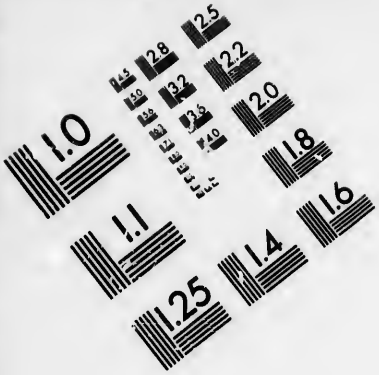

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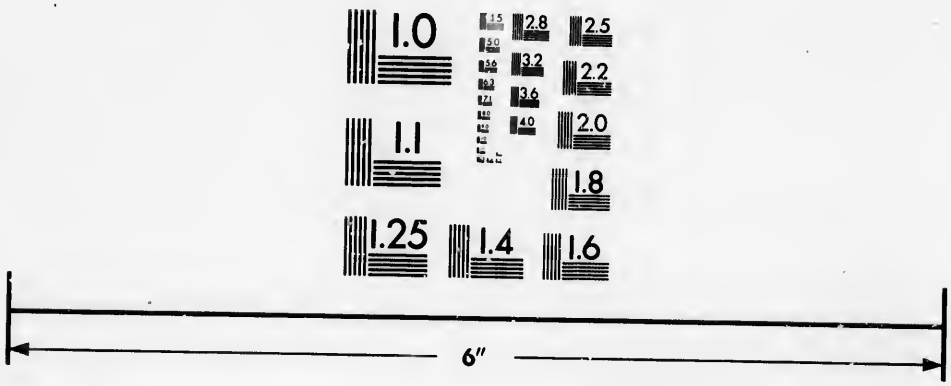

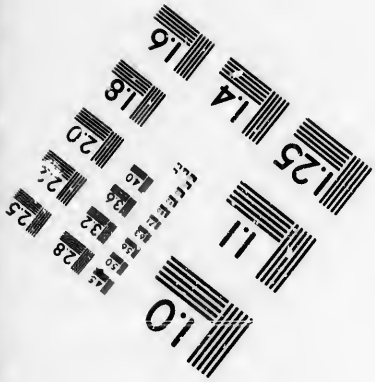

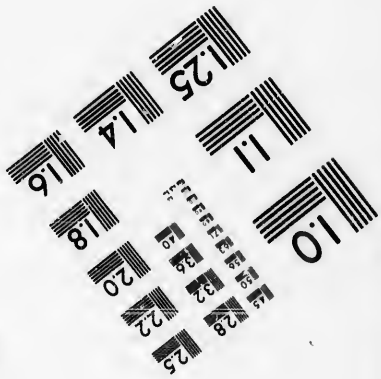

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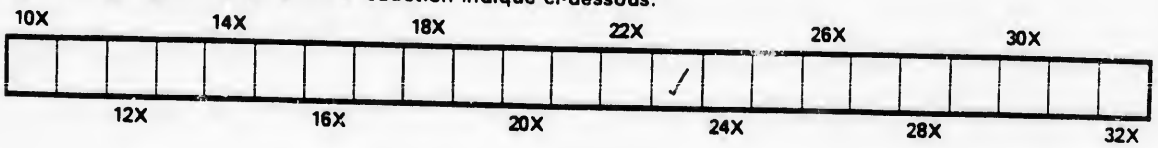

Editor's Journal de l'Anatomie et Physiologie
with respects of the
Author.

F Ch.

HORACE NELSON

ON

STRICTURE OF THE RECTUM.

STRICTURE OF THE RECTUM;

ITS

HISTORY, SYMPTOMS, DIAGNOSIS, PATHOLOGY,

AND

SUCCESSFUL TREATMENT BY INCISION,

Illustrated by Cases:

BEING AN

INAUGURAL DISSERTATION

For the British Degree of Doctor of Medicine, University of McGill Medical College,

MAY 3, 1861.

BY

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University Medical College, New York;

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MONTREAL:

JOHN LOVELL, CANADA DIRECTORY OFFICE, ST. NICHOLAS ST.

1861.

TO

WILLIAM SUTHERLAND, M. D.,

Professor of Chemistry in the University of McGill Medical College,

MY

FORMER COLLEAGUE IN THE SCHOOL OF MEDICINE OF MONTREAL,

Whose Social Attributes

ARE

ONLY EQUALLED BY HIS HIGH PROFESSIONAL ATTAINMENTS,

THE FOLLOWING

DISSERTATION

IS RESPECTFULLY DEDICATED,

As a slight Tribute of Friendship and Esteem,

BY

THE AUTHOR.

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STRICTURE OF THE RECTUM.

I. History.

Diseases of the Rectum and Anus, in one form or another, are of common occurrence, though they are often neglected by the patient, or overlooked by the surgeon, till they have made such progress, not only by their local effects, but by their disastrous inroads upon the system at large, that they can no longer be disregarded; and it is at this late hour, and under these unfavourable conditions, that the advice of the surgeon is sought for. Nor is this surprising, seeing that with very few exceptions, indeed, the primary cause of nearly all the affections of the lower bowel is found in a more or less constant and oftentimes obstinate state of constipation, preceded or accompanied with various derangements of the chylopoietic viscera.

Of the several affections of the Rectum for which surgical aid is at times required, *Stricture* of this portion of the alimentary canal though not of very common occurrence, is one that requires much discrimination on the part of the surgeon, to fully and clearly understand the various causes that may induce this deplorable state of things, and also the best means of remedying an evil, which, if unchecked in its course,—and this is too often the case in the hands of the young, unexperienced, or thoughtless practitioner,—till relief is beyond reach, and death is staring both patient and attendant in the face, when the only alternative, a very precarious and loathsome one, an artificial anus, presents itself.

Having within the last few years seen seven cases of Stricture of the Rectum, and treated six of them upon a plan different from that generally advised by recognised authorities, and with entire success, a short history of this affection may not prove uninteresting to the junior practitioner, whilst to those who may have grown grey in the service, and have long been wedded to preconceived

opinions, it may not be entirely beneath their notice. In the preparation of this paper I have availed myself of the labours of those who from chance or inclination, have been thrown in the way of making something of a specialty of this affection, and who are justly considered as orthodox upon the subject; in all cases where it was deemed proper or requisite, due credit has been awarded, and if I have dissented from long entertained and time-honoured views, more particularly upon the treatment, it has been because I have thought proper to leave a well-beaten track and strike out a new path for myself, and with what success my readers will be the best judges.

I cannot probably find a better preface to this paper than by the translation of an extract from the very practical monograph of a distinguished French surgeon:—"There is one fact, at once curious and important in pathological anatomy: it is that of all the portions or divisions of the alimentary canal, those that are normally of a contracted calibre, are the more ordinary seats of very serious alterations. In these narrowed portions, the blood vessels are more numerous, there is an increased degree of sensibility, the follicles are more developed, the texture is thicker and more compact, and the organization more complicated. It is here that we find *stopping* places called for by the functions to be carried on immediately above; here the contact is harsher, there is sometimes a species of elective organic action which will either permit or refuse the passage of foreign substances, depending upon the properties they may possess or may have acquired. Is there acute inflammation, the points I am indicating are the ones where it rages with the greatest severity, or accompanied by a special class of symptoms of an unusually intense description. Is it a case of chronic inflammation, or of one of those irritative affections which, after having implicated a large extent of surface, becomes limited and centered upon certain points, then rest assured that you will almost always find them in the regions alluded to, causing changes of structure, deep disorganization, and the creation of various morbid products, all of which so frequently baffle the most judicious and scientific efforts of the practitioner.

These culminating points in pathology, if I may be permitted the expression, are the isthmus of the fauces, the esophageal opening, the cardiac and pyloric orifices, the neighbourhood of the ilio-cæcal valve, and lastly, the lower portion of the rectum and anus. Examine cases, open bodies, and you will find that the very great majority of morbid affections, and more particularly those of a chronic nature, of the alimentary canal select these points not only as their origin but as their principal or exclusive seats.

The termination of the large intestine, and the opening in which it is insensibly merged, are endowed with all the conditions necessary to render their

lesions at once of very frequent occurrence, and of a very serious character. A double muscular ring around the anus, opened only by superior muscular power; large mucous follicles intended to favour the easy passage of the excretions; a high degree of sensibility, oftentimes morbidly exalted; a receptacle wherein irritating substances accumulate by their volume, their consistence or composition; in both sexes the proximity of the most active portion of the genito-urinary organs, whose excitations, congestions or pathological changes promptly extend to the surrounding organs; finally, fits of coughing, even the mere effort of talking, severe muscular action reflected upon the anal region, press and there confine venous blood; such are some, though not all, of the principal conditions of structure, of functions and connections, which render the rectum and anus of such importance in pathology.

These considerations could not fail to strike the mind and arrest the attention of the observing practitioner; thus many of the diseases of the terminal portion of the digestive tube, supposed formerly to be of rare occurrence, because they were imperfectly understood, have been more attentively studied during the last twenty years, and have become very lately objects of special if not general attention."*

II. Surgical Anatomy of the Rectum.

It will not be out of place, at the onset, for a proper understanding of our subject, and a full knowledge of the parts implicated in stricture, and more particularly in relation to the surgical treatment, as will hereafter be demonstrated to be the only correct and permanent mode of treating this affection, to trace a brief sketch of the surgical anatomy of the rectum.

This portion of the intestinal canal—variously estimated by anatomists to be from six to nine inches in length—is continuous with the sigmoid flexure of the colon, opposite the left sacro-iliac symphisis, and passes obliquely downwards to the right where it rests upon the middle of the sacrum; now it continues downwards moulded upon the curvature of the sacrum and coccyx, next it inclines somewhat backwards and forwards to terminate at the anal orifice, or more correctly speaking, at the upper fibres of the external sphincter muscle. The rectum —one of the many anatomical misnomers—will now be seen to be far from being a straight canal as its name would otherwise imply, has been divided into three portions.

