X. THE SURGERY OF ANO-RECTAL CONDITIONS INCLUDING HAEMORRHOIDS

SAMUEL SKAPINKER, M.B., B.CH. (RAND), F.R.C.S. (EDIN.)

Department of Surgery, University of the Witwatersrand, Johannesburg

Ano-rectal conditions are extremely common in practice. A knowledge of anatomy and the principles of rectal surgery are essential for their correct understanding and proper treatment and management. Incorrect treatment or mismanagement may result in prolonged suffering.

HAEMORRHOIDS

There are 3 primary piles, 1 situated on the left and 2 on the right. This is easily remembered by picturing them as on a clock face at 3, 7 and 11 o'clock. Each pile has 3 parts:

1. *The Pedicle*, which is made up by a plexus of veins situated in the rectum and is covered by pale-pink rectal mucosa.

2. *The Internal Pile*, which commences above the ano-rectal ring and ends at the mucocutaneous junction below (Fig. 1).

3. *The External Pile*, which extends from the mucocutaneous junction to the anus proper. The external pile is poorly supported, because its only attachment is the subcutaneous sphincter, and is therefore the first part to prolapse. It is covered by two types of skin—smooth skin from the anal canal and hairy skin from the anus.

The principal *aetiological agent* of haemorrhoidal disease is anal infection. All other factors, such as heredity, erect posture of man, lack of valves in the veins, pregnancy etc., are of secondary importance. One must remember that haemorrhoids may only be a symptom of a grave underlying condition such as portal hypertension due to cirrhosis.

Symptoms

1. *Bleeding*. Bright red blood in small amounts occurring at the end of defaecation, either as smearing of the stool or on the toilet paper, is usually the earliest sign. The bleeding may actually stain the clothing or there may be bleeding into the rectum causing grave anaemia. When bleeding is the only symptom the condition is called *first-degree haemorrhoids*.

2. *Prolapse*. The prolapsing pile appears through the anus first with the relaxing of the sphincters during defaecation. When the pile gets larger, its constituent mucous membrane and plexus of veins become loosened from their attachment to the underlying muscle and prolapse occurs—these are *second-degree haemorrhoids*. These prolapsing haemorrhoids give a feeling of fullness and discomfort. They may return spontaneously or may have to be replaced by the sufferer. They then become so big that they prolapse when the patient coughs or strains or may prolapse spontaneously. These are called *third-degree haemorrhoids*. In this stage, all parts of the haemorrhoid share in the enlargement. The external portion gives rise to the skin tags, and the prolapsed pile has red mucous membrane on its inner side and skin on its outer side. The other symptoms are discharge and

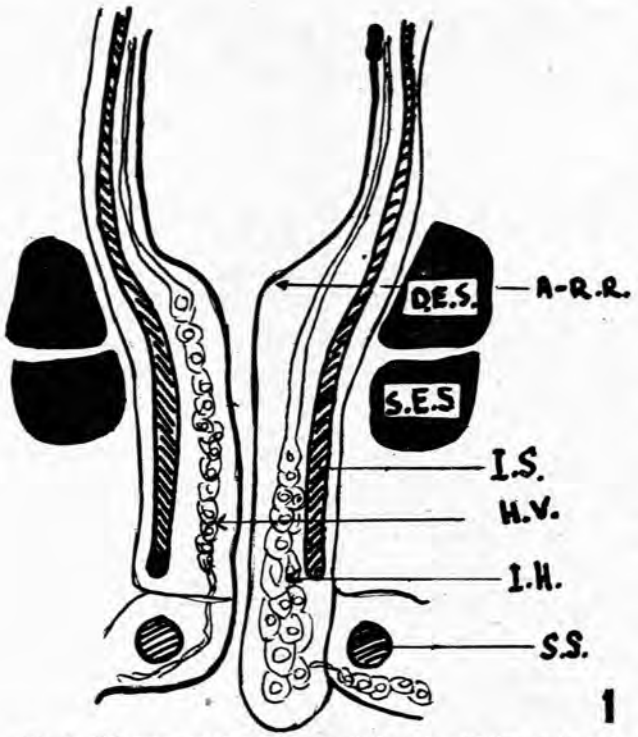

Fig. 1. Diagram to show 3 parts of the pile and the prolapsed pile (right). D.E.S.—Deep External Sphincter; S.E.S.—Superficial External Sphincter; I.S.—Internal Sphincter; A-R.R.—Ano-rectal Ring; I.H.—Internal Haemorrhoid; H.V.—Haemorrhoidal Vein; S.S.—Subcutaneous External Sphincter.

pain. The latter symptom is suggestive of thrombosis or strangulation.

Clinical Examination

The patients are best examined in the left lateral position. External skin tags usually indicate large haemorrhoids. A careful digital examination should be made (every now and then a hidden carcinoma is found). The haemorrhoids cannot be felt on palpation unless they are thrombosed or infected.

The most important examination is proctoscopy. The proctoscope should always be warmed and well lubricated. As the proctoscope is withdrawn the harmorrhoids prolapse. If there is any suspicion of malignancy a sigmoidoscopy should be done.

Treatment

This depends on the degree of the haemorrhoid. First degree haemorrhoids are usually treated by injection. The solution most used is 5% phenol in almond oil. Three c.c. are used for each haemorrhoid and one can either treat each haemorrhoid at weekly intervals or do all 3 at one sitting.

The site for the injection is in the submucous space of the pedicle. The injection must not cause blanching or swelling, which indicates that the needle is too superficial. The best needle to use is a Gabriel needle that has a collar to prevent it penetrating too deeply.

The patient should always be warned of discomfort, and his bowels may be opened next day.

If this form of treatment is not available, one can use an astringent ointment according to St. Bartholomew's Hospital formulary, viz. Ung. hydrarg. subchlor. ½ oz., procaine hydrochlor., 1 gr., paraffin. molle ad. 2 oz. This is milked into the rectum after defaecation. It often tides the patient over an acute attack.

Early second-degree haemorrhoids may respond to injection treatment, but any haemorrhoid that prolapses justifies surgical intervention.

Haemorrhoidectomy

Preparation of the Patient. Two days before the operation the patient takes a purgative, preferably liquid paraffin and cascara. The evening before the operation the patient is given an enema and shaved; on the morning of the operation he is told to empty his bowels and then washed out until the return is clear.

Operation. The operation most in use today is that of ligation and excision. The patient is placed in the lithotomy position and the sphincters are gently dilated so as to admit 3 fingers. The haemorrhoids are then grasped with artery forceps and drawn down. The incision is made in the anal skin at the base of the external portion of the haemorrhoid; this is dissected medially, separating it from the subcutaneous sphincter, which should be displayed, until the pedicle is reached. This is then ligatured with strong catgut and the haemorrhoid distal to the ligature is removed. Bridges of skin should be left between the haemorrhoids. The subcutaneous sphincter must be carefully preserved and dissected free (Fig. 2). Its inclusion in the ligature is the commonest cause of

