be more painful to his feelings, and do more injury to his fame and fortune, than an hundred successful cases can repair.

Thus far I have endeavoured to shew, that the use of the common bougie should be considered as a leading principle in the cure of every description of stricture in the urethra. “ It requires patience, cool-



ness, and perseverance. If the surgeon can make any progress, though slowly, he must be contented. If after the exertions of many days he once gets through, he will be compensated by seeing the ease and comfort of the patient, and the pleasing prospect of being soon at the end of his labour." \* I will conclude with applying here, an observation used by Mr. Whately on another occasion. " If, therefore, by this easy, safe, and mild method of treatment, relief can occasionally be given to the close of life, without the patients suffering much inconvenience or pain from the disorder, it is certainly more adviseable to pursue this plan of treatment, than to make use of a remedy, which has in some instances produced even fatal consequences." †

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\* Howard's Treatise, Vol. III. p. 161.

† Whately's Observations, first edit. p. 64.



IT would be needless to trouble the reader with a long detail of cases. The following are selected from a great many, and are given in confirmation of the foregoing observations, with a view of shewing how frequently strictures exist, without the patient having any knowledge of it.

### CASE I.

A gentleman, aged thirty-five, who had been married upwards of nine years, consulted me for a discharge from the urethra, which had troubled him in a slight degree for ten months, but had increased so much as to alarm him, and led him to believe it was the remains of an old venereal complaint. He said, he made water very well, and in a full stream; but on desiring him to make water in my presence, it appeared



he had deceived himself in this particular. He then admitted, that he had not made water in a fuller stream for a great length of time, but that he had not thought it of any consequence. On examination by the bougie, a stricture was found at five inches and a half, and another at six and a half. They were dilated in nine weeks, and very shortly after the discharge entirely disappeared.

## CASE II.

A gentleman, aged thirty-four, wrote to me from the country on account of a discharge he had from the urethra; but before my answer reached him, it had stopped. A twelvemonth after he called on me, having a running, which he suspected was a clap. On questioning him, it appeared, that he had never been quite free from a trifling gleet. On this account, as



there was no inflammation, a bougie was introduced, which stopped at five inches and a half. By a little perseverance it passed on. The next day the discharge was rather increased, which confirmed the patient's suspicion of its being venereal. At my solicitation he was induced to wait two days, when it was so far lessened, as to clear up his doubts. The bougie was then used every day, and he got well without any unpleasant symptoms.

### CASE III.

Captain — had been troubled with a discharge from the urethra for many months. A stricture was found at five inches and a half, and another at six inches; the latter was extremely irritable, as was the whole of the canal. I applied the mercurial ointment, lowered with some spermaceti ointment, which produced a



slight sensation of warmth; in a few days this was not felt, and a moderate sized bougie passed through the stricture, without any pain. The bougie was gradually increased in size, and at the end of two months, a full sized bougie could be passed into the bladder.

#### CASE IV.

Major ———, about thirty-five years of age, applied to me to examine whether he had strictures. He said he could make water very well, but that he was living with a friend who was suffering dreadfully; that his mind was so affected by it, that he could not rest satisfied till he was sure he was free from any symptom of the complaint, particularly as his course of life, for years, had been such as to warrant the expectation of it. I passed a full sized bougie as far as the bulb of the ure-



thra, but could not get it further; it was therefore withdrawn, and I could not then persuade him to let me try a smaller size. His distress was very great, though he confessed he did not feel the least pain on its introduction, yet the sensation at taking it out, he said, was horrible.\* In a few days, he consented to another trial; a moderate sized bougie passed through without any pain, and in seven weeks, a full sized bougie passed the stricture.

### CASE V.

Colonel ———, on his arrival from India, consulted me for a gleet. He permitted me to examine the urethra; the bougie went as far as six inches, with great ease, when it stopped. A smaller sized bougie was introduced and passed through

\* It is not uncommon for persons not to complain when a bougie is introduced, yet faint immediately it is taken out.



the stricture. This was repeated daily for a few weeks, when he left town, the urethra being very nearly restored to its natural size. He was not aware of any difficulty in voiding his urine; but when the stricture was dilated, he said, it explained to him a sensation he did not before understand, which was always left in that spot, for some minutes after he had made water.

## CASE VI.

A respectable tradesman, in Westminster, applied to me for the cure of a gleet; for which he had been using a variety of injections, and taking bark to strengthen his bladder, which he said he was advised to do, as it was so weak he could not hold his water. On examination, the glans penis appeared highly inflamed; the orifice of the urethra having a pouting appear-



ance; I therefore postponed any further investigation of his complaints, until the inflammatory symptoms were abated. In a few days the parts were in a state to admit of an examination with a bougie. I found a stricture at five inches, and another at five and a half. In the course of three weeks they were sufficiently dilated to admit a full sized bougie, which passed on to another stricture at six inches and a half. Through this I could only pass a small sized bougie, which gave so much pain, that I was obliged immediately to withdraw it. Four days afterwards I introduced a small bougie a second time, which did not give him so much pain as the former application, and remained in ten minutes. On the third day it was repeated, and afterwards every second day for nearly a fortnight. At this time he could retain his water, and was in other respects, in a comfortable state; but having



some business to transact at Portsmouth, he left town, promising to pass the bougie himself regularly. In about three weeks he returned, and his complaints were not worse. A moderate sized bougie passed very readily on to the bladder, and the discharge had nearly stopped. He afterwards submitted to the regular use of the bougie, and continued it until he was completely relieved.

