

may possibly be attributed a severe throbbing pain which lasted three hours, requiring the use of opiates. Three days later he called at my office feeling very comfortable and was able thereafter to attend his usual duties at a down-town house. The operation was on Saturday and only one day's detention from business resulted.

CASE III. Mr. N., journalist, age thirty-six. Referred by Dr. M. of Allston. He had had protruding internal hemorrhoids for ten years.

Rectal examination: External sphincter contracted but easily dilated. Large right anterior pile and three smaller ones, two of them coalesced.

Operation in office. The spineters were easily dilated without previous anesthetizing, and the internal hemorrhoids removed with three ligatures. Absolutely no pain during the operation. For a short time after the operation he complained of an ache about the anus, and of a weak feeling but soon returned to his home with Dr. M. in an automobile. Five days later he reported at my office feeling very comfortable, from which day he resumed his usual work.

CASE IV. Miss M., age forty-one. Referred by Dr. B. In 1897 she underwent ether operation for anal fissure. At the present time there are four internal hemorrhoids.

At a private hospital the hemorrhoids were removed with three ligatures. The sphincters were easily dilated, as much as required to place the ligatures in position without resort to regional anesthesia. No pain during and but little following operation. She remained in the hospital seven days.

CASE V. Mr. C., age sixty-nine; real estate business. Referred by Dr. G. Diagnosis: Internal and external hemorrhoids. Operation at residence. Sphincters dilated without anesthesia. Two internal hemorrhoids were ligated and the two external hemorrhoids removed. No pain during or following operation.

An annoying diarrhea set in on the fourth day which retarded his convalescence somewhat. Notwithstanding this complication he was able to go to his office in nine days.

After operation, absolute confinement to bed is unnecessary; in fact, these cases do better if on their feet somewhat, but they will hardly be able to attend their usual avocations in less than three or four days to a week, depending on the personal equation of the patient.

At the Boston Dispensary it has been my practice for the past three years to operate upon nearly every case of hemorrhoids, no matter how extensive, and the patients report daily thereafter for treatment, without seeming to experience any great inconvenience; but the application of these methods to more susceptible private cases has not proved equally satisfactory.

The operation is radical, and the only argument of importance I have ever heard against the ligature method is that it causes considerable pain until the stumps have sloughed away. This is due to the fact that the hemorrhoid has not been carefully freed from its muscular attachments, but has been strangulated almost *en masse*, without the previous dissections which I have described.

It is quite impossible to conceive that a ligature tied around the pedicle of a hemorrhoid would cause any more pain than if it were removed by any of the other methods commonly employed.

HEMORRHOIDS AND THEIR TREATMENT.*

BY CHARLES S. GILMAN, M.D., BOSTON.

THE subject of hemorrhoids and their treatment is an old one, but is of interest to medical men of to-day on account of the newer methods of treatment.

The term "hemorrhoids" or "piles" denotes a form of disease which originates in an altered or varicose condition of the veins of the lower rectum or anus. The change is not one of varicosity or dilatation alone; there is always some thickening of the vein wall, and a section of a hemorrhoid shows a large admixture of connective tissue elements around and between the dilated veins. This increase is more marked when the hemorrhoid is of long standing, or has been the seat of repeated attacks of inflammation, the resulting exudation leading to induration and thickening. "In some cases the proliferation of connective tissue has been so great that the veins have been nearly obliterated, the larger part of the hemorrhoid being of fibrous tissue."¹

Classification. — Hemorrhoids are classified, according to their location, as external and internal. The former are covered with integument, and are located externally around the anal margin. The latter are covered with mucosa and are always found in the anal canal. Often hemorrhoids are seen with characteristics of both varieties, which are called extero-internal, or combination hemorrhoids, their lower portion being covered with skin, the upper with mucous membrane.

The external variety is divided into two classes, — cutaneous, or hypertrophied folds of skin; and venous, or thrombotic.

The internal variety is classified as venous and capillary.

Causes. — The causes of hemorrhoids are both predisposing and exciting. Among the predisposing causes are heredity, sex (more common in the male), age (during the most active period of adult life), occupation (those who lead a sedentary life and those doing heavy lifting are more commonly afflicted), manner of living (more common in higher walks of life), climate and season (some authorities claim that hemorrhoids are more common in the tropics), erect posture, absence of valves in the hemorrhoidal veins and the peculiar office of the rectum.

Anything which causes obstruction to the circulation, or induces straining, may result in a varicose condition of the veins of the lower rectum, and so we find among the exciting causes, diseases of the prostate, bladder, urethra, intestines, pelvic diseases, tumors of the abdomen or pelvis, obstructive hepatic diseases, tight lacing, pregnancy, diarrhea and constipation.

The injudicious use of drastic purges and of enemata tend to cause hemorrhoids, owing to straining and tenesmus produced at stool.

Symptoms. — The symptoms of hemorrhoids vary in different subjects. Some cases are seen

* Read before a meeting of N. E. Alumni of Baltimore Medical College, Nov. 7, 1906, and reread by request before the Norfolk South District Medical Society, Dec. 6, 1906.

¹ Goodsall and Miles, Part I, p. 252, 1900.

where but little discomfort is caused, even when the patient has a well-developed case.

The cutaneous variety, when not in a condition of inflammation, causes but little trouble, except more care in keeping the parts clean. They are usually in the form of distinct tags of skin at the anal orifice, or may be a proliferation of skin extending entirely around the anal margin. This condition favors an inflammatory attack, which may be caused by the use of rough paper as a detergent, by an attack of diarrhea or dysentery, by constipation, by abnormal discharges from the vagina or rectum, by friction of wearing apparel; in fact, by anything which may produce an irritable condition of the parts. They then become inflamed, enlarged and painful.

The thrombotic variety usually occurs in robust, active persons. They are a condition of a blood clot around the anal margin. Whether the condition is due to a rupture of the vein wall, which allows the blood to escape and coagulate in the tissues, or whether the blood coagulates in the vein itself does not matter as far as diagnosis and treatment are concerned. Any force or exertion which would break the vein wall or cause stasis in the vein, may produce this condition. During straining at stool while lifting a heavy weight, or during violent exertion, a sensation of something giving away is felt, and, upon examination, a painful swelling, varying in size from one sixteenth of an inch to one inch or more in diameter, is found at the anal margin; it is usually single, but may be multiple. The writer has seen as many as eight present in one case. The swelling is usually oval in shape and is, as a rule, dark purple in color. When seen immediately after its appearance, it is tense and cystic, but after a few days the appearance changes; the skin becomes loose, and the clot feels like a pea or bean beneath the skin. Defecation is difficult and painful, due to spasm of the sphincter, and there is discomfort when walking or sitting. Pain may be very acute, or dull and heavy, and may be referred to the sacrum and down the thighs.

Internal hemorrhoids are more serious than the external variety. In some cases severe hemorrhage has occurred when the patient has been previously unaware of the existence of any rectal disease. Besides the danger of hemorrhage, there is the inconvenience and discomfort which may occur from the protrusion and strangulation of the hemorrhoidal mass, and many cases are accompanied with severe pain.

The capillary form consists of a small raspberry-shaped development of the arterial capillaries close to the surface of the rectal mucous membrane; they are covered with a very thin layer of epithelium, which is easily ruptured, and are the source of frequent hemorrhages.

This form does not protrude and can be detected only with the aid of the speculum, unless the sphincter is greatly relaxed, when it is possible to evert the mucous membrane sufficiently to enable them to be observed. They bleed easily — the blood is of a bright, arterial character and oozes after the act of defecation. The amount

of blood lost at one time is not very great, but often marked anemia is caused on account of the frequency of the bleeding. "When they have been in existence for some time the mucous membrane becomes thickened, hemorrhages cease, and eventually they resolve themselves into the venous variety."²

The venous variety is seen in three stages of development. In the first stage, the presence of the hemorrhoidal tumor can be detected by digital examination, with the aid of the speculum, or by everting the membrane of the anal canal; it does not protrude and is often present without causing the patient any discomfort.

In the second stage there is an increase in the size of the tumor, and a stretching of the mucosa, so that there is often protrusion through the anal orifice at defecation. During this stage there is a spontaneous return of the tumor into the anal canal as soon as expulsion has ceased.

In the third stage the hemorrhoidal tumor constantly protrudes unless the patient remains in the recumbent position for some time.

The chief symptoms of internal hemorrhoids are hemorrhage, pain, protrusion and a discharge of mucus.

In many cases bleeding is the first symptom noted by the patient. The hemorrhoid occurs at first only when the bowels are relieved, and varies in quantity from a few drops to a considerable loss of blood. The quantity of blood depends in a measure upon the consistency of the stools, hardened feces causing far more hemorrhage. When the hemorrhoids protrude after stool, but return spontaneously into the rectum, the bleeding may be profuse. In the third stage, when the hemorrhoids do not return spontaneously, but require manual manipulation (the protrusion occurring upon exertion, or while standing or walking), or during strangulation, there is not bleeding as a rule, but a discharge of mucus.

Pain is usually reflex in character, and may be referred to the dorsal surface of the sacrum or to the lower lumbar region. When there is protrusion or strangulation, the pain is localized at the anus and is then of a throbbing character, which is relieved after reduction, if no other disease complicates the case. When complicated by other diseases, local pains persist for some time after reduction has taken place.

The protrusion of hemorrhoids does not occur during the first stage, although it may be the first symptom noticed by the patient. The occurrence of protrusion marks the beginning of the second stage. During this stage they are reduced spontaneously and cause little inconvenience unless they become strangulated; then, if not reduced artificially, they will become painful, gangrenous and partially or completely slough.

During the third stage the sphincters are usually relaxed, and the protrusion is almost constant during defecation, active exercise, or prolonged standing.

The discharge of mucus is present chiefly during

²Tuttle: Diseases of Rectum, Anus and Pelvic Colon, page 611. 1902.

the third stage. The quantity is much in excess of the normal secretions from the rectum and may be due to "reflex hypersecretion consequent upon the irritation and congestion of the mucous coat when constant protrusion is present."³ This causes very great discomfort to the patient by adhering to the underclothing, and in many cases the peri-anal skin becomes irritated by the constant escape of mucus.

Diagnosis. — The diagnosis of both varieties of hemorrhoids is comparatively easy, and yet every known tumor which occurs around the ano-rectal region has been called hemorrhoids, and they have been often confused with other rectal diseases which are accompanied with hemorrhage and pain. The diagnosis of the external and external-internal varieties can readily be determined by inspection.

In most cases of the internal variety there is no external evidence of the disease, and an attempt to examine the anal canal with a bivalve speculum is usually unsatisfactory, because when the blades are open the pile tumors are flattened out. The same condition obtains when a fenestrated glass speculum is used.

A good way to locate hemorrhoids when no protrusion is present is to give the patient a small enema of glycerin and water, which causes straining and engorgement of the tumors; then, by everting the anal canal, the hemorrhoids are brought into view.

Hemorrhoids can be distinguished from villous growths by the broad base of the latter, their slow growth, spongy feeling, bright color and frequent hemorrhages.

Malignant growths occur as hard, nodular growths on the side of the rectal wall; they grow larger and break down.

Venereal warts can be distinguished by their number and circumscribed location; they are soft, pedunculated, fragile, bifurcated and give off a disagreeable odor.

Pruritus ani is frequently called "itching piles." This condition is not a condition of hemorrhoids — there is absence of both tumor and hemorrhage — and is usually due to some irritating rectal discharge, seat worms, ulceration in the anal canal, enlarged papillæ, neurosis, or eczema of the skin. In many cases of hemorrhages, where no hemorrhoids can be found, bleeding is due to ulceration, injury or fissure. Because of protrusion, procidentia recti and polyps have been mistaken for hemorrhoids. The polyp is recognized by its pedicle, and the rectal prolapse by its even protrusion, color and soft, velvety feeling.

Prognosis. — The prognosis of hemorrhoids is always good, if the condition is recognized and intelligently treated.

Treatment. — The treatment of hemorrhoids is both palliative and operative.

The palliative treatment of the cutaneous variety consists in regulating the bowels, cleansing the region frequently with hot water, adjusting the clothing so that it will not irritate the parts,

and the use of ointments or powder containing zinc oxide or carbonate of bismuth and camphor. This method is rather unsatisfactory and slow.