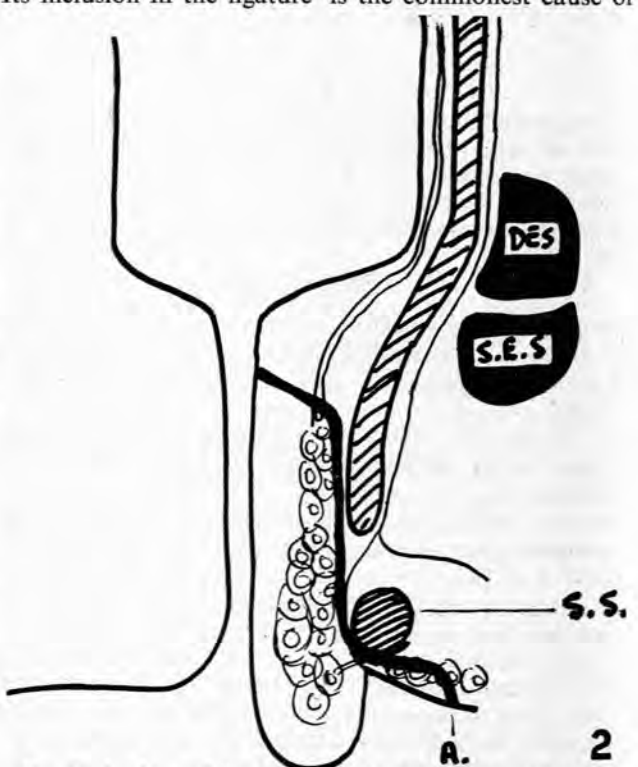

Fig. 2. A=Line of Section. This is the plane in which the haemorrhoidectomy is to be performed. Note how close the Subcutaneous Sphincter (S.S.) is to the haemorrhoid. D.E.S. and S.E.S.—see Fig. 1.

severe post-operative pain. Failure to realize this important anatomical point has been the main reason why the operation of haemorrhoidectomy has gained the reputation of being a very painful procedure. Careful preservation of the subcutaneous sphincter can make the operation relatively painless. It is the author's practice then to put on a soft-paraffin gauze dressing and a thin tube into the rectum.

Whether heavy anaesthetics such as proctocaine should be used in haemorrhoidectomy is a controversial question; today many surgeons consider it to be of no value and liable to cause rectal infection.

Post-operative treatment consists of the control of pain, and this is best relieved by morphine and, after the 1st day, by aspirin which is one of the best analgesics to use. The rectal tube is removed after 24 hours. A mild aperient is given on the 2nd evening after operation and repeated if it has not taken effect on the 3rd day. If this fails an olive-oil enema is given. A careful digital examination is gently performed on the 7th day with a view to preventing the formation of adhesions and stricture.

Strangulated Haemorrhoids

In this condition the haemorrhoids are prolapsed and strangulated by the severe sphincter spasm and infection. This condition is best treated conservatively by bed rest with the foot of the bed elevated. Cold packs should be applied to the buttocks and adequate sedation is necessary. If possible the haemorrhoids may be gently replaced. Haemorrhoidectomy should not be performed until 5-6 weeks have elapsed.

Haemorrhoids and Pregnancy

During the latter months of pregnancy haemorrhoids are an extremely common affliction. They should be treated conservatively and the astringent ointment which has been described should be used. Haemorrhoidectomy should not be considered for at least 3 months after parturition.

Perianal Haematoma

This is often called an external haemorrhoid, but is really not so. It is an external haematoma caused by straining. The patient experiences a sudden pain in the anal region and discovers that he has a tender, painful external swelling. If the condition is seen in the first 24 hours, the treatment consists of simple evacuation of the clot. The best treatment between 24 and 72 hours is excision. If seen after this it is best treated conservatively, when it will subside and gradually disappear.

ANAL FISSURE

The term 'anal fissure' signifies a crack in the anal skin. The lesion is actually an ulcer in the skin of the wall of the anal canal. It occurs most often posteriorly and is the result of trauma which may be due to a hard stool or a small foreign body. The posterior portion of the subcutaneous anal sphincter is vulnerable as it is unsupported. At first the lesion is a linear tear, but infection sets in and it becomes indurated and chronic and a sentinel pile develops.

The acute anal fissure manifests itself as spasm, and this spasm may spread to the external sphincter and even to the levator ani. If the fissure heals, the spasm may pass off. If, however, the spasm is allowed to remain for any length of time, fibrosis of the subcutaneous sphincter occurs and this results in its being contracted. Once this has occurred, the condition can only be treated surgically. The chief symptom is pain, especially during stool. As healing occurs this becomes less, but there is a marked tendency to exacerbations. These patients also complain of a discharge and slight bleeding. Irritation and pruritus often results.

Treatment. In the acute cases if the spasm can be overcome, the fissure often heals spontaneously. This may be encouraged by either painting the fissure with silver nitrate or injecting the sphincter with 5-10 c.c. proctocaine. But once the condition has become chronic and the sphincter fibrosed, active operative treatment is necessary. Stretching of the sphincter under general anaesthesia is not satisfactory and the only sure method is the adequate excision of the fissure and sentinel pile and sectioning of the subcutaneous sphincter. The raw area is treated with 40% tannic acid, which stops the bleeding and also prevents a large raw area. The patient is usually constipated and so an aperient is given on the 3rd day. The patient is also instructed how to pass a well-lubricated St. Mark's dilator twice daily for 2 weeks.