The *first*, or upper *portion*, from three to five inches in length, extends downwards and to the right from the left sacro-iliac symphisis, to the middle of the third sacral vertebra; it is invested by peritoneum on its anterior, lateral, and

* J. L. Bégin, Annales de la Chirurgie Française et Etrangère, 1841; vol. 3, p. 180.

two-thirds of its posterior surfaces, where the serous membranes of the opposite sides unite to form the meso-rectum, which attaches the gut, rather loosely, to the upper segment of the sacral bone. Posteriorly it rests upon the pyriform muscle, and is separated from the sacrum and its iliac junction by the sacral plexus of nerves, the branches of the left internal iliac artery, the superior hemorrhoidal or terminal branch of the inferior mesenteric artery, and lastly, by loose cellular tissue; anteriorly, the peritoneum is reflected from the intestine upon the posterior surface of the uterus, and its appendages in the female, and upon the posterior surface of the bladder in the male, at a distance of from four to five inches from the anus, forming a pouch in which are lodged some portions of the small intestines.

The *second*, or middle *portion*, varies from two and one half to three inches in length, and extends from the middle of the third bone of the sacrum to the prostate gland; it follows the curvature of the sacrum and coccyx, and has the least lateral deviation of any portion of the gut. Posteriorly, it is loosely connected to the bones by cellular tissue; the peritoneum only and partially invests its upper and anterior surfaces; anteriorly, it is in relation with the prostate gland, loose cellular tissue intervening, next we have the vesiculæ seminales and vasa deferentia, leaving a triangular space where the trigone of the bladder is only separated from the rectum by a layer of adipose tissue; in the female the vagina is directly in contact with it, forming the recto-vaginal septum.

The *third*, or inferior *portion*, the least in anatomical importance, is from one to one inch and a half in length, and extends from the prostate gland to the anal orifice; it is directed obliquely downwards and forwards, and has no connection whatever with the peritoneum; it is encircled successively by the internal sphincter, the levator ani, and the external sphincter; it is imbedded in the fatty deposit of the ischio-rectal fossa; and hence, when abscesses are formed in this region, their well known tendency to infringe on the calibre, and interfere with the action of this portion of the intestine; in the male it is separated by a small triangular space from the bulbous and membranous portions of the urethra, while in the female, the same space exists between the vagina and the rectum.

From the foregoing brief description it can now be clearly seen that the importance and extent of the peritoneum—the great dread in cutting operations upon the rectum—has been, to say the least, very much exaggerated; it only invests the upper and lateral surfaces of the first portion, but a small part of the anterior surface of the second, and is totally unconnected with the third portion. In fact, Velpeau* says that the last four or five inches of the rectum (the most

* Traité d'Anatomie Chirurgicale des Regions, t. II, p. 322. Paris, 1826.

usual seat of stricture,) have no immediate connection with this serous membrane.

A few words now concerning the mucous membrane of the intestine, which, from its looseness and numerous folds, has always been a fruitful source of error and doubt in explorations by the bougie. This membrane is thicker, more vascular, and more loosely connected to the muscular coat beneath than at any other portion of the large intestines; hence the resistance offered to, and the liability of stoppage of the bougie. In its contracted state, the lower portion of the rectum is thrown into a number of longitudinal folds, denominated the columns of the rectum; again the mucous membrane forms the three prominent valvular folds of Houston, all directed obliquely; one is found at the commencement of the rectum, this is the great *sticking* point, near the right sacro-iliac symphisis; a second extends inwards on the side opposite the middle portion, and the third projects backwards, from the front part of the rectum, opposite the prostate gland. The situation and direction of these folds should be carefully remembered to ensure the safe and complete passage of the bougie throughout the extent of the rectum.

Another reason why strictures are not treated by the use of the knife has been from fear of *hemorrhage*. Let us point out the sources whence the bleeding may possibly arise:—1st. The superior hemorrhoidal, the terminal branch of the inferior mesenteric artery, descends between the layers of the meso-rectum, and opposite the middle of the sacrum, divides into two branches which ramify between the mucous and muscular coats to near the termination of the intestine, where they anastamose with each other, and with 2nd, the inferior hemorrhoidals, two or three small branches sent off by the internal pudic artery, near the tuberosity of the ischium, which cross the ischio-rectal fossa, and are distributed to the muscles and integuments of the anal region.

The middle sacral, from the bifurcation of the abdominal aorta, and the lateral sacrals, the last branches of the internal iliac arteries, supply no branches to the rectum, and could scarcely be implicated in any operation performed upon the part, unless the whole thickness of the bowel were incautiously divided down to the bone, either in the mesian line, or about one inch on either side of it. It will now be seen, therefore, that the hemorrhage can only proceed from the branches of the superior hemorrhoidal; and as the incision is generally made on the sacral aspect of the intestine, and presenting, consequently, a firm and unyielding base, I cannot conceive but that the bleeding could be readily and speedily controlled by properly applied pressure.

III. Frequency of Stricture, and the influence of Age and Sex upon its Development.

It is occasionally observed in practice, as a singular coincidence, that several cases of some rare disease will, at times, present themselves in rather rapid succession, and this I have found to be true in relation to the subject under consideration, having seen seven examples of stricture of the rectum in the last few years. However the affection cannot be considered as of frequent occurrence, as is proved by the assertions of those who enjoyed a deserved popularity in the treatment of this disease, and whose opportunities were far from being limited. "It must not be supposed, as some writers would lead us to do, that stricture of the rectum is a very frequent disease.....In a large parochial infirmary in which I have had opportunities of examining many bodies, I have seldom discovered stricture of the rectum."* Again, "organic stricture is supposed by many to be of very common occurrence, but I have not found it to be so; for the cases I have seen bore no proportion to the number I ought to have met with, were the statements made in books correct."†

Age appears to exert little or no influence on the development of stricture, though it is generally of more frequent occurrence in old persons; its average rate may be reckoned as between the 25th and 60th years. Bushe‡ records the death of a man from this affection at the advanced age of 72.

Sex; Dessault,§ from his observations made during a long term of service at the Hotel Dieu, Paris, states that stricture is much more frequent in women than in men, in the proportion of one to ten. Ashton‖ says that the proportion is about equal in the two sexes. Bushe,¶ in his fifteen reported cases, mentions having met with stricture in only eight women. Erichsen** says that it is met with special frequency in women. Of the thirty-one cases I have collected, twenty occurred in men and only eleven in women; of my own cases, four were men and three women.

IV. Causes.

Although in some extremely rare cases, stricture of the rectum has been known to come on spontaneously, yet its exciting source, if not direct origin, is found

* T. J. Ashton, Diseases, Injuries, and Malformations of the Rectum, second edition, London, 1857, p. 288.

† George Bushe, Treatise on the Malformations, Injuries, and Diseases of the Rectum and Anus. New York, 1837, p. 264.

‡ Op. cit. p. 259.

§ Œuvres Chirurgicales, par X. Bichat, vol. 2, p. 422, Paris, 1813.

‖ Op. cit. p. 39.

¶ Op. cit. p. 48.

** Science and Art of Surgery, edited by Brinton, page 759. Philadelphia, 1854.

in inflammation in or about the part elf; and this inflammation may be induced by a variety of causes which may be classed as *accidental*, while *others may be more properly considered as local or constitutional.*

Among the *accidental* causes we have the presence of foreign bodies thrust from the exterior, the lodging of some substance, the retention of portions of clothing or other materials in the gut or its immediate neighbourhood, setting up a degree of irritation that leads, sooner or later, to an effusion of serum or coagulable lymph in the coats of the bowel, or in its cellular investment, which becoming more completely and thoroughly organized, induces degeneration and alteration of the tissues, and with this, necessarily, a commensurate degree of contraction of the bowel, which, if unrelieved, will lead to a complete closure of its canal, and the lingering and agonizing death of the patient.

It is a singular fact that this unfortunate result is more to be looked for after some slight injury, such as a fall or blow upon the nates or anal region, than when the injury has been from the first, of a most serious, if not very doubtful nature. Well do I remember seeing in the hands of my venerable and distinguished teacher of surgery, Valentine Mott, of the University of New York, an enormous angular stone, that had been forciblydriven base foremost into the rectum of a drunken fellow, by some equally drunken associates, just for the "fun of the thing," and which remained concealed in its novel situation for some ten days, producing obstinate constipation and its many and varied accompaniements, and had baffled the skill of several eminent medical men. The Professor's advice was requested; he made a close and critical examination,—the patient not being able to give any account himself—and soon discovered the source of the trouble, but did not so soon find the means of dislodging the intruder; and it required all the mechanical and surgical ingenuity with which he is so pre-eminently gifted, to succeed in performing successfully the only operation on record, I believe, of *lithotomy in the rectum.* The after treatment was carefully attended to, the man recovered, and was living several years after free from any inconvenience whatever. Again, that foreign bodies may remain for some years imbedded in the immediate vicinity of the bowel, implicating its tunics and infringing upon its diameters, without, however, the production of very serious, if any evil consequences, is proved by an interesting and novel case I communicated lately to the pages of the *British American Journal of the Medical and Physical Sciences* of this city.*

Operations performed in the perineal or anal regions for the cure of fistula-in-ano, or the removal of hemorrhoidal growths, have been known to be followed with the amount of irritation requisite to induce contraction; yet it is emphati-

* March, 1860, p. 99.

cally asserted "that *no* operation for the cure either of hemorrhoidal tumours or fistula-in-ano, ever *did*, or ever *will*, tend to the production of stricture or other diseases of the gut, provided the operation is rightly performed, and that proper attention is afterwards paid to the general health of the patient."*

After this unqualified assertion, the reader will not be a little surprised to hear that the same surgeon, in his reported cases, mentions no less than two instances where the stricture followed his operations for the cure of fistula-in-ano.† We must, in all kindness, presume that the operations were rightly performed, and that the necessary care in the after treatment and general condition of the patient had been attended to, and still stricture was the result. Therefore, we must class as among the occasionally accidental causes of stricture of the rectum, operations performed upon this portion of the alimentary canal.

Of the *local, predisposing*, or *constitutional* causes, as has already been said of the other diseases of the bowel, constipation, by whatever cause it may be induced, stands in the first rank as productive of stricture; the hardened fæces passing slowly through the intestine are retarded by its various curvatures and the folds of its mucous membrane, accumulate and distend the part, thereby exciting an undue degree of irritation and pressure, resulting in a low-chronic form of inflammation and its sequences: an acrimonious or acid condition of the alvine excretions; the never ceasing irritation of protracted diarrhœa, and more particularly of dysentery, and the cicatrization of ulcers frequently attending these complaints; functional disorders of the stomach and its accessories, more especially the liver; the development of adventitious structures in or around the bowel, such as adipose, and less frequently, though certainly not the less fortunately, scirrhous tumours, though a contrary opinion is entertained by a distinguished writer, who says that malignant structural change is of more common occurrence than simple degeneration.‡ Exostosis of some portion of the sacral or coccygeal bones; an enlarged and indurated prostate gland, and a misplaced uterus, have all, at various times, been known to produce the affection under consideration.

