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The Pathology, Symptomatology and Treatment of Hemorrhoids, Simple and Complicated.

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In other contributions under similar titles, I have, at length dealt with the subject of hemorrhoidal disease; so that at present my efforts will be directed only towards a review of salient points and the enumeration of types, rather an endeaver to analyze the subject in detail.

It is unnecessary, at the outset, to enter into the morbid anatomy or the pathological changes in the vascular system and the mucous membrane of the rectum and anus, essential to the formation of simple, common hemorrhoids; therefore the pathology of complicated cases alone will be chiefly considered in the present instance.

RELATIVE FREQUENCY OF HEMORRHOIDS.

Hemorrhoidal dilatation of the veins of the rectum, I have found so common, in the living and dead subject after adult years are attained, that I have come to regard it as practically physiological. It is a species of

vascular degeneration. In the anus it first presents itself, for many good and satisfactory reasons. When devoid of complicating elements, hemorrhoids are inoffensive and harmless; so that we may go through life, not knowing that a cluster of hemorrhoidal masses, occupied the edge of the anus, on the interior of the rectum. They constitute a disease only, when they persue the seat of pathological processes, or of an usual type, when we have an atypical condition, or we are in the presence of *complications*.

Varieties of Hemorrhoids.

Anatomical Division.—

1. Veinous hemorrhoids.
2. Arterial hemorrhoids.
3. Mixed hemorrhoids.
4. Internal hemorrhoids.
5. External hemorrhoids.

Pathological Division.—

1. Thrombosed hemorrhoids.
2. Inflamed hemorrhoids.
3. Bleeding hemorrhoids.
4. Ulcerating hemorrhoids.

Co-Incident Complications or Sequellæ.—

1. Anal fissure.
2. Anal fistula.
3. Anal stricture.

Tubercle, syphilis and cancer play an important *role* in many types of piles.

Hemorrhoids become the seat of pathological changes, chiefly through *infection*, either through the mucous membrane, the circulation or the absorbants.

The great preponderance of hemorrhoids are varicose; though the most rebellious types of hemorrhage, from so-called internal piles, are often dependent on a papilomatous or angiomatous state of the arterioles in the submucosa, just within the verge.

A varicose state of the veins of the leg causes cutaneous and muscular atrophy; in the spermatic cord a wasting of the testicle.

In the rectum the sphyncter *externus* and levator ani suffer from the effects of malnutrition, when the walls of the afferent vessels give way. A low grade of inflammation supervenes in which there is a free hyperplasia into the inter-fasicular spaces and parenchyma of the muscle fiber. This undergoes organization with fibrous changes, so that the external sphyncter, in all cases of hemorrhoids, undergoing pathological changes, will be found greatly thickened of a dense consistance and but moderately distensible.

The Usual Termination of Non-Complicated Hemorrhoids.

In response to an immutable law in the economy, Nature in her own time, will dispose of any superfluous tissue, or excrescences, by slow but radical processes. When the element of malignancy is absent and there

are simple neoplastic varices at the anus, they will in time disappear of themselves.

Modus-Operandi of Spontaneous Cure.—A primitive hemorrhoid is a tumor like dilatation of a vein with *fluid* blood. This tumor fills and empties, expands and contracts under certain physiological conditions of the anus and lower rectum.

But, when they sustain a pressure from hard, irregular-shaