BENIGN STRICTURES* OF THE RECTUM

By

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There are many and varied causative factors in the production of benign or simple strictures of the rectum. Such strictures are as a rule notoriously difficult to treat, and as is the case in many other lesions to which the flesh is heir, the old maxim applies that "Prevention is better than cure."

Benign strictures may be classified as:—

- (1) Congenital.
- (2) Acquired.

Congenital Strictures are usually the result of inadequate union between the proctodoeal invagination and the hind-gut proper. Any degree of obstruction, from stenosis of the anal orifice up to complete atresia of the anal canal, may be present. Imperforate anus may be associated with absence of a portion or the whole of the rectum.

Operations upon such cases early in life may be followed by marked stricture formation.

Acquired Strictures may be (1) spasmodic, (2) organic.

(1) *Spasmodic Strictures* are uncommon, but undoubted cases of spasm of the sphincter muscles, without any obvious cause, are met with from time to time.

Reflex spasm of the sphincters from associated fissure and anal ulceration is quite well known.

(2) *Varieties of Organic or Fibrous Stricture.*—*Traumatic Stricture* may follow accidental wounds of the anal canal or rectum, in which tissue is lost at the time of injury or else due to subsequent sepsis and sloughing. Gun-shot wounds also come under this category.

Pressure of the head during labour against the sacral promontory may be followed by sloughing of the rectal wall, with stricture formation.

Post-operative Strictures.—The removal of internal piles by operation may be followed by a greater or lesser degree of fibrosis and contraction. This is especially the case if large bare areas of tissue are left after removal of the piles. This is one of the disadvantages of "Whitehead's operation," and is due to the giving way of part of the line of suture of the mucous membrane to the anal skin, with resulting fibrosis and contraction. Similar stenosis may follow any method of operation for internal piles, especially the high-stripping operation. The occasional judicious passage of a well-vaselined finger during convalescence will often obviate this.

The modern ligature operation is based on principles directed towards preventing stricture formation, namely, ligation of the piles at the level of the anus, and the preservation of intact portions of skin in continuity with mucous membrane between the ligated piles.

The use of strong chemical solutions in the injection treatment for piles has been responsible for sloughing of the tissues with subsequent stricture formation. Carbolic acid was first used in this connection by Mitchell of Illinois in 1871. Strong solutions varying from 27 per cent to 90 per cent were employed.

Stricture formation has been known to follow the accidental use of an enema in which the fluid was too hot; ulceration and fibrosis resulting.

In pre-antiseptic days, ulceration and sepsis invariably followed operations on the anal canal and rectum, with resulting fibrosis and stricture formation.

Extensive operations for fistula, if associated with much sepsis, may be followed by rectal stricture.

Inflamed and sloughing internal piles may be followed by ulceration, fibrosis and subsequent cicatricial contraction.

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Inflammatory Strictures may follow any form of "Chronic Proctitis."

(1) *Chronic Ulcerative Colo-Proctitis*.—Stricture formation is quite a common sequela of this condition, in fact long multiple strictures often result during the process of healing. (See photograph.)

In the reports of the Mayo Clinic it is stated that 8.5 per cent of cases of Ulcerative Colo-Proctitis develop strictures.

(2) *Tuberculous Stricture* of the rectum is rare, but is more common in the colon.

(3) *Dysentery* is a rare cause of stricture.

(4) *Bilharzia* may produce ulceration of the rectum, rarely followed by stricture.

(5) *Peri-Rectal Inflammation*.—Under this heading must be placed strictures resulting from all varieties of pelvic cellulitis. Peri-rectal fibrosis may follow the application of "radium" for uterine affections. Proctitis is an occasional sequel to radium treatment for carcinoma of the cervix, and this may be followed by dense fibrous tissue formation both in the coats and outside the rectal wall.

I had a patient some years ago who developed acute intestinal obstruction, the result of a fibrous stricture of the rectum, due to the use of radium for carcinoma of the cervix. This necessitated a Colostomy. In due course the fibrous tissue resolved and it was found possible to close the Colostomy.

Fibrosis may also follow the use of radium in the cure of Epithelioma of the anus or anal canal.

Venereal Disease is said to be responsible for a large number of cases of fibrous stricture of the rectum.

There are certain clinical and pathological features associated with this class of case:—

Sex. Mostly in women.

Age. 20 to 40 years.

Situation. Usually the lower 3 or 4 inches of the rectum including the anal margin and may reach the pelvic colon.

The strictures may be single, multiple, annular, cylindrical or funnel-shaped. There is usually ulceration above the stricture and occasionally also below.

The stricture is often very dense, involving the whole circumference of the bowel. It is characterised by bands of indurated and fibrotic muscle between which are pockets, from the bottom of which fistulous tracks may lead to the surface in the anal region or open into the vagina. One characteristic feature is the presence of fibrous polypi both above and below the stricture; these may project through the narrowed lumen. If the stricture is low down the tone of the sphincters may be lost.

The following complications may arise:

(1) Peri-rectal suppuration and fistulae.

(2) Perforation of a stercoral or distension ulcer above the stricture.

(3) Chronic intestinal obstruction terminating in acute obstruction.

It has been debated by many authorities and on many occasions as to which variety of venereal disease is responsible for this class of stricture.

Gonorrhoeal Proctitis may be followed by stricture formation. This usually occurs in women and is the result of direct extension of the infection from the vagina.

Sir Charters Symonds in a Presidential Address to the Sub-Section of Proctology of the Royal Society of Medicine in 1923, laid stress on gonorrhoea as a common cause of fibrous stricture of the rectum in women. From his examination of specimens apparently of this nature, in various hospital museums in London, he came to the conclusion that many cases labelled as syphilitic were in reality gonorrhoeal in origin.

Syphilis has been cited in many text-books as a common cause of fibrous stricture of the rectum. This is difficult to prove. Very few cases of undoubted syphilitic stricture have been recorded. A patient may be suffering from syphilis but the rectal stricture may be the result of associated gonorrhoea.

Very few cases of undoubted syphilitic stricture have been seen at St. Mark's Hospital.

Lymphogranuloma Inguinale and Climatic Bubo.—Stannus regards an infection with the "ultra-microscopic filtrable virus" which is responsible for the above conditions, as an important factor in the production of fibrous stricture of the rectum. As previously stated, such strictures occur mostly in women. The method of production is a spread from a vaginal infection via lymphatics to the wall of the rectum. In such a case there is no associated Proctitis, but Elephantiasis Vulvae or Esthiomène is usually evident. Such strictures are met with from 2 to 8 cm. above the anus.

In the male Lympho-granuloma may also be responsible for rectal stricture, the result of Sodomy. In such cases Proctitis is evident. Frei's test is of great help in the diagnosis of Lympho-granuloma as a causative factor.

Treatment.

This resolves itself into

- (1) Preventive and palliative.
- (2) Operative.

Preventive treatment implies rigid and early attention to any form of proctitis and to its cause.

I would again emphasise the importance of passing a finger at intervals during convalescence after operations on the anal canal or rectum for piles, fissure, fistula, etc., in order to prevent cicatricial contraction.

Palliative treatment resolves itself into dilatation, which may be rapid or intermittent. This must be undertaken with the utmost care with either soft flexible rubber bougies or graduated metal dilators, under an anaesthetic. Serious or even fatal accidents have resulted from splitting the stricture with resulting peri-rectal spread of infection, or even peritonitis, if the stricture is above the peritoneal reflection.

After the stricture has been dilated, if it is low down, the patient may be given a dilator of suitable size, and instructed how to pass it himself, daily.

Operative treatment. Under this heading must be placed:

- (1) Internal Proctotomy.
- (2) External Proctotomy.
- (3) Excision of Stricture.
- (4) Colostomy.

Internal Proctotomy.—The indications for this operation are: A small annular stricture with a well-marked diaphragm. The stricture is partly divided by means of a blunt-ended bistoury, guided by a finger in the rectum. The divisions should be made posteriorly and laterally and followed by gradual dilatation with bougies.

External Proctotomy or Posterior Linear Proctotomy is indicated in cases of cylindrical or funnel-shaped strictures of greater density, situated within 3 or 4 inches of the anus.

In this operation, the stricture together with the rectal wall, anus and overlying tissues are all divided in a posterior direction. Temporary incontinence will follow, but the final results are encouraging. The operation affords good drainage, which is a point of great importance in rectal operations. It must be followed by the regular and systematic use of dilators for some considerable period.

Excision of the stricture.—This is an operation favoured by Hartmann, who reports very satisfactory results in a series of cases. It may be exceedingly difficult owing to peri-rectal fibrosis. The preliminary steps are similar to those of a "Whitehead's operation" for piles.

After dissecting up a cuff of mucous membrane, the bowel is divided above the sphincters. The rectum is isolated and freed to well above the upper limit of the stricture. (The peritoneal cul-de-sac may have to be opened in certain cases.) The portion of strictured rectum is excised, and the cut end of the bowel brought through the sphincters and sutured to the anal skin. Drainage of the post-rectal space by a counter incision is important.

Another method is excision of the stricture by a sacral approach followed by an end-to-end anastomosis.

Colostomy.—This may be a temporary expedient in order to divert the passage of faeces and so allow an ulcerated mucous membrane to heal. As soon as the rectum is clean, the stricture may be dilated and finally the colostomy closed. I have recently had a successful case of this nature. On the other hand, a "permanent colostomy" may be necessary. This is advisable in cases of long tight strictures with much peri-rectal infiltration and loss of sphincteric control.