The impaction of various substances after having been swallowed either intentionally or otherwise, may set up a great amount of irritation at the sigmoid flexure, not only causing stricture, but determining ulceration of the bowel, as was seen in an interesting case where a person had swallowed some hog's bristles.§

* J. Howship, Practical observations on the symptoms, &c., of the diseases of the Lower Intestines and Anus. London, 1824, p. 3.

† Op. cit., case 14, page 51; case 15, page 52.

‡ James Syme, Diseases of the Rectum, 3rd edition. Edinburgh, 1854, p. 49.

§ J. Burrell, Edinburgh Medical Journal, vol. 9, p. 110.

Again it has been asserted, though I conceive without sufficient reasons, that stricture has arisen from the metastasis of various cutaneous affections,* or from the suppression of habitual discharges; syphilis has also been looked upon as a cause; this can be readily granted if there should be a direct application of the specific matter to the part producing ulceration, cicatrization and contraction of the bowel, but it cannot be admitted upon purely constitutional grounds, unless analogy comes to our assistance, from what we know is of so frequent occurrence in the upper and first portion of the alimentary canal, I allude to the mouth and fauces. The long, and often injudicious use of drastic purgatives, or the incautious use of a syringe, may also be looked upon as exciting, if not directly predisposing, causes. Tanchou † cites the case of a lady who had had no stool for *two months and a half;* there was no stricture of any portion of the intestine, and the constipation was due to the inordinate and careless use of injections, whereby the contractile power of the bowel had been very much weakened, and very nearly absolutely lost.

V. Varieties or forms of Stricture.

Stricture of the rectum may present itself under one of three forms:—1st. *Simple,* fibrous or organic, with thickening of the mucous or muscular coats of the bowel, the result of chronic inflammation; 2nd. *Spasmodic,* resulting as its name implies, from abnormal action of the sphincters, and most generally as an accompaniement or symptom of hemorrhoids or ulcerations of the membrane in the immediate vicinity; 3rd. *Malignant,* or scirrhus, consisting in specific degeneration.

VI. Seats of Stricture.

Much discrepancy exists among writers as to the portion of the intestine most likely to suffer from stricture; it is said to have been found at distances varying from *two* to *ten* inches from the anus. In thirty-one cases, the stricture was ascertained to be at from *two* to *four* inches in twenty cases; from *four* to *six* inches in ten cases; and in only *one* case it is reported to have existed *ten* inches above the anal orifice, consequently above the sigmoid flexure of the colon. It will, therefore, be seen that in three out of every four cases, we are to look for the stricture within reach of the finger, that is from two to four inches up the bowel; and in those cases where the assemblage of symptoms would lead us to suspect the existence of stricture, though unascertainable by the finger, and recourse is had to an exploring bougie, we must bear in mind that the examina-

* Dessault, op. cit., p. 423.

† Traité des Retrecisements du canal de l'Uretre et de l'Intestin Rectum. Paris, 1835, p. 29.

tion is attended with much difficulty, and is far from being conclusive or satisfactory; the instrument may pass readily enough, perhaps, till it arrives opposite the promontory of the sacrum, when its further progress becomes suddenly and abruptly checked, the extremity of the bougie being either entangled in the folds of the mucous membrane or striking against the bone. Consequently stricture at the sigmoid flexure of the colon is to be looked upon as of extremely rare occurrence, and in many cases as very improbable. There are but few well established instances on record, ascertained positively only after death, as in the case of the great French tragedian Talma. In further illustration of this position, and the deception attending occasionaliy the use of the bougie, I will quote the following striking case:—"I was consulted by an elderly lady who had been supposed by two medical men of high respectability, to be suffering from stricture of the rectum, between 5 and 6 inches from the anus; finding that the coats of the rectum, though greatly dilated, were quite smooth and apparently sound in their texture, as far as my finger could reach, and conceiving that the symptoms of the case denoted a want of tone or proper action, rather than mechanical obstruction of the bowel, I expressed a decided opinion that there was no stricture in existence. Not many months afterwards, the patient died; and, when the body was opened, not the slightest trace of contraction could be discovered in the rectum, or any other part of the intestinal canal. One gentleman, who had been formerly in attendance, was present at this examination, and wishing to know what had caused the deception, which he said had led to more than *three hundred hours* being spent by himself and colleague, in endeavours to dilate the stricture with bougies, he introduced one as he was wont to do, and found that, upon arriving at the depth it used to reach, its *point* rested upon the *promontory* of the sacrum."*

It will not be out of place to quote a few extracts from well known writers, showing very conclusively the great diversity of opinion in relation to this important part of our subject. "Strictures are commonly situated in the lower part of the gut, within reach of the finger. Are they never situated higher up? I saw one case where the stricture of the rectum was about six inches above the anus; and I saw another case where there was stricture in the sigmoid flexure of the colon, and, manifestly, the consequence of a contracted cicatrix of an ulcer, which had formerly existed at this part. Every now and then also, I have heard from medical practitioners of my acquaintance, of a stricture of the upper part of the rectum, or of the sigmoid flexure of the colon having been dis-

* Syme, Op. cit., pp. 110-11.

covered after death. Such cases, however, you may be assured are of *very rare* occurrence."*

"Any one who maintains that strictures exist at *ten* or *twelve* inches, and who pretends to be able to *cure* them, must be extremely *ignorant*, or *intentionally deceives* the patient."† He alludes in one of his lectures to a man, W. C., who had been treated by bougies for a stricture of the rectum, at the height of *thirteen* inches! It is needless to say, that the poor fellow after long and patient suffering was *not* cured of that stricture, for it was unquestionably demonstrated that *none* existed.

"The most usual seat is *two* to *three* inches from the anus; occasionally higher up, even in the sigmoid flexure of the colon; these cases are very rare, and their absolute existence has not generally been known till after death."‡

"The situation in which we meet with strictures of the alimentary canal, is most commonly about the termination of the colon."§

"These, however, must be very rare cases, for all the best authorities declare the stricture to be almost universally low down."‖

"In the majority of cases which have fallen under my observation, the stricture has been situated between *five* and *six* inches from the anus, about the situation of the angle formed by the first portion of the rectum. Next in frequency, I have discovered the disease at the junction of the sigmoid flexure of the colon with the rectum."¶

VII. Symptoms of Simple Stricture.

The symptoms of simple stricture may be very properly considered under the heads of *special* and *general*, or *local* and *constitutional*.

1. *Special or local symptoms.* From the very onset the patient's attention is attracted to a very *characteristic* symptom, which is a more or less severe degree of pain in the process of defecation, accompanied with an unwonted desire of straining; this is generally preceded by a constipated state of the bowels,—a prominent and long precursory symptom—the stools are scanty, and the matters voided taking on variable appearances, being either in small lumps and hardened, compressed, flattened, oftentimes of a diameter scarcely larger than that of a crow-

* Sir Benj. C. Brodie, Lectures on Diseases of the Rectum, London Medical Gazette, April 4, 1853, p. 30.

† Syme, London Lancet, April 5, p. 356.

‡ Ashton, Op. cit., p. 289.

§ W. White, Observations on Strictures of the Rectum and other affections, 3rd edition, Bath, 1820, p. 47.

‖ South, Chelius' Surgery, vol. II., p. 336.

¶ F. Salmon, Stricture of the Rectum, 4th edition. London, 1830, p. 23.

quill, and discharged in a convoluted or spiral form. Again, there may be a diametrically opposite state of things, that of diarrhœa, the fluid fæces being forceably and almost involuntarily ejected, this last symptom is characteristic of the most advanced period of the disease; lastly, the two conditions, diarrhœa and constipation, may be present at one and the same time. A small portion, the crust of the hardened fæces which are retained in the rectum, becomes dissolved or diluted by the admixture of the intestinal mucus, and these matters are voided involuntarily: the practitioner might be led to suppose that the case was one of diarrhœa, when in reality it is one of *constipation*, various astringent remedies are administered, anodynes freely given to allay the pain and other abdominal symptoms, and yet the accumulation is allowed to increase daily; the physician is acting upon a pretended cause, and necessarily the patient dies either from abdominal inflammation, or from the great and sudden weakness certain to follow the evacuation of the enormous quantity of matters distending the intestinal canal.

Vidal (de Cassis)* relates that he was requested to see a paralytic patient said to have had diarrhœa for a very long period; he had been drenched with rice water, and even leeches had been applied to the abdomen to relieve the colicky pains. The rectum was examined and found distended with a mass of hardened fæces, which was removed, and immediate relief followed. There was here then constipation and diarrhœa, retention and incontinence, as around the mass of indurated fæces were liquid matters, which escaped from the anus at every instant. The patient complains of a feeling of itching, heat, and weight about the anus; there is frequently a discharge of semi-purulent or mucous matters, and the fæces are occasionally tinged with blood.

2. *Constitutional symptoms.* From a very early period of the affection the digestive functions become impaired, and we have present many of the symptoms of dyspepsia; more or less torpor of the liver, and hence the almost constant state of constipation; the tongue is coated, and the appetite very capricious; flatulency, and spasmodic pain or colic in the abdomen, and, frequently, from abdominal distention the free play of the lungs is seriously interfered with; the countenance has a dull sunken appearance, and, at a more advanced period, it is characteristically expressive of very severe uneasiness and anxiety, if not of constant suffering. There is more or less headache, and sleep is always disturbed; the action of the kidneys is impaired, the urine being scanty and high-coloured, and its discharge is frequently attended with pain; irritation of the bladder; pain sometimes at the end of the penis after micturition. In the female there is

* Traité de Pathologie Externe, 3me edition, vol. IV., p. 367, Paris, 1851.

irritation of the uterus, accompanied with bearing-down or expulsive efforts; pains or cramps radiating around the pelvis to the back and down the thighs; at a more advanced period general debility becomes one of the most prominent symptoms.

