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RESEARCH ARTICLE

FAECAL INCONTINENC FOLLOWING ANO-RECTAL SURGERY AND ITS MANAGEMENT

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ABSTRACT

Faecal Incontinence is the inability to control bowel movements, causing fecus to leak unexpectedly from the rectum. Also called Bowel Incontinence, Faecal Incontinence ranges from an occasional leakage of stool while passing gas to complete loss of bowel control. Most common cause of faecal incontinence is damage to the anal sphincter or their nerves. Normally the rectum stretches to hold stool until one can get to toilet. But after the ano-rectal surgery, there is a scarring that makes the walls of the rectum stiff, fibrous and less elastic. The rectum then can't stretch as much and can't hold stool resulting in faecal incontinence. Also injury to the nerves that sense the stool in the rectum or those that has control on the anal sphincters can lead to Faecal Incontinence. Many patients feel embarrassed about bowel incontinence and most of them didn't tell their problem to the consulting doctor. But incontinence can be treated successfully. Maintaining proper diet with high fibre intake, avoiding meat, alcohol, caffeine, fatty, fried, oily and spicy foods, bowel retaining and pelvic floor exercises including Mool Bandhadiscribed in Yoga to make the anal and pelvis muscles stronger and proper treatment can help most patients gain normal control of the bowels If the treatment does not work, surgery may help correct the problem. There are several types of procedures. The choice of surgery is based on the cause of the incontinence and the patient's general health.

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INTRODUCTION

Fecal incontinence after ano-rectal surgery is a challenging condition. It is one of the most psychologically and socially debilitating conditions in an otherwise healthy individual. It can lead to social isolation, loss of self-esteem and self-confidence, and depression (https://emedicine.medscape.com/article/268674-overview). Fecal incontinence can be defined as the unintentional loss of stool (feces) or gas (flatus) (https://www.medicinenet.com/fecal_incontinence/article.htm). It is often due to a failure of one or more of the components that allow the body to control the evacuation of feces, when it is socially appropriate. A normal bowel movement requires a complex interaction and feedback system between the nerves and muscles of the rectum and anus. The anatomy of this area is complicated. The rectum is a reservoir for holding stool. Two sphincters or circular muscles separate the rectum from the anus and control when the anus should allow a bowel movement. The internal anal sphincter (IAS) is under involuntary control of the body's nervous system, while the external anal sphincter (EAS) can be actively controlled by the individual.

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In addition, the puborectalis muscle tugs at the junction of the rectum and anus, creating a 90 degree angle, which makes it harder for stool to move involuntarily into the anus. When the rectum is full and for a normal bowel movement to occur, the IAS relaxes just a little. Cells in the anus can detect feces or flatus and if the brain says that it is an opportune social time to pass gas or have a bowel movement, the puborectalis muscle relaxes, straightening the path from the rectum to the anus. Squatting or sitting helps increase the pressure within the abdomen, and muscles that surround the rectum squeeze its contents, the EAS relaxes and a bowel movement occurs. If it is not an appropriate time to open the bowel, the puborectalis muscle contracts, the EAS contracts, the rectum relaxes and stool is forced back into the upper part of the rectum, causing the urge to have a bowel movement to be temporarily quieted (https://www.fascrs.org/patients/disea se-condition/fecal-incontinence-expanded). Faecal Incontinence ranges from an occasional leakage of stool while passing gas to complete loss of bowel control. Most common cause of faecal incontinence is damage to the anal sphincter or their nerves. Normally the rectum stretches to hold stool until one can get to toilet. But after the ano-rectal surgery, there is a scarring that makes the walls of the rectum stiff, fibrous and less elastic. The rectum then can't stretch as much and can't hold stool resulting in faecal incontinence.

Also injury to the nerves that sense the stool in the rectum or those that has control on the anal sphincters can lead to Faecal Incontinence (https://www.mayoclinic.org/diseases-conditions/fecal-incontinence/symptoms-causes/syc-20351397).
Following surgery, ano-rectum requires some duration of time to regain the bowel control. But, many a times it may never become normal as it was before. How long it takes to become normal vary from patient to patient. It would be weeks or months. It is important not to expect too much recovery during early weeks or months.

Symptoms of faecal incontinence

Increased frequency of bowel movements,
Increased urgency – little or no warning of when the patient need to go.
Diarrhoea or loose motions
Constipation
Perianal pain while passing stool
Passing small amount of stool frequently in fragments
Leaking stool or unable to control bowel
Increased flatus and unable to distinguish between flatus and fecus.

Diagnosis of bowel incontinence (https://www.webmd.com/digestive-disorders/bowel-incontinence#1)

Discussing bowel incontinence may be embarrassing, but it can provide clues for a doctor to help make the diagnosis.

Physical Examination

During a physical examination, the strength of the anal sphincter muscle is to be checked using a gloved finger inserted into the rectum.

Other tests may be helpful in identifying the cause of bowel incontinence, such as:

Stool testing:

If diarrhoea is present, stool testing may identify an infection or other cause.

Endoscopy

A tube with a camera on its tip is inserted into the anus. This identifies any potential problems in the anal canal or colon. A short, rigid tube (anoscopy) or a longer, flexible tube (sigmoidoscopy or colonoscopy) may be used. Anorectal manometry. A pressure monitor is inserted into the anus and rectum. This allows measurement of the strength of the sphincter muscles. Endosonography. An ultrasound probe is inserted into the anus. This produces images that can help identify problems in the anal and rectal walls. Nerve tests. These tests measure the responsiveness of the nerves controlling the sphincter muscles. They can detect nerve damage that can cause bowel incontinence. MRI defecography. Magnetic resonance imaging of the pelvis can be performed, potentially while a person moves bowels on a special commode. This can provide information about the muscles and supporting structures in the anus, rectum, and pelvis.

Management of Faecal Incontinence

Faecal incontinence is usually treatable. In many cases, it can be cured completely. Conservative treatment for the management of Faecal Incontinence by control of diarrhoea, physiotherapy or electrical therapy is often successful in patients with minor incontinence. Often, simple changes may help reduce bowel incontinence. Besides the conservative treatment, there are many effective treatments which help to manage bowel incontinence. These includes- Diet, Pelvic Floor Exercises, Bowel Retaining and Biofeedback sensor. Surgery may be recommended for people whose bowel incontinence is not achieved by this treatments.

Diet

void the food which may lead to incontinence. Alcohol, Caffeine, Dairy products (in people who are unable to digest lactose, a sugar found in most dairy products),Fatty, fried, or greasy foods, ,Spicy foods, Cured or smoked meats, sweeteners like fructose, mannitol , sorbitol, and xylitol should be avoided or tracked off.

Fiber

Adding bulk to the diet may thicken loose stool. To increase fiber,eat more whole grains. 30 grams of fiber should be taken daily.

Pelvic Floor Exercises

These methods can help to control the anal sphincter muscle during a bowel movement. Begin a program of regularly contracting the muscles used to control faecal incontinence. This builds strength in the pelvic muscles and may help reduce bowel incontinence. Actually the anal sphincters are not technically part of the pelvic floor muscle group, but the EAS is a voluntary, striated muscle which therefore can be strengthened in a similar manner. It has not been established whether pelvic floor exercises can be distinguished from anal sphincter exercises in practice by the people doing them (http://onlinelibrary.wiley.com/wol1/doi/10.1002/bjs.1800700806/abstract; https://en.wikipedia.org/wiki/ Fecal_ incontinence# Medication). Mool Bandha in Yoga is one of the best exercise that strengthen the pelvic floor muscles and anal sphincter muscles (http://yogachicago.com/2014/o3/yoga-for-incontenence-and-other-pelvic-floor-disorders/).

Bowel Retaining

Bowel retraining involves trying to have a bowel movement at certain times of the day. Schedule bowel movements at the same times each day can help prevent accidents in between.

Medication

Pharmacological management may include anti-diarrheal/constipating agents and laxatives/stool bulking agents Stopping or substituting any previous medication that causes diarrhea may be helpful in some extent. There is not good evidence for the use of any medications however (Alexander, 2013).

Biofeedback Sensor

A sensor is placed inside the anus and on the abdominal wall. This provides feedback as a person does exercises to improve bowel control (Norton, 2012).

Surgical management of faecal incontinence

If the above treatment does not work, surgery may help correct the problem. There are several types of procedures. The choice of surgery is based on the cause of the incontinence and the person's general health.Surgical management is considered under 4 general groups (https://en.wikipedia.org/wiki/ Surgical_management_of_fecal_incontinence).

- Restoration and improvement of residual sphincter function :
- Replacement / imitation of the sphincter or its function :
- Antegrade continence enema (ACE)/ antegrade colonic irrigation :
- Fecal diversion (stoma creation):

Sphincteroplasty (Rectal sphincter repair)

This surgery is indicated in the patients whose anal muscle ring (sphincter) isn't working well due to injury or aging. The anal muscles are reattached to tighten the sphincter and help the anus close more completely (Wexner, 2010)

Postanal Repair

This procedure aims to improve FI by restoring the anorectal angle and lengthen the anal canal. The main indication is denervation of the pelvic floor (e.g. descending perineum syndrome). After the patient is anesthetized, an incision is made posterior to (behind) the anus and a space between the EAS and IAS is opened up. This plane is followed, freeing the rectum from its attachment to the pelvic floor. Puborectalis and pubococcygeus are folded and held with stitches. These folds will lengthen the anal canal. It is safe and simple, but long term improvements in FI are poor (30-40%) (Bruce, 2007).

Perianal Injectable Bulking Agents

These procedures aim to inject bio-compatible material into the walls of the anal canal, aiming to bulk out these tissues. This may bring the walls of the anal canal into tighter contact, raising the resting pressure, creating more of a barrier to the loss of stool, and reducing FI (Maeda, 2013).

Sacral nerve stimulator

A device can be put inside the body to stimulate the nerves that maintain continence (Tadataka Yamada, 2009).

Graciloplasty (Gracilis muscle transplant)

The patients who have lost nerve function in the anal sphincter, gracilis muscle transplants may be helpful. The gracilis muscle is taken from the inner thigh. It is put around the sphincter to help tighten the sphincter muscle.

Artificial Bowel Sphincter

The ABS aims to control incontinence by mimicking the natural action of the sphincter muscle. The device consists of three components: an inflatable cuff (the sphincter) that occludes the anal canal, a pressure-regulating balloon filled with radio-opaque solution located in the retroperitoneal space, and a control pump placed in the scrotum or labia. When the cuff is inflated with fluid, continence is achieved. The control pump regulates the movement of fluid from the balloon to the cuff and is operated manually by the patient to allow peristaltic passage of faeces. By compression of the pump the cuff is deflated, fluid is displaced from the cuff back to the pressure-regulating balloon and defaecation can take place (https://s3.amazonaws.com/academia.edu.documents/42245221/Systematic_review_of_safety_and_effectiv20160206-11499-2004).

Anal Encirclement (Thiersch Procedure)

This was originally described as a surgical management for rectal prolapse. This operation essentially involves encircling the anal canal with implanted foreign material. Various materials have been used, including nylon, silk, fascia strips, silver wire, and silastic bands. Anal encirclement effectively supplements the anal sphincter, narrowing the anal canal and its barrier function to stool, without altering voluntary control. Since complications are common, and can be serious (fecal impaction, infection, erosion of encirclement through anal canal), modern surgeons prefer to perform colostomy (Mundy, 2014).

Radiofrequency ablation ("Secca Procedure")

This refers to temperature-controlled radiofrequency energy being delivered to the anal canal, and is marketed as the SECCA procedure. This procedure aims to create a controlled scarring and stricturing of the anal canal. In theory, it is thought that radiofrequency induced IAS injury may cause collagen deposition and fibrosis (scarring), resulting in the affected area tightening (Bruce, 2007). Specialized surgical instrument called a radiofrequency handpiece is used (Hull, Tracy, 2007).

Antegrade Continence Enema

This procedure involves the surgical creation of a stoma (either an appendicostomy, cecostomy, or sigmoidostomy), which thereafter functions as an irrigation port. This antegrade colonic irrigation**:** aims to introduce fluid to wash out the colon at regular interval.

Fecal Diversion

Sometimes, this procedure is performed in people who are not helped by other therapies. The large intestine is attached to an opening in the abdominal wall called a colostomy. Stool passes through this opening to a special bag. You will need to use a colostomy bag to collect stool most of the time (Nils G. Kock, 1994). If treatment does not get rid of bowel incontinence, you can use special fecal collection devices to contain the stool and protect your skin from breakdown. These devices have a drainable pouch attached to an adhesive wafer. The wafer has a hole cut through the center, which fits over the opening to the anus.

Conclusion

Faecal incontinence after an ano-rectal surgery is the commom complication which is oftenly unreported by the patient due to

the stigma. It is one of the most psychologically and socially debilitating conditions in an otherwise healthy individual. Faecal incontinence is usually treatable. In many cases, it can be cured completely. There are various treatment modalities available to overcome the faecal incontinence. Conservative treatment and simple changes may help reduce bowel incontinence. Besides the conservative treatment, there are many effective treatments like Diet, Pelvic Floor Exercises, Bowel Retaining and Biofeedback sensor, which help to manage bowel incontinence. When these treatment does not work, surgery may help correct the problem. There are several types of surgical procedures summerized in the paper to overcome the faecal incontinence.

REFERENCES

British Journal of Surgery Society Ltd British Journal of Surgery 2004; 91: 665–672 Published by John Wiley & Sons Ltd 666 L. Mundy, T. L. Merlin, G. J. Maddern and J. E. Hiller

Bruce G. Wolff 2007. The ASCRS textbook of colon and rectal surgery. New York: Springer. ISBN 0-387-24846-3 l.], edited by Tadataka Yamada ; associate editors, David H. Alpers ... [et (2009). Textbook of gastroenterology (5th ed.). Chichester, West Sussex: Blackwell Pub. ISBN 978-1-4051-6911-0

Edited by Tadataka Yamada; associate editors, David H. Alpers ... [et 2009. Textbook of gastroenterology (5th ed.). Chichester, West Sussex: Blackwell Pub. ISBN 978-1-4051-6911-0

http://onlinelibrary.wiley.com/wol1/doi/10.1002/bjs.1800700806/abstract

http://yogachicago.com/2014/o3/yoga-for-incontenence-and-other-pelvic-floor-disorders/

https://emedicine.medscape.com/article/268674-overview

https://en.wikipedia.org/wiki/Fecal_incontinence#Medication

https://en.wikipedia.org/wiki/Surgical_management_of_fecal_incontinence

https://s3.amazonaws.com/academia.edu.documents/42245221/Systematic_review_of_safety_and_effectiv20160206-11499- 2004

https://www.fascrs.org/patients/disease-condition/fecal-incontinence-expanded

https://www.mayoclinic.org/diseases-conditions/fecal-incontinence/symptoms-causes/syc-20351397

https://www.medicinenet.com/fecal_incontinence/article.htm

Hull, Tracy 30 April 2007. "Fecal Incontinence". Clinics in Colon and Rectal Surgery. 20 (2): 118–124. doi:10.1055/s-2007-977490.

Incontinencehttps://www.webmd.com/digestive-disorders/bowel-incontinence#1)

Kaiser, Andreas M. 2012. "ASCRS core subjects: fecal incontinence". ASCRS. Retrieved 29 October .

Maeda, Y; Laurberg, S., Norton, C Feb 28, 2013. "Perianal injectable bulking agents as treatment for faecal incontinence in adults". Cochrane Database of Systematic Reviews (2): CD007959. doi:10.1002/1 4651858.CD007959.pub3. PMID 23450581.

Mar, MI; Alexander, CE (11 June 2013). "Drug treatment for faecal incontinence in adults". The Cochrane database of systematic reviews. : CD002116. doi:10.1002/14651858.CD002116.pub2. PMID 23757096.

Nils G. Kock, Classic Article; forward by Corman, Marvin L., M.D., March 1994. Springer (web); Volume 37, Issue 3; excerpt from "Diseases of the Colon & Rectum"; Chapter: Intra-abdominal 'Reservoir' in Patients With Permanent Ileostomy; Pp. 278–279.

Norton, C; Cody, JD (Jul 11, 2012). "Biofeedback and/or sphincter exercises for the treatment of faecal incontinence in adults". Cochrane Database of Systematic Reviews.

Wexner, edited by Andrew P. Zbar, Steven D. 2010. Coloproctology. New York: Springer. ISBN 978-1-84882-755-4. 02111.

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