ANO-RECTAL ABSCESSES

If ano-rectal abscesses are not correctly treated from the beginning, the development of anal fistulae is a common occurrence.

Infection gains entrance to the perianal and perirectal tissues either by means of an infected anal crypt or from an infected perianal hair follicle. The infection may localize superficially, or deeply in the tissues of the ischio-rectal fossa on one or both sides. The treatment is prompt surgery, for the fat of the ischio-rectal space has very poor resistance to infection. The diagnosis is not difficult and the symptom of deep throbbing pain with induration or swelling of the ischio-rectal fossa makes the diagnosis easy. A cruciate incision is made across the abscess and 4 pointed flaps are then widely excised until the resulting defect in the skin is larger than the largest part of the abscess. The cavity must be plugged up to its very apex with soft-paraffin gauze and should be packed daily after the patient has had a hot Sitz bath. The dressing should be done by the medical practitioner himself and not delegated to the nursing staff, for failure to cause healing to occur from the apex results in fistula formation.

Pelvi-rectal abscess, which usually results from intraperitoneal infection, should be drained through the ischio-rectal fossa.

ANAL FISTULA

This is one of the most difficult conditions to treat adequately in rectal surgery. It is surprising how often these patients have been subjected to multiple operations and still have their sinuses.

An anal fistula is a tract of inflammatory origin, having

its primary opening in the anal canal or rectum and its secondary opening in the anal or perianal skin. It usually results because a pocket has occurred in an ischio-rectal abscess and burst into the rectum. If the internal opening is not defined, this can be the continued source of infection to the ischeo-rectal space, and the cause of persistant and multiple fistulae.

The principles of treatment are:

1. The primary opening must be found.
2. The fistulous track must be found.
3. All fistulous tracks must be laid open and converted into 'furrows' throughout their entire course.
4. The cavities *must* be allowed to heal from within out.

The fistulae may unfortunately pass to the rectum above the sphincters and in laying them open the sphincters may have to be cut. Injudicious severance of these may result in incontinence. The surgery therefore requires great judgment and experience. The fistulae are classified as low-level fistulae and higher-level fistulae. The former usually pass immediately above the subcutaneous sphincter, (see Fig. 1), which can be sacrificed with safety and the tract exposed satisfactorily. High level fistulae on the other hand usually pass between the superficial and deep portions of the external sphincters. Here the most important factor is whether the ano-rectal ring will be cut in laying the tract open. If both the internal and the external sphincters are cut incontinence may result, and so two-stage procedures have to be undertaken. In all these procedures, the final result depends on adequate and painstaking post-operative care.

PRURITIS ANI

This term is given to the subjective symptom of itchiness around the anus and anal cleft. It may be provoked by local causes or by systemic conditions such as diabetes mellitus, jaundice, etc. Local inflammatory conditions such as fissures, polyps or haemorrhoids may often be the cause, and elimination of them results in cure of the condition. Intestinal parasites and common skin diseases should always be looked for.

Treatment

In all conditions in which organic causes can be found, specific treatment to remedy the condition must be carried out. The scratching in many of the cases has become a habit and has to be tackled psychologically. If no cause is found, X-rays are sometimes of value. The author has found the following ointment of value:

Pulv. zinc. oxide. 2 dr., Lin. camph. 1 dr., procaine hydrochlor. 10 gr., Steril. paraff. molle ad 2 oz.

Drastic surgical procedures such as cutting the nerves often result in failure.

In conclusion, stress should be laid on the necessity of constantly being aware that a rectal carcinoma, which may cause many of the above symptoms, may be mistakenly diagnosed as haemorrhoids. A full rectal examination will avoid this pitfall and result in earlier treatment. The treatment of early carcinoma of the rectum has an excellent prognosis.