The operative treatment is simple and the results are sure; it consists of the removal of the tags or hypertrophied folds of skin, under local anesthesia, with the scissors, the excision being made at about one-eighth inch above the base. This allows the sides of the resulting wound to come together without causing much contraction of the anal skin, and there is no discomfort to the patient after the first few hours. This should be dressed with a sterile pad of gauze, held in place with a T bandage, and the wound kept clean and dusted with some antiseptic powder until healed.

In cases of the thrombotic variety, where the skin over the clot is not tense and where inflammation is not present, the palliative treatment is often successful. A soft movement of the bowels should be secured once or twice daily, by the use of the compound licorice powder at night, or a mild aperient, as sulphate of magnesia, Carabana or Hunyadi water before breakfast. The patient should be kept quiet and in the recumbent position for the first few days, and the lead and opium wash U. S. P. should be applied continually to the anal region by means of a thick pad of gauze, which should be moistened frequently during the first few days, and then less frequently until complete absorption of the clot takes place. The operative treatment of this variety of hemorrhoids is much quicker in results than the above method. It removes the clot at once; it can be done at the office painlessly, and, in the writer's experience, pain and soreness disappear immediately, and the condition is less troublesome to the patient, for he is able to assume his business and social obligations. It consists in making an incision into the tumor and turning out the clot under local anesthesia. The incision should be made in the center of the swelling, beginning at the outer margin and in a line radiating from the anal canal. After the clot is removed, the cavity should be packed with a small piece of gauze, which should be allowed to remain twenty-four hours and should not be renewed. The wound should be cleansed daily and stimulated with a 10% to 15% solution of ichthyol in glycerin, or dusted with aristol or some similar antiseptic powder.

The palliative treatment of internal hemorrhoids is often successful in the incipient stages. The exciting causes should be removed as far as possible, *i. e.*, constipation should be relieved, any urethral, prostatic, pelvic or other diseases attended to; the diet should be restricted, and the use of condiments and stimulants should be prohibited; the external parts should be kept clean, and the patient should be kept in the recumbent position. If there is strangulation, spasm of the sphincter and pain, the application of the ice bag to the parts, or applications of hot water compresses or hot poultices give relief. Suppositories containing morphine, cocaine or eucaine may be used if needed. In cases where there is

³ Goodall and Miles, Part I, p. 281. 1900.

much hemorrhage, a thin strip of gauze moistened with weak solution of nitrate of silver (2% to 4%), or 10% solution of ichthyol in glycerin, or 50% solution of balsam of Peru may be placed in the anal canal, where it should be allowed to remain several hours, or the bleeding points may be cauterized.

In some cases a suppository containing extract hyoscyamus gr. 2; ext. belladonna gr. $\frac{1}{4}$ to $\frac{1}{2}$; iodoform gr. 1; oil eucalyptus gtt. 1, with or without morphine gr. $\frac{1}{4}$ to $\frac{1}{2}$, according to the amount of pain present, has given temporary relief, as has also an ointment containing cocaine hydrochloratis gr. iii; sol. adrenalin chloride 5ss; bismuth sub carbonatis gr. x; vaseline 3i, applied by means of a hard rubber pile pipe morning and night and after stool.

In most cases an operation becomes necessary eventually.

The operative treatment of internal hemorrhoids is the more satisfactory to both patient and physician, and with the recent introduction of local anesthesia in the treatment of ano-rectal diseases, the discomfort is not as prolonged as when the palliative measures are used, and an immediate, permanent cure can be obtained.

The operations practised oftenest are the clamp and cautery, the ligature, the excision and the injection methods. Many other operations have been suggested and have met with more or less favor, such as sub-mucous ligation, divulsion of the sphincter muscle, removing by *éraseur*, or the wire loop, puncture or linear cauterization by means of caustics or the galvano-cautery, and excision and suture of the wound. Probably the most popular methods in use to-day are the clamp and cautery and the ligature methods.

Dr. S. G. Gant, of New York, favors the clamp and cautery operation when a general anesthetic is given,⁴ while Goodsall and Miles practise the ligature method almost exclusively at St. Mark's Hospital in London.⁵

The excision method, known as Whitehead's operation, in which the entire pile-bearing area is excised and the rectal mucous membrane is sutured to the skin at the anal margin, is a very difficult operation to perform successfully, and many grave complications and conditions have resulted from this method, such as incontinence, ulceration, stricture, abscess, proctitis and other forms of rectal disease.

Earle's modification of Whitehead's operation is one of the most reliable and safe methods when a complete excision of the pile-bearing area is desired.

In operating after this method the skin is caught at each quadrant of the anal orifice, just at the white line of Hilton, with hemostatic forceps, and with them the skin and mucous membrane are pulled down. This brings into view any hemorrhoids which may exist, when they are also caught with hemostats and drawn well down. An incision is made at the center of the anal orifice posteriorly, sufficiently deep to

allow Earle's clamp forceps to be applied at right angles to the long axis of the rectum, and at the same time to include in the forceps the amount of tissue to be removed from this part of the anal canal, care being taken to include more mucous membrane than skin. Before applying the clamp forceps, the first two stitches to draw together the skin and mucous membrane should be taken at the bottom of the incision. With forceps now applied and held in position, the tissue above the forceps is cut away and a running suture is made by passing it first under, then over, the forceps until the end of the forceps is reached, when the forceps are withdrawn and the suture is made taut. Another similar bite of the redundant tissue is taken until the entire hemorrhoidal area is removed.⁶ Of course, a general anesthetic is necessary, and the patient must be confined to bed for several days.

There is another method of excision practised by some surgeons, in which an elliptical incision is made sufficient to remove the tumor; the edges of the incision are sutured and healthy strips of mucous membrane are left between the points of incision.

There are many advocates of the injection method, and, in the hands of some surgeons, good results have followed this line of treatment. It consists of the injection of caustics, astringents or antiseptic fluids into the hemorrhoidal tumor, and it is claimed that a cure results with but little pain, without causing detention from business and without the use of a general anesthetic. Most of the prominent rectal surgeons who have given this method a thorough and complete trial agree that although cures are occasionally obtained, yet in most instances the method is unsatisfactory in that the relief is only temporary, and because the injection of carbolic acid and similar agents may produce much pain, inflammation, swelling, extensive sloughing, abscess, fistula, phlebitis and resulting absence from business. Cases of death from embolism have been reported as a result of this method.

Most surgeons insist that patients suffering with hemorrhoids shall give up all social and business engagements and take a general anesthetic for the purpose of having them removed, no matter what the number, size or condition of the hemorrhoidal tumors. In many cases this is unnecessary, for nearly all uncomplicated cases of hemorrhoids of whatever variety can be radically operated upon in the office or at the patient's home, under local anesthesia, with very little pain or discomfort and but slight, if any, interruption in the daily habits and engagements of the patient.

The use of local anesthesia in the ano-rectal region has been the subject of much discussion among the most prominent rectal surgeons during the last two or three years. There have been many advocates of cocaine, eucaine or stovaine and ethyl chloride as being suitable agents, with which local anesthesia of this region could be

⁴ Gant: Diseases of Rectum and Anus. 1902.

⁵ Goodsall and Miles, Part I, p. 288. 1900.

⁶ Taken from lectures by Professor Earle at Baltimore Medical College during course, 1895-96.

secured. The degree of anesthesia produced by these drugs is very satisfactory and it admits of a sufficiently long operative period, but their use is frequently followed with toxic effects. There is distinct shock and always considerable bleeding, and often prolonged post-operative pain.

In the spring of 1903, Dr. S. G. Gant⁷ reported a series of several hundred cases of ano-rectal diseases, in which he had used the injection of sterile water into the tissues to secure local anesthesia. Since that time nearly all of the prominent rectal specialists and many other surgeons have tried that method, and after becoming familiar with the technic, have been favorably impressed with the results.

During the past eighteen months the writer has operated upon 23 cases under sterile-water anesthesia, and upon 16 cases with the combined use of $\frac{1}{2}$ of 1% eucaine in 2% boric acid solution and sterile water. By the combined use is meant the use of the eucaine solution to anesthetize and secure divulsion of the sphincter muscle, and the use of sterile water to anesthetize the hemorrhoidal tumor before ligation.