## CASE VII.

A gentleman, who was to be married in a few days, applied to me, having a trifling discharge. He gave me leave to pass a bougie, which stopped at a stricture about six inches, which was completely removed by the use of the bougie. He had no difficulty in making water, nor any symptom, indicative of his complaint, excepting the discharge.



## CASE VIII.

A gentleman, about forty years of age, applied to me for the cure of a hydrocele. A few days after the operation, (injection), he told me he was sure the inflammation had produced something in the urethra, for he felt constant pain in the passage below the scrotum. I questioned him as to the probability of stricture; but he said it was impossible, as his water came in a full stream, though he thought it troubled him oftener than usual. On examining him with a bougie, I found a stricture near the bulb of the urethra, through which a moderate sized bougie only would pass. By using the bougie a few weeks, the urethra was dilated sufficiently to admit one of the largest size.



## CASE IX.

A young gentleman, about twenty years of age, applied to me for the cure of a gleet from the urethra, which had been on him upwards of a year and a half. He said, that he had lately lost his flesh, had no appetite, and that he was frequently troubled with shiverings and sickness, and he was apprehensive, if something was not speedily done for his complaints, he should get into a decline. He had had a violent gonorrhœa a year and a half previous to coming to me, for which he had used injections, and the running had never completely ceased from that time. I passed a full sized bougie as far as four inches, when it met with resistance, and gave him pain, which left him instantly on the bougie being taken out. The next day a smaller sized bougie passed



through the stricture as far as five inches and a half, where it stopped; but after remaining a few minutes, it proceeded on to the bladder. Two days afterwards the operation was repeated, but the bougie, as on the first attempt, did not pass the second stricture, till after it had lain in the urethra nearly a quarter of an hour. This circumstance continued for six days, when it went through with tolerable ease.

### CASE X.

J. H. a married man, aged thirty, applied to me for the cure of a gleet. On questioning him, I found he made water eight or ten times a day, and that he could not retain it when he had occasion. Although he was in great distress from this circumstance, as it was an interruption to his employment, (as marker at a billiard table), he was not in the least aware that it



arose from any impediment in his passage. On examination there was a stricture at three inches and a half, another at five, and another at six and a half. The first was easily dilated, and the others were made in a very comfortable state in a few weeks, by the use of the bougie, and the occasional application of the unguent hydrar. He continues to use the bougie, and remains well, having no difficulty in retaining his urine.

### CASE XI.

A young gentleman, in one of the public offices, called on me with a purulent discharge from the urethra, which he said came on suddenly, and as far as he knew, without any cause. He had contracted a gonorrhœa a few months before, for which he said he had used some strong injections, given him by a friend, that



cured the complaint in a few days. On questioning him as to his water, he asserted it came very freely. As I had suspicions of his having a stricture, I requested he would permit me to pass a bougie, which, after much persuasion, he consented to, and a stricture was found at five inches and a half. As there was some inflammation, the operation with the bougie was deferred for a few days, till the discharge had nearly ceased. He had the bougie passed regularly, and in the course of three weeks, the urethra was dilated to its natural size.

## CASE XII.

I performed the operation for the radical cure of an hydrocele on a gentleman, not long since, who after a few days told me he was sure the inflammation had produced something in the urethra, for he



felt constant pain in the passage below the scrotum. I questioned him as to the probability of stricture, but he said it was impossible, that his water came in a full stream, though he thought it troubled him oftener than it used to do. On examining him with a bougie, I found a stricture in the perinæum, through which a moderate sized bougie only would pass. By using the bougie a few weeks, the urethra was dilated sufficiently to admit one of the largest size.

### CASE XIII.

Suppression of urine, arising from stricture in the urethra, relieved by catgut bougie.

On Thursday, July 30, 1807, I was called up by a professional gentleman in the neighbourhood, to visit a naval officer



at Hatchett's Hotel, with a retention of urine. I found him in extreme pain, not having passed any urine for fourteen hours. His bladder was very tense, and he had constant straining.

On passing a moderate sized bougie, it met with an obstruction about six inches down the urethra. This was withdrawn, and a smaller bougie was attempted to be introduced, but without success. I then took a fine catgut bougie, and passed with great caution as far as the stricture, and in a few minutes was fortunate enough to get it through the stricture. Having accomplished this, and directed him to take sixty drops of laudanum, and to be kept as quiet as possible, I left him for nearly two hours. On my return he was on his feet out of bed, with the urine trickling in a very small stream by the sides of the bougie; in this way he stood nearly an



hour, and voided three pints of urine. The catgut bougie being perfectly soft was taken out, and a small sized common bougie introduced, and the patient put into bed.

Four hours afterwards I saw him again; he had been to sleep, and was considerably relieved. As he complained of an irritation to make water, the bougie was withdrawn, and he voided, with some difficulty and in a very small stream, about three-quarters of a pint. The bougie was again introduced; it passed with greater ease than it had done before. He was now perfectly composed in his mind, and shortly after he was put to bed, he fell asleep, and continued so six or seven hours. When he awoke the bougie was taken out, and he passed about half a pint of urine, with much less straining, but still in a very small stream. The opiate was repeated at



night, but in a less quantity. He passed a good night, and the next day was considerably better. From this time he continued to mend; the bougie was passed daily and persisted in, till the passage was sufficiently dilated to admit of nearly a full sized bougie. It is now only used occasionally.

THE END.