If the index finger of either hand is well oiled, and very gently passed through the anus, it will in a great majority of cases come in contact, at a distance of from two to three inches and a half, with a hard, incompressible ring, having but a small perforation in the centre, through which the apex of the finger cannot be made to pass without very great force, and an increase of all the local symptoms. Should the stricture be situated at a greater distance than four inches, and, consequently beyond the reach of the finger,—happily of rare occurrence—recourse must be had to the use of rectum bougies, or what is preferable, to the bulbous or silver ball form of this instrument, as it is less liable to become entangled and arrested in the folds of the mucous membrane, at or about a level with the promontory of the sacrum, or the junction of the first portion of the rectum with the sigmoid flexure of the colon, opposite the left sacro-iliac symphisis. This examination is by no manner of means easy of performance, or satisfactory in its results, as cases are not wanting where stricture had been supposed to exist, and treated as such, and after death no stricture has been discovered. "If you employ the force necessary to make the bougie penetrate through the stricture, is there no danger of its penetrating the tunics of the intestine instead? This last is no theoretical objection to the use of these long bougies in diseases of those parts. I will not say that I have *seen* the patients, but I have been *informed* on good authority, of not less than seven or eight cases in which this frightful accident occurred, and the patients died in consequence."*

VIII. Symptoms of Spasmodic Stricture.

This form of stricture is of rather frequent occurrence, and is more particularly seen in women. It often results from derangements of the *primæ viæ*, and is frequently an accompaniment or symptom of hœmorrhoids or fissure. There is great difficulty in defecation, attended with much straining, and pain of a sharp or spasmodic nature, during and long after the evacuation of the bowels, and in some cases it is almost constant. The passage of the finger through the sphincter aggravates the pain, but the moment it has passed beyond it, the bowel is found to be in its normal condition.

IX. Symptoms of Malignant Stricture.

This variety of stricture, like malignant disease in other parts of the system,

* Sir B. C. Brodie, Op. cit., p. 31.

generally occurs after the middle period of life, is more prone to attack the female sex, and is often a concomitant of disease in some remote organ. It has been observed that malignant stricture is often slow and very insidious in its progress, many of its ordinary symptoms being so feebly marked, that life may be prolonged for many years. At first the patient will complain of some slight degree of uneasiness about the rectum and anus, and some little difficulty in the process of defecation; then there may be weight and pain with heat in the part; again there may be scarcely any difficulty at stool, if the disease is of the soft, or hæmatoid character, and implicates but a limited portion of the bowel; the fæces are flattened, narrowed, and have the other appearances seen in simple stricture, if it is of the true scirrhoid form. There is a discharge of fetid bloody muco-purulent matter, almost always more or less constant, and accompanied by increased pain, which is more of a burning, lancinating character. The pain radiates round the pelvic and lumbar regions, through the nates down to the thighs; at this advanced period of the disease, every evacuation adds to the measure of pain which is now almost unremitting. There may be obstinate constipation at various stages of the disease, though the opposite condition is more likely to prevail, from the admixture of the solid feculent mass with the morbid secretions; tympanites.

Sooner or later we observe the setting-in of the characteristic symptoms of carcinomatous disease, the sallow, anxious, and unhealthy aspect of the countenance, so strongly portraying severe mental and bodily suffering; there is general disturbance of the functions, and depression of the nervous power.

If an examination is made, this must be borne in mind in a diagnostic point of view, there will be an increased if not a copious discharge of blood, a thing that does *not* occur in simple stricture, and if the disease is within reach of the finger, it will be found in different cases to present variations as to its position, form, and extent. Sometimes it presents itself under the form of a solid, hard, and incompressible tumour, implicating more or less of the intestinal canal, and having all the external characteristics of scirrhus; at other times the stricture imparts the soft and pulpy feel of fungus hæmatodes; again, there may be a number of small tumours of variable consistency, just above the anus, and occasionally obliterating the canal of the intestine.

X. Diagnosis of Stricture.

Upon a correct diagnosis, not only of stricture, but of every other disease, is based the sole rational plan of treatment that should be adopted for its cure, and if this cannot be attained, its alleviation; inattention to this important point

results, every day, in more or less serious errors of practice. It should be remembered that a patient may, at times, complain of all the symptoms usually denoting stricture, and yet this condition not exist, this is frequently seen in dyspeptic persons; while from more immediate causes all the symptoms may be induced, as in pressure of a displaced or enlarged womb, ovarian, uterine, or other pelvic tumours, an enlarged prostate, and lastly abscesses in the recto-vaginal septum. Again, there are several affections of the lower part of the intestine that bear a very close analogy in their general, and not a few in their local, symptoms to stricture. The diseases from which it must be differenced are:—*hæmorrhoidal growths; ischio-rectal abscess; fistula-in-ano; polypus; fissure or irritable ulcer; simple inflammation of the rectum;* and for the purposes of treatment the differential diagnosis of the *spasmodic* and *malignant* forms of stricture should be borne in mind. A little attention to the symptoms of simple stricture—already detailed—and the comparison with the most prominent signs of the foregoing affections, cannot but lead to a correct diagnosis.

a. *Hæmorrhoids.*—There can be no possibility of error, when the hæmorrhoidal tumours are external; when, on the other hand, they are internal, the finger will readily detect near the upper border of the inner margin of the external sphincter a more or less complete ring formed by soft, elastic, and compressible tumours, which vary at different times and under various circumstances in their size, form, colour, and consistency; they are liable to become inflamed, indurated, and ulcerated, when the throbbing pain and other distressing symptoms will subside, at the same time that increased purulent or sanguineous discharges will afford temporary relief, and in some fortunate instances a permanent cure is effected. Moreover, if the digital is corroborated by the specular examination, no doubt can exist as to the nature of the affection we are called upon to treat.

b. *Ischio-rectal abscess* presents itself under the forms of superficial or acute, and deep-seated or chronic.

1. *Superficial or acute abscess* is generally preceded by all the symptoms of irritative fever: throbbing, shooting, darting pains through the anal and perineal regions. On examination, a hard turbercle will be felt on one side of the bowel, at about its middle portion which, increasing, will press more or less upon the rectum, inducing constipation, sympathetic irritation of the urethra, bladder, and prostate; œdema, externally, of the subjacent tissues, and a livid spot indicating the locality of the tumour, in which suppuration very early takes place, rigors frequently marking the advent of this process. The pus may either be discharged in the bowels, or externally by the side of the anus; this bursting of ischio-rectal abscesses is one of the most prominent causes of fistula-in-ano. These morbid

collections are more frequently met with in subjects of strong and otherwise healthy constitutions.

2. *Deep or chronic abscess* comes on very insidiously and is more often met with in persons of weakly and lymphatic temperaments; the pain is of a more obscure nature, and little local inconvenience is experienced unless, as in the acute variety, it should interfere much with the functions of the neighbouring organs. The pus increasing will point more frequently towards the intestine, where there is less resistance than towards the margin of the anus; pressure by the finger is productive of pain, and a tumour of variable size, with a distinct fluctuating feel will be easily detected. If the pus—as soon as it is formed—is not evacuated either by natural or artificial means, it will burrow around the anus, through the nates and even down the thighs; it may induce fatal peritonitis by opening into the abdominal cavity through the recto-vesical fold of the peritoneum, or less directly by the extension of the irritation.

c. *Fistula-in-Ano* is more frequently observed in persons of sedentary habits and weakly constitution, and is, oftentimes, a symptom or accompaniment of chronic or slow disease, more particularly phthisis pulmonalis. It may be *complete* or *incomplete*. It generally results from the suppuration of hæmorrhoidal tumours, abscesses caused by contusions, wounds, or the irritation of foreign bodies. There is deep-seated pain and uneasiness for some time after defecation; an external examination will discover on one side of the anus a small ulcer surrounded by an elevated bluish red margin, and through which there is a constant discharge of reddish fluid, at times very thin, at others thicker and partaking of the nature of pus, so that it is almost impossible for the patient to keep himself in a comfortable or cleanly condition; then there will be the escape of flatus, and finally of fæcal matters, this last is of itself pathognomonic of complete fistula. By an internal examination, the finger will detect, at a distance of from one to four inches from the anus, a small elevation on the mucous membrane—the intestinal opening of the fistula—and the diagnosis will be completed and assured by the passage of a probe, through the cutaneous opening, along the sinus, when it will come in direct contact with the finger.

In the incomplete form of fistula-in-ano, there will be pain, heat, and a throbbing sensation in the rectum, with some degree of hardness on the affected side of the anus; the dejections will be mixed with a variable quantity of puriform secretion. Pressure exerted externally near the anus—where the integuments according to the stage of the disease, may or may not be thinned and discoloured—will force out the pus contained in the sinus; internally, the finger meets the same appearances as in the complete form, only that finger and probe do not come together, and pain is experienced when pressure is made against the tuberosity of the ischium and verge of the anus.

d. *Polypus of the Rectum.*—Is of not very frequent occurrence; happens about the twentieth or thirtieth year, rarely after, and occasionally before these periods; defecation becomes gradually more and more impeded; there is tenesmus and weight in the anal region; the fæces are often bloody, and occasionally present a groove or furrow upon one surface, which corresponds to the point of attachment, size, and situation of the polypus. When the tumor is near the anus, or its pedicle is long, it becomes extruded through expulsive efforts, when all doubt is removed; if the polypus is retained in the bowel, the finger will generally detect, near the anus, a smooth, movable and pediculated tumor; its progress will be attended with some degree of constitutional disturbance.

c. *Fissure and irritable Ulcer of the Anus* are, from the assemblage of their symptoms, the affections most likely to be mistaken for stricture; as these two conditions are in almost every case present together, and are so nearly alike in their symptoms and consequences, I include them under one head.

Fissure and ulcer is almost invariably situated on the posterior, or sacral surface of the sphincter; the situation was only found to vary in 6 out of 100 cases; in three the fissure was on the perineal surface of the muscle, and all in women, in two on the left, and in one on the right side.*

It is more commonly seen among hysterical females and those exposed to syphilitic infection, and in enfeebled cachectic men; it may result from inattention to the regular condition of the bowels, and often accompanies a scrofulous diathesis, tubercular disease of the lungs, or as a sequence of chronic diarrhœa. There is very acute pain during and, for a considerable period, after every evacuation, and the pain is generally confined to one portion of the bowel, at its sacral aspect just above the anus; this pain will be occasionally complained of from the time of one evacuation to another; the fæces will be streaked with blood or pus, and there is a more or less constant oozing of sanious, purulent or muco-purulent matter from the anus. The finger introduced through the anus finds much difficulty to overcome the irritability and spasmodic action of the sphincter; having cleared it, it will feel a depression in the mucous membrane either in the form of a small soft ulcer or, more commonly, in that of a narrow, long fissure or crack, with raised and soft edges, in one of the folds of the mucous membrane at a point corresponding generally with the coccyx. The contact of the finger increases the acuteness of the pain, and on its withdrawal it will be stained with blood, marking pretty accurately not only the form and extent of the fissure, but also its situation. The constitutional symptoms are strongly marked: the countenance is expressive of great suffering; disorder of the diges-

* J. Rouse, British Medical Journal, May 12, 1860, p. 356.

tive organs; extreme nervous irritability, and all the other attendants of severe and protracted disease. The diagnosis of Fissure may be summed up in the following few words; the presence of the fissure itself, the spasmodic contraction of the sphincter ani, and the burning pain.

f. *Simple inflammation of the Rectum.*—This may be induced by numerous and varied causes, many of them similar to those productive of simple Stricture; there will be smart irritative fever, a distressing burning pain, and heaviness and throbbing at the anus and in the rectum; the evacuations are scanty, and mixed with mucous or bloody discharges; tenesmus and sympathetic contraction of the sphincter muscle; irritation of the genito-urinary organs, at times strangury, and even retention of urine. The finger introduced in the rectum will find its natural heat increased to a high standard, the mucous membrane smooth throughout its extent, and bathed with the morbid secretion characteristic of simple inflammation of the Rectum.

g. *Spasmodic Stricture.*—Little need be said as to the diagnosis between spasmodic and simple or organic stricture of the Rectum, attention to the predisposing causes, their complications, the peculiarity of the symptoms, and a physical examination, detecting the increased thickness of the sphincter and its very contracted condition, will soon determine the points at issue.

h. *Malignant Stricture.*—The diagnosis between simple and malignant stricture is attended with numerous difficulties, and in some instances a satisfactory distinction cannot be arrived at.* The age of the patient, the hereditary tendency, or acquired constitutional diathesis, and the immediate causes producing the obstruction, must be closely questioned. If the subject is young, or under the middle period of life, and the stricture clearly results from simple inflammation, its progress will, generally, be more rapid, and all the symptoms more clearly defined. The finger, during an examination, though detecting a considerable amount of hardness in the affected part, it will be of a smooth uniform surface, and does not impart the rough and stony feel peculiar to scirrhus. This form of stricture has been observed more frequently in the first portion of the rectum than simple stricture; and is characterized by the peculiar sharp and lancinating pain through the affected part, together with a more constant feeling of heat, and a discharge of sanguineous or fetid purulent matter, which discharge is always increased by an examination, and after an evacuation. At a more advanced period the contraction will increase, the pains are more acute, the progress of the case is very rapid, and the constitutional complications develop themselves. We must, however, bear in mind, that in a few cases the disease has run its course

*Vidal, op. cit. p. 424.

so slowly and insidiously, that it may only at the first examination, that an impermeable barrier is discovered and from which unfortunate state of things no relief can be found except in death.

When the stricture is of the scirrhous form, there will be a greater degree of induration and contraction with more or less irregularity of surface, and with a tendency to spread upwards, rather than downwards towards the anus; the disease may spring out in the cellular tissue surrounding the rectum, it will then press upon it, and from contiguity, the entire intestine, and indeed all the tissues and organs of the pelvic cavity will become cemented into one hard, immovable cancerous mass. The stricture, in some cases, may be due to the development of a soft cauliflower excrescence springing from one side of the intestine, presenting a large number of small nodulated tumors which slowly invade the whole circumference of the intestine forming a ring, or shooting across one segment makes a band which becomes rapidly developed into a complete closure of the intestine.

XI. Prognosis of Stricture.

After the case has been properly and unequivocally determined to be one of stricture, many circumstances must be taken into consideration before we can rest upon a correct prognosis; we must question the age of the patient and his habits of life, the local and general symptoms, the causes predisposing or exciting of the stricture, its duration, situation, and ascertainable physical characters.

If the constitution is unimpaired, without complications of structural disease in remote or proximate regions; if the stricture is within reach of the finger, and the induration is of an even, smooth surface, we may safely promise the patient a prompt recovery by a judicious plan of treatment. If, on the other hand, the contraction is of long duration and very tight, and accompanied with a great degree of constitutional disturbance, we must express a guarded opinion; and, lastly, if the stricture passes to the ulcerative stage—although not of a malignant character—no hopes, indeed, should be entertained, as, in numerous cases, treatment has not only aggravated the symptoms, but has undoubtedly hastened the fatal issue.

If the patient is somewhat advanced in years, the pain of a constant, shooting nature, and the external manifestations of malignant disease are present, the prognosis becomes highly unfavourable, although he may live for many years. But if the patient has attained about the middle period of life, and the obstruction is the consequence of non-specific inflammation, and proceeds without any very great amount of local or general disturbance, and application is made at an early period, there can be no question as to the favourable issue of the case.

If the stricture is beyond the reach of the finger, and its existence supposed to have been ascertained only through the use of bougies, the chances of the patient are measurably lessened, as the very great difficulty, if not impossibility, in some cases, of satisfactorily introducing the instrument to a greater distance than five or six inches, will always render the treatment tedious, painful and very doubtful, leaving out of the question the complications that may arise from injuries inflicted upon a healthy portion of the intestine.

XII. Course and termination of Stricture.

The progress of this affection is, in some cases, very insidious and much advance may have been made, and the symptoms have become very urgent before assistance is applied for. In other cases the stricture rapidly advances to complete obstruction, with retention of the fæces, vomiting, pain, and all the accompanying symptoms of intestinal strangulation. A large sac, or pouch, is at times formed by the lodging of a great mass of feculent matter just above the strictured part, which may ulcerate, and either give rise to fistula-in-ano, when an operation, under otherwise favourable circumstances, for the new disease, may prove the salvation of the unfortunate patient; in the female the abscess may open into the vagina, when fæces will escape through this canal; in the male the ulceration sometimes communicates with the bladder, when flatus, urine, and fæces are simultaneously voided; in other instances, again, the ulcer perforates the intestine implicating the peritoneum, with an aggravation of all the symptoms, and the patient dies a prompt death from serous inflammation.

When surgical art avails not, death will take place, as just said, from peritoneal inflammation, directly or indirectly propagated to the peritoneum, or more slowly though not less surely, by a sinking of the patient's strength. The disease may yet progress to complete occlusion, and still the patient may linger an existence of suffering for many weeks; we find in Miller * the record of a case of constipation of thirty days' duration; and in three other cases complete obstruction lasted from forty to fifty days. We also find mention of a case of five weeks duration, when the stricture suddenly gave way, hardened fæces mixed with blood and mucus discharged, which were speedily followed by abundant feculent evacuations, and the patient ultimately recovered.

In other cases, nothing remains but the making of an artificial anus—a proceeding generally terminating in death—from the previous general impaired state of the system. Lastly, obstruction may take place very suddenly and unexpectedly from acute intestinal strangulation, and death has occurred within

* Practice of Surgery, Philadelphia, 1845, p. 434.

two or three days. Persons have been known to die from accumulation of fæces, before ulceration and its symptoms have manifested themselves, or been attended by the evidences of internal strangulation.

The *extent* of intestinal surface involved in simple stricture varies in almost every case; in some it may be from three to four inches in length; in others it will form but a narrow ring scarcely half an inch, and frequently less, in thickness, above which the caliber of the intestine is of its normal diameter, though it often forms a pouch of considerable magnitude. In some rare cases, as in one that came under my observation, that of Mrs. H., No. 3.—there was a double stricture at an interval of near two inches, the second, or highest one, not being discovered till after the first one, near the anus, had been divided, when the finger being pushed through, came in contact with the second. It is very seldom that a simple stricture forms but a partial division across the intestine, though bands have been discovered stretching from one side to the other, leaving a variable space above and below for the passage of the excretions; these bands are sometimes torn, or they become still more strongly organized and tense from the constant pressure exerted against them by the weight of the column of feculent matter from above. In stricture of the hard or scirrhous kind, a much larger extent, longitudinally as well as circularly, of the intestine is implicated, spreading occasionally from the anus to the promontory of the sacrum; in stricture caused by soft cancer, a portion only of the circumference of the bowel may be implicated, a narrowing of one of its segments from the morbid growths shooting out of the side of the intestine.

XIII. Formation and development of Stricture.

The proximate causes of stricture may very correctly be resolved under two heads—those arising from inflammatory action, and others, though of less frequency, from the cicatrization of ulcers, or of wounds accidental, or made by the Surgeon's knife.

In stricture from inflammation, commensurate with the causes producing it, there will be an exudation of coagulable lymph, or fibrine, either on the surface of the mucous membrane or between it and the submucous cellular tissue; this gradually assumes the appearances and characters of fibroid formations, new vessels are developed and ramify through the adventitious substance, it becomes more compact, or, as it is more perfectly organized, it encroaches upon the whole circumference of the bowel through continuity of surface, and is covered by the mucous lining of the gut, which is now very much hypertrophied if primarily affected, or is raised from the muscular coat if the disease has originated in the submu-

cous cellular tissue. In simple stricture it is very seldom that the muscular coat is implicated, hence there is scarcely stricture or puckering of the three coats of the bowel, as is clearly demonstrated after the division of the mucous membrane alone.

If the stricture results from the healing of an ulcer or of a wound, the contraction takes place in relation to the cicatrization required to repair the loss, and hence a proportional narrowing not only of the mucous membrane but also of the muscular and serous coats takes place; thus we have not only an internal ring, but an external depression from the puckering of the whole caliber of the intestine. The very few cases of spontaneous stricture spoken of can only be explained upon the assumption of some organic change in the part itself, from some unknown or unappreciable cause.

XIV. Pathology.

In simple stricture, the mucous membrane is not only thicker but of a harder structure than natural, and is less vascular, hence its white or fibroid appearance. "In malignant stricture, dissection reveals great and extensive thickening and consolidation, as well as confusion of all the parts. The disease is not confined to the coats of the intestine, but is continued more or less extensively into the cellular membrane beneath the peritoneum reflected over the sacrum and bones of the pelvis. The firm, yet elastic feel, of this disease is peculiar, much resembling that of cartilage; on opening the cavity of the bowel, the canal is found nearly or completely closed the section presenting so few traces of original structure as to render it difficult to say in what particular structure the disease originates. It appears to me to commence in the cellular membrane connecting the coats of the intestine; an opinion not only rendered probable from the appearance of the parts, but from the evident facility with which the disease extends itself in the cellular tissue."*

XV. Treatment of Stricture.

I have now come to the consideration of the treatment of stricture, and it is in this part, more particularly, that I am compelled to dissent, and not without reason I believe, from the views entertained by teachers and writers and adopted by the profession at large. The only indication that presents itself is the restoration of the canal of the intestine to its normal dimensions, and this object can only be secured through the mechanical means now employed, or through an operation that has proved uniformly successful in my hands.

* Howship, op. cit. p. 15.

I will, first, speak of the treatment of simple stricture by the process of dilatation. The first step in the operation is to pay attention to the condition of the bowels, and in some measure soothe the irritation which is constantly kept up in the rectum by the presence of a large mass of fæces pressing upon the strictured part; the patient should be ordered light mucilaginous drinks, the food to consist of such articles as leave but little solid residue that no further additions may be made to the already large fæcal mass; the daily use of tepid injections thrown through a long pipe *beyond* the stricture, and allowed to sojourn in the bowel as long as is compatible with the comfort of the patient, by which means, if properly carried out, the hardened fæces will become softened and diluted, and their evacuation, in a fluid state, is attended with much less pain and straining than in the opposite condition; the patient will in some measure be relieved, and be better prepared for the second part of the treatment. This is to be attempted by the use of bougies, if the stricture is within reach of the finger, commencing with one that will just enter the contracted canal, and in proportion as dilatation is effected, the size of the instrument is to be slowly and gradually increased, and introduced once in two or three days allowing it to remain for some minutes, unless this is counteracted by irritation of the part, which is sometimes apt to spring up in spite of the most careful and gentle manipulation. This condition of things, when present, is to be treated by rest, the hip-bath, opium by injections or suppositories; in some cases the treatment requires to be more active, leeches and fomentations are to be applied to the anus and perineum; and if from the extension of the irritation, there should supervene much abdominal pain with the other symptoms of peritoneal inflammation, no time should be lost to overcome it by the measures usually employed in such cases, ignoring, for the time being, the primary cause of all the trouble, the stricture. When the unfavorable symptoms have been removed, the stricture will be found pretty much in the same condition as it was at the commencement of the treatment, and the same process must again be gone over.

What is the *object* of the bougies and will their use *cure* the stricture? These two important questions are readily and satisfactorily answered in the *negative* by reference to those most in favour of this mode of treatment. "Dilatation *seems* to be the *only* means we possess of causing the obliteration of stricture of the rectum." * "The bougies are used for the pressure they excite upon the ring and thereby induce its removal by the process of absorption, and *not* as some have supposed by mere *mechanical* dilatation." † Therefore absorption induced through the pressure of the bougie *seems* to be the only mode of cure for stricture

* A. Todd, Medical Times and Gazette, August 6th, 1859, p. 130.
† R. Druitt, Principles and Practice of Modern Surgery, Philadelphia, 1856, p. 544.

and this is very far from being successful, as I really do not believe it can be carried on to the degree requisite to cause the removal of the entire stricture. "Though a simple stricture *may* be much relieved by bougies, it is *seldom* I think *cured* by this means, there being a great tendency for it to *contract* as soon as the treatment is *discontinued*." * "When after a lengthened, persevering and annoying plan of treatment has been pursued for some time, and a considerable diameter has been obtained, *dilatation* becomes *limited* by the sensitive character of the anus, as also the irritability of the intestinal membrane, and the *total absorption* of the stricture is not *effected*." † If the above opinions are to be respected, and I know not why they should not, as they are those entertained more or less pointedly by all writers, is it not a little surprising that no improvement has been sought to be made in a plan of treatment unquestionably based upon false premises, and almost always unsuccessful in its results? Howship ‡ in giving the results of ten of his cases treated by dilatation, says that there was but *one* case cured, *one* partly cured; and *eight* relieved by the bougie. These facts seem to me to call for stronger reasons for the exclusive use of bougies, in preference to that of the knife in the treatment of stricture, than the fear of hemorrhage, peritoneal inflammation or inflammation of the rectum; although, singular as it may appear, these *three* objections are entirely overlooked in the operation for fistula-in-ano, which no one pretends to cure—even where of considerable extent—otherwise than by the *knife*, when the same parts, as in stricture, are more directly if not more deeply implicated. And yet, "when the stricture is very close, and of long standing, we shall gain time by *incising* its margin, previous to dilatation." § "If a tight callous stricture resists the ordinary treatment, *notch* slightly at several points of the contracted ring, then dilate in the ordinary way." || "Stricture has been *divided* by slightly notching it at different points, then use the bougie, the great risk of hemorrhage, the difficulty of checking it, and the danger of inflammation from wounds of the rectum are serious objections to the proceeding, which should only be resorted to in extreme circumstances, and then with the utmost possible caution." ¶ "If the stricture yields but slowly, is very tight and indurated, *notch* it towards its posterior aspect, with a sheathed probe-pointed bistoury, without danger to the peritoneum, then a tent of compressed sponge for twelve hours." **

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* Erichsen, op. cit. p. 792.
† Todd, op. cit. p. 131.
‡ Op. cit. pp. 52-76.
§ Ashton, op. cit. p. 301.
|| Miller, op. cit. p. 426.
¶ W. Pirrie, Principles and Practice of Surgery, Philadelphia, 1852, p. 656.
** Erichsen, op. cit. p. 791.

Other authorities to the same purpose might be adduced, but I think I have sufficiently proved that to perfect a cure, it can only be done by the use of the knife in the *last* place, when it could readily and securely have been done in the *first* instance, and a cure effected in the course of three or four days, with very little pain, and comparatively still less inconvenience to the patient.

Some strictures may have very insidiously progressed till a certain amount of contraction and hardness have ensued, and still the introduction, a few times, of the bougie, and attention to the patient's general health and the soluble condition of the bowels, have determined the absorption of the effused lymph, before it had acquired the firmness and consistence of fibroid formation. Many will, no doubt, coincide in the opinion "that bougies often quickly remove disease that at first appeared of an alarming character." *

The great objection, and no doubt the most valid one, to the use of the common rectum-bougie, is that, from its configuration, it not only may dilate the stricture but it must keep the anal opening also in a proportionate state of dilatation and this last condition is of itself, at times, more tedious if not more painful than the material portion of the treatmentt. To succeed, I will allow the expression, with bougies, the rectum should be stretched to its fullest capacity, while the anus and sphincter remain in their natural contracted state. To meet this important indication Mr. Todd † has contrived and figured an instrument the mechanism of which is certainly well calculated to effect the objects in view. In order to give the reader, who may not have the *Gazette* at hand, an idea of this dilator, the following brief sketch may not be uninteresting: it consists of two blades of finely polished steel forming, when closed, a small size oval bougie. These blades are about three inches and a half long, rounded above and below, and made to separate from and approach each other in a parallel direction, by mechanism contained within. Beneath these is a round stem, one quarter of an inch in thickness, upon which the anus and sphincter are allowed to contract. The parallel movement of the blades is effected by four slight bars of steel placed in pairs—one pair crossing each other above, the other below, united at their intersection by a pivot. The extremities of each pair, at the centre of the blades, are connected together and to the centre of the blades by means of hinges, their distal extremity being permitted to traverse a groove within the blades. The stem, before spoken of, is hollow, and is continued above within the blades, to a fork, the extremity of which is attached to the pivot connecting the intersection of the superior cross-bars. Through this hollow stem passes a rod, which also ends above in a fork, attached in a similar manner to the pivot through the inter-

* Bransby B. Cooper, Lectures on Surgery, Philadelphia, 1852, p. 440.
† Op. cit. p. 132.

section of the lower cross-bars. The other extremity of the rod is a screw, on which is a graduated scale; to this a thumb nut is fitted, having a rim upon its upper part, which revolves in a groove in the extremity of the outer or hollow stem.

With the above description of the instrument, its *modus operandi* is explained as follows: "when the nut is turned from right to left, the inner rod is pushed up, and the intersections of the cross-bars are made to approximate, the horizontal diagonal of the central quadrangle becomes, therefore, elongated, and thus the blades are separated. A contrary movement of the nut draws down the rod, and brings the blades together. The screw is made so fine that dilatation can be effected by an exceedingly gradual movement."

He mentions but one case in support of the use of his instrument; a lady had been *two months* under treatment by the use of bougies, the anus only admitting one of five eighths of an inch in diameter. By cautious and gradual extension with the instrument, the stricture was dilated to one inch and one eighth without the least pain or uneasiness; she could retain the instrument as long as she wished, as it caused no inconvenience whatever.

XVI. Treatment of Spasmodic Stricture.

As already stated this form of stricture is generaly symptomatic, and, therefore, before determining upon the plan of treatment, it is desirable, as far as possible, to ascertain the causes that may have induced, and still keep up the great irritation and unusual contraction of the sphincter muscle. In the very great majority of cases this stricture will be found to be caused by a fissure or ulcer of the mucous membrane either of the anus itself, or of the intestinal membrane immediately continuous with it; and the only means of remedying the patient's excessive torture, is by dividing the affected part, and partially or totally through the fibres of the sphincter muscle; the after-treatment consists merely in attention to the condition of the bowels, the regulation of the diet, and no tents are required.

When the stricture is not dependent upon disease of the mucous membrane, recourse may, possibly, be had to the use of bougies, at the same time that the proper hygienic and remedial measures are adopted; if the stricture should resist the dilating process and the parts become very much irritated the division of the membrane and the superficial fibres of the sphincter muscle, at one or two points of its circumference, will insure a prompt cure.

Should the bougies fail, and objection is raised to the use of the knife, we may adopt the *forcible* dilatation recommended by Maisonneuve * by intro[illegible]

* Gazette Médicale de Paris, January, 1853.

one finger, then a second, and gradually the rest of the fingers; then the whole hand is pushed through the sphincter, and when the muscle is cleared, the fingers are tightly closed and the fist forcibly and suddenly withdrawn, this produces such an amount of relaxation of the sphincter as will effectually overcome its abnormal contraction.

XVII. Treatment of Malignant Stricture.

This form of stricture is entirely beyond surgical aid; pressure either by bougies, or other means, to induce absorption, should not for one moment be thought of, as it not only aggravates the sufferings of the wretched patient, but adds fresh stimulus to the disease and hastens a fatal termination. There is absolutely nothing to be done but the administration of anodynes and palliatives to assuage the agonizing pains; to support the declining strength through such means as the exigencies of any particular case may call for, and to keep the lower bowels as free as possible of feculent matter as has been recommended in the treatment of simple stricture, in one word the surgeon is a powerless spectator, and his office is narrowed down to smoothing the passage to the grave. If the patient does not succumb under general contamination of the system a perfect closure of the intestine will take place, and for which there can be no relief, though some writers have advised to cut through the mass at all hazards, and even with Lisfranc to extirpate the entire rectum, an operation that can never be successful, and which from the meagerness of the details and their great obscurity, one is justified in believing that the cases have proved fatal in a very few days, if not hours.

Delpech,* unfortunately lost too early to science, says that when cancerous closure is complete, it had been proposed to cut through some part of the constriction in order to establish a passage for the feculent matter. This plan is undoubtedly attended with much danger and great inconveniences: to carry a cutting instrument through, or in the immediate neighbourhood of a cancerous mass is to hasten the ulcerative process, which must prove the death of the patient; but in these cases, let the means we adopt be whatever they may, they must always be very defective.

Lastly life may be prolonged for a few weeks, after complete closure of the intestine, by the operation for artificial anus in the lumbar or iliac regions. My readers will necessarily understand that the chance, as small as it may be, can only be entertained in cases of simple stricture; I will moreover refer them to the various surgical authorities as to the situation and manner of performing the operation, one in which I have had neither direct nor indirect experience.

* Precis Elementaire, tome 3me, p. 559, Montpelier, 1831.

If the stricture is beyond the reach of the finger, and happily this is very seldom the case, little hopes need be entertained from any plan of treatment, the knife cannot reach the disease and bougies more often than otherwise fail in their use.

XVIII. Treatment of Stricture by Incision.

Having now described, as fully as is compatible with the limits of this dissertation, the history, symptoms, &c., and the ordinary plan of treating stricture of the rectum, I will conclude with a few words in relation to its treatment and cure by incision, as I have successfully practised it in six cases, and was present at a seventh, and so confident am I that this is the only correct mode of treating this affection, that I shall adopt it in every case that may present itself in future.

By reference to the surgical anatomy of the rectum, briefly sketched at the commencement of this paper, the reader can readily judge whether the objections raised against division of the stricture, are based upon the real or presumptive danger either of hemorrhage, or of wounding the peritoneum. Should it be that any thing like troublesome bleeding took place, I know not why it could not be promptly and effectually controlled by pressure, through the full distension of the rectum, either by compressed sponge, lint, or common cotton; should these means fail, the injection of some astringent solution will, most likely, prove beneficial; although there are many agents of this class, the following bears the recommendation of great efficacy in arresting the bleeding after the removal of internal hæmorrhoids, and would be equally applicable in that which might possibly result from the division of the stricture. Take one grain of sulphate of iron, and dissolve it in one ounce of water, a small quantity to be injected at a time;* and, lastly the introduction of pieces of ice in the anus and rectum, as I have done in several instances after the extirpation of hæmorrhoidal growths, will effectually arrest the bleeding. I cannot but believe that undue stress has been laid upon the presumed danger of hemorrhage; and from the result of my cases, this fear has never been present in my mind, and should it in any case occur, I am confident I could control it without danger to the patient, and comparatively little inconvenience to myself.

The second objection, is the wounding of the peritoneum; by reference to the disposition of this membrane, it will be seen that there can be no possibility of implicating it in the two lower portions of the rectum, as we know that it is only in connection with a small part of the anterior surface of the middle portion—the most common seat of stricture—and that it is not at all to be found

* J. P. Vincent, Edinburgh Monthly Journal, March, 1848, p. 41.

in the lower third. Between four or five and a half inches, no fears need be entertained of wounding the membrane, even if the case is one admitting of incision, as the knife is only to be carried through the mucous and muscular coats on their posterior surfaces, and then the serous investment can be sufficiently dilated by pressure of the finger, precisely in the same manner as it is accomplished after the division of the ring in strangulated hernia. Even admitting that the peritoneum should be slightly wounded, for it cannot be much except through carelessness or ignorance, and special inflammation be the result, this complication is *generally* amenable to treatment, whereas *none* is available in stricture if it remains unrelieved, and the danger from peritoneal inflammation—directly or indirectly—is almost equal, if not greater, in the treatment of simple dilatation with bougies. It is a little singular that the fear of inflammation is looked upon rather lightly after the operation for strangulated hernia, more particularly when the sac requires to be opened, sometimes to a considerable extent, and from the preceding and subsequent manipulations to return the prolapsed mass, the chances of peritoneal inflammation are increased ten-fold more than in the more simple operation of cutting through a stricture.

The manner in which I perform the operation is as follows:—the patient stoops forward resting his head and hands on the edge of a bed, the feet on the floor with the legs somewhat separated; in this position the nates are elevated to a convenient height for the operator; this posture I consider preferable to the recumbent one, upon the side, as there is no impediment from the bed clothes, and does not require an assistant to keep the thighs apart. The left index finger, well oiled, is gently pushed through the anus till its apex rests on the stricture; a long, narrow, probe-pointed bistoury, held in the right hand, is carefully passed flatwise along the finger through the contracted part, when its edge is turned a little to the right or left of the median line, towards the sacrum, the left finger pressing upon the back of the knife, forces it through the stricture, about the depth of the blade; the knife is then withdrawn from the stricture, turned on its side, though still retained in the intestine, while the left finger now ascertains the nature and extent of the incision, and the stricture will be found to have greatly given way, and that the small wound has spread out to nearly one inch in width, should there be any undivided bands of mucous or cellular tissue between the edges of the wound, they are to be cut across, when the mucous membrane above and below the strictured part will be felt smooth and on a level, a similar incision is next to be made on the opposite side, and the knife removed; two fingers can now easily pass through the stricture in all directions. Next introduce a piece of compressed sponge—the size of a half dollar peice, to which a stout string is attached, and allowed to hang

out of the anus,—in the stricture; give the patient an anodyne to quiet pain and prevent the immediate action of the bowels, and order him to bed. The sponge is to be retained, if possible, for twenty-four hours, when a brisk laxative is administered, which will have the effect of expelling the sponge, and with it the contents of the large intestines, the evacuations are attended with comparatively little pain, the patient complaining more of smarting than any thing else. No second dressing is required as there can be no danger, after twenty-four or thirty hours, of the wound re-uniting by first intention; all that is necessary, is to keep the bowels in a very relaxed condition for three or four days, when the patient may return to his ordinary avocations, cured of a very annoying, and, often dangerous affection. I will now illustrate the foregoing mode of treatment by the notes of seven cases, in which it proved eminently successful.

Case I.—Stricture of the Rectum, after Ulceration; cure.

One morning in February, 1850, when doing duty as Assistant Surgeon to the 4th Regt. United States Infantry, at Plattsburgh Barracks, a "loose fish" of a soldier was brought by a file of the guard to the Hospital, complaining of severe pain in the bowels, and constipation of several days' duration; as the unfortunate creature was an *habitué* of the Guard-house, and knowing something of his antecedents, I ordered him a dose of a most villanous mixture, composed of "picra" and the black draught, with such things as cayenne pepper and scammony for seasoning; this prescription had proved remarkably successful in clearing the Hospital of a number of idlers, and returning them very promptly to duty. In the case of Young, the mixture was administered three times during two days, and though readily swallowed no relief was obtained; my sergeant saw particularly that the doses had been taken. On the morning of the third day, the report was "no amendment;" I now enquired somewhat more closely into the nature of the case, and learnt that the man, in common with a very large number of the soldiers of the American army, had suffered very severely during the Mexican campaign, from a most inveterate and intractable form of diarrhœa, soon changing into dysentery, and which had decimated the ranks more than the balls and bayonets of the "Greasers;" he had been for some months in hospital at Chapultepec, and was on the invalid list on his return home. Part of his regiment was quartered at the Plattsburgh Barracks, when I was appointed to take the medical charge, and had treated quite a number of the men still suffering from this disease, although Young had not before fallen directly under my notice. I now thought that the poor fellow must be really ill, and, therefore, made an examination *per anum*, knowing full well the different tricks

soldiers will be up to, in order either to shirk duty, if not to procure their discharge from the service. I was not a little surprised to find, that though the finger passed with some difficulty through the anus, it soon—at the distance of about three inches—came in contact with a tight resisting ring, through which I could not push the point of the finger. The case had now resolved itself to one of stricture, from the healing of one or more ulcers resulting from chronic diarrhœa. Looking over the surgical appliances of the Hospital, I found nothing in the shape of rectum bougies, and unable to wait a requisition upon the medical purveyor, I saw myself compelled to follow a plan of treatment different from that laid down in the books, and as the man was evidently failing, I did not hesitate to perform the following operation:—Placing him in a stooping position, his head and hands resting on his bunk, I introduced the left index finger, well oiled, into the rectum up to the stricture, and then carefully passed flatwise a probe-pointed bistoury; this was pushed through the ring of the stricture, and a cut made to the left of the median line, towards the sacrum, the finger now ascertained that the strictured part had been completely divided through, without implicating anything else than the mucous and a portion of the muscular coat, as the evenness of the lining membrane, on either side of the stricture plainly indicated; the finger could readily be passed through the divided stricture, and a little pressure imparted the sensation of tearing, or giving way, just as is experienced in the operation of hernia. However, fearing that through some means re-union might possibly take place, and the stricture be closer than ever, I made a similar cut upon the opposite side, when the knife was withdrawn, and two fingers could easily be introduced in the bowel without force, and very little pain. There was not a teaspoonful of blood lost; a piece of compressed sponge, secured by a thread, was pushed into the stricture, an anodyne administered, and the patient ordered to bed. The following morning a large dose of castor oil was ordered, the sponge and an immense quantity of fæces were discharged, and in four days, he was reported fit for duty. He continued in the service till the expiration of his enlistment—two years—and never had a return of his old complaint. I look upon this case as one of perfect cure; and the plan of treatment adopted suggested itself from the want of the ordinary instruments usually recommended in such cases.

Case II.—Stricture of the Rectum complicated with Hæmorrhoids; cure.

January 10, 1853, J. Sampson, of Alburgh, Vermont, requested my advice for hæmorrhoids that had, at times, during two years, troubled him very much; at that period he began to complain of more or less pain when at stool, had consulted

some physicians, and taken any quantity of patent pills for the purpose of regulating the bowels, but all to no purpose, when small tumors were protruded after every evacuation with great straining and increase of all the symptoms. Being now fully satisfied that he was suffering from piles, he resigned himself to his fate, under the impression that there could be no cure. It was under these circumstances that he called at my surgery in relation to a daughter who had been for some months in ill-health, and incidentally alluded to his own case; answers followed questions, and an examination proposed to which he immediately acceded, being perfectly willing to submit to anything that might offer the least prospect, if not of cure, at least of relief. There were two or three small hæmorrhoidal tumours around the verge of the anus, and the finger could only be made to pass through the external sphincter with some difficulty, when, within two inches above it, I detected the existence of a stricture. The case was now plain, and I told the patient that the chances of cure were decidedly in his favour, and that all the suffering arose more probably from the stricture than from the piles. He readily acquiesced to all I proposed; and the operation was performed the following day, in the same manner and with the same after-treatment as in the first case. He returned home on the third day, the bowels having been freely and copiously emptied by strong laxatives. In two months he reported himself free from trouble in the process of defecation, and rid of his old complaint the piles, the one operation had cured both. Four years after he was still in the enjoyment of perfect health.

This case is rather interesting, as no doubt the development and gradual increase of the stricture, prevented the free return of the blood, and consequently favoring the engorgement of the hæmorrhoidal veins, was the direct cause of the hæmorrhoids themselves, as they immediately began to decrease the moment the stricture had been divided and consequently the pressure removed. Since the occurrence of this case, when consulted for hæmorrhoidal affections, particularly where the symptoms are well marked, I generally call for an examination, being convinced that stricture *may* occasionaly not only be complicated with hæmorrhoids, but that it may, in some cases, be the direct cause of their development.

Case III.—Double Stricture of the Rectum mistaken and treated for disease of the womb; cure.

Mrs. H. of Champlain, New York, thirty-seven years of age, the mother of three children, the youngest nine years old, had been in bad health for some time past, when she called upon me in Nov. 1853. She was of a fine *figure*, and of very sedentary habits; near three years before, she remarked an unusual

degree of straining at stool, with some trifling pain, though she was not generally inclined to costiveness; the pain and straining kept gradually increasing till they had become almost unbearable, and she was rather pleased than otherwise that the bowels were costive, as she seldom had more than one or two calls to the water closet during the week. She complained of pain in the back and thighs; considerable difficulty in micturition, and a more or less constant bearing down sensation, aggravated at, and immediately after, an evacuation; the menstrual function was normal as to time and quantity; occasional slight leucorrhœal discharge, and some pain during sexual congress. She had tried various plans of treatment without any amendment, and considered herself, as she had been told by a medical man—however *without* an examination—labouring under some disease of the womb, for which she had submitted to empirical and other treatment. Having become acquainted with the foregoing particulars, I proposed a vaginal examination to which she consented after a little hesitation; I found nothing abnormal either in the vagina or in the position and configuration of the womb; although I distinctly felt some hardness of the recto-vaginal septum, like a portion of hardened fæces retained in the rectum. I next made a rectal examination, and at once discovered the cause of the mischief in the shape of a stricture. She was now apprised of the nature of her ailment, and strong hopes entertained of a perfect cure. The operation was performed a few days after; and the finger having been pushed through the stricture to ascertain if every thing was clear, came in contact, about one inch beyond, with a second stricture, which was also divided, sponge dressing, &c., and she returned home on the fifth day. I had the pleasure of seeing this lady several times afterwards, and she had never complained either of trouble in the womb, or when attending to the evacuation of the bowels. She was living and well in the month of May, 1858, when I left Plattsburgh for Montreal.

There are many important points connected with the foregoing case—the consideration of which I cannot now enter upon—more particularly the sympathetic irritation of the womb which had been looked upon as the principal disease, and treated, necessarily, without success.

Case IV.—Stricture of the Rectum and fistula-in-ano in a phthisical subject; cure of the stricture.

Mr. H. Chatterton, of Beekmantown, New York, aged about 40 years, a strong stout man, though of a confirmed phthisical habit, consulted me in the fall of 1852, for a fistulous opening near the anus, from which he had suffered, more or less, during four years; pain in defecation, disturbed action of the bowels and

latterly derangement of the digestive organs, etc.; there had always been a discharge from the opening, so profuse, at times, that he could not keep himself in a cleanly or comfortable condition. On examination I saw a large, wide external opening to the left of the anus; the finger being pressed up the rectum came, at about three inches, in contact with a very tight stricture; about one quarter of an inch below it, was the inner opening of the fistula, and this diagnosis was corroborated by the passage of a probe. I now told my patient that his sufferings resulted more from the stricture than from the fistula which, although troublesome and annoying, was of benefit to him on account of his lung-affection. He readily acquiesced in my decision, and the operation was performed. In one week he was discharged, when he wished me to operate for the fistula which I peremptorily refused to do. He died some nine months after of phthisis, but I could not obtain permission to examine the body.

It may, to the junior practitioner, appear rather singular that after having succeeded so well with the stricture, I would not undertake the more simple operation for the cure of the fistula; this I could not do, and surgical or any other kind of interference would not only not have cured the local disease, but would have hastened the full development of the tubercular affection. Upon this point I will quote the following extracts, the first from Sir Astley Cooper and the second from Sir Benjamin C. Brodie;—"The surgeon often brings *discredit* upon himself by operating for fistula-in-ano, in the last stage of phthisis, and when it is *impossible* that the disease can be *cured*, therefore that death which is the result of the pulmonary disease is *falsely* attributed to the *fistula-in-ano*."

"In those cases in which a fistula-in-ano occurs in connection with some organic disease of the lungs or liver, I advise you *never* to undertake the *cure* of the fistula. No good can arise from an operation under these circumstances; but if you perform it, one of two things will happen—either the sinus, although laid open, will never heal; or, otherwise, it will heal as usual, and the visceral disease will make more rapid progress afterwards, and the patient will die *sooner* than he would have done if he had *not fallen* into your hands."

Case V.—Simple Stricture of the Rectum; cure.

M. J., Esq., surgeon dentist of this city, a gentleman of high mental acquirements and good sound judgment, consulted me in the summer of 1859, for a long standing trouble about the anus. The bowels were always costive, and their motions attended with such increasing and acute sufferings, that for months he had delayed as long as possible attending to the calls of nature, and latterly

had only been able to secure anything like a bearable evacuation through the means of repeated injections, for the purpose of diluting the fæces. He had been under the care of some of the medical men of this city, who had recommended various drastic and laxative preparations to overcome the costive habit, and to remove the supposed irritability of the rectum and anus, had employed suppositories of opium and belladonna. All these measures were, however, of no avail, and the disease was constantly increasing, when discouraged and almost wearied of a suffering existence, and thinking something might be gained by a change of medical attendant, he called upon me. I proposed an examination to which he readily assented. With the greatest difficulty, and most excruciating pain, I succeeded in passing the finger through the anus, when at a distance of three and a half inches, I discovered a tight and very close stricture, with an opening the size of a crow-quill, which very readily accounted for the very small size and spiral form of the evacuations. I now explained to the doctor the nature of his disease, and how it should be remedied; he at once appreciated my views, and readily agreed to the plan of treatment proposed. The following day the operation was performed in the usual manner, and the sponge introduced. At my call in the evening he told me that he had experienced much pain from the sponge for a couple of hours, when suddenly he felt relieved; I examined, the finger passing with more ease through the external sphincter, when the sponge was found to have passed through the stricture and out of reach, another piece was introduced, and an anodyne ordered. The next morning he reported having slept pretty well, was nearly free from pain; and that in the course of the night the desire to relieve the bowels became so urgent, that the two pieces of sponge with a large quantity of fæces were discharged. The after-treatment was as detailed in the other cases; and in the course of a week he was enabled to attend in his operating room. The doctor has since continued in perfect health, and is as satisfied as I am of the success and little trouble attending the use of the knife in the treatment of stricture.

Case VI.—Simple Stricture of the Rectum; cure.

Mrs. J., of Lagauchetiere Street, about 36 years of age, the mother of two children, had for some four years consulted several practitioners for a great difficulty in evacuating the bowels, great pain for some hours after, and a constant state of constipation that had resisted all the means employed. None of her attendants had ever proposed an examination. In January last she called upon my friend and former fellow-student, Dr. G. BEAUDRIAU, of Craig Street—a most worthy and capable practitioner, but unfortunately totally blind from

amaurosis—who, after listening to her history, requested an examination, and although deprived of his sight, still in the possession of a highly educated finger, he at once discovered the existence of a stricture. Being unable to operate, he requested my assistance; I satisfied myself of the correctness of his diagnosis, and proposed the operation to which the patient assented. After the division of the strictured part had been effected, I discovered that I had forgotten the sponge; it was replaced by long narrow strips of old linen well saturated in olive oil, and crowded in the rectum; anodyne, &c. The next day the plugging had been expelled with the contents of the bowels: another examination revealed that the stricture was entirely removed, three fingers being readily passed, and without pain, through the intestine. A third visit, and she was discharged cured. I have seen her since, and she pronounces herself as well as ever.

Case VII.—Simple Stricture of the Rectum; cure.

This case occurred in the person of Mrs. L., of St. Lewis Street, a woman of good physical development and of excellent constitutional health. She had been for some time suffering with symptoms of stricture, when she called upon my friend Dr. J.—the subject of my fifth case—for the purpose of having something done for her teeth; she incidentally mentioned the peculiarities of her case, and as they were nearly identical with those under which he had so long suffered, he detailed his experience and referred her to me. As she was a patient of my brother's the case passed into his hands. I accompanied him to her residence, the operation was performed, and attended with the same success. It is now near two years since, and she does not complain of her former trouble.

The reader has now the details of the cases before him, and if I can be instrumental in affording relief but to one poor sufferer in the hands of others, I shall consider myself amply repaid for the time and trouble devoted to the preparation of this dissertation.

Montreal, 27½ Little St. James Street,
15th April, 1861.

TABLE OF CONTENTS.