The technic of the ligature operation for the radical cure of hemorrhoids under the combined use of eucaine solution and sterile water is as follows:

The patient is given an enema of one pint of warm water to clean out the rectum; then a small enema — four to six ounces — of equal parts of warm water and glycerin is thrown into the rectum, the passage of which causes straining and a resulting engorgement of the hemorrhoidal tumors. The external parts are scrubbed and made as aseptic as possible; then the eucaine solution should be used to anesthetize the sphincter muscle. A sufficiently long anesthetizing needle should be used, and one point of entrance selected in the median line at 1 to 1½ inches from the posterior anal margin. With one finger in the anal canal as a guide, the needle can be directed along either side of the anal wall, thus anesthetizing the muscle thoroughly. The sphincter should be carefully divulsed when the engorged hemorrhoids are brought into view. These are now anesthetized with warm sterile water; the needle point is thrust into the center of the tumor and the water is slowly forced into the tissues in sufficient quantity to distend them until they are of a glassy, white appearance, when anesthesia is complete. The pressure exerted upon the terminal nerve filaments is sufficient to prevent cutting pain, although some patients complain of discomfort for a moment, due to distention, which is entirely relieved as soon as the tissues are cut. The tumor can now be grasped with a hemostat and pulled down. A U-shaped incision is made at the mucocutaneous junction, and a stout linen or silk ligature is placed around the entire tumor and is securely tied. The part outside the ligature is excised, care being taken to leave a stump of sufficient size to prevent slipping of the ligature, or when the tumor is very small it can be left to

slough. This method should be followed until all of the hemorrhoids have been ligated. Then a thick, wedge-shaped pad of gauze should be applied firmly to the ano-rectal region under a T-bandage. Laxatives should be given to produce a semi-solid stool each day. The anal canal should be cleansed thoroughly, and an application of 10% solution of ichthyol in glycerin, balsam of Peru 50%, or 2% to 4% solution nitrate of silver made daily until sloughing is completed and the resulting ulceration healed.

The points in favor of local anesthesia in the operative treatment of hemorrhoids are many. It is safe and effective; it can be easily and quickly applied; it simplifies the work and takes away the fear which most people have of taking a general anesthetic. Pain at the time of the operation is rare. Post-operative pain is less than under the old methods, and is very slight when sterile water is the agent used. The period of detention from business is greatly reduced and often patients can go about their usual occupations, as confinement to bed is not an absolute necessity. It affords relief in some cases otherwise unsuitable for an operation, and takes many cases from the hands of the quack and itinerant. It enables the operator to secure permanent results and, if properly applied, admits of as thorough and complete work as can be done under a general anesthetic.

STUDIES IN PSYCHOPATHOLOGY.

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(Concluded from No. 14, p. 434.)

XII. CASE OF INSISTENT STATES WITH SUBCONSCIOUS TRANSFORMATION OF PERSONALITY.

SHERMAN, age thirty-one. Russian. Father is very nervous; mother is also nervous and suffers from severe headaches, so does his sister, who is otherwise quite well. Physical examination is negative; reflexes are normal; memory, attention, recognition, are good; no sensori-motor disturbances.

Patient suffers occasionally from severe attacks of headache accompanied by vomiting; he has very depressing nightmares and cries out in his sleep. He is very timid and keeps away from company, communing with himself. In his childhood patient made the round of child diseases. He is physically well, but rather slightly built. Patient is very religious and has "never masturbated." About the age of eighteen he developed contrary thoughts in regard to God; he could not pray without associating in his mind the words of the prayer with filthy words and curses. Unaccountable fears took possession of his mind. At the same time sexual desires became developed and his mind began to associate them with all kinds of improper relations, even with his sister and with his mother. He is very miserable about these ideas as he is very religious, and the thoughts are not only repugnant to him, but simply torture him by their very presence. Since last year the patient has become worse, — his sexual and contrary religious ideas have become more insistent.

⁷ N. Y. Med. Jour., April 18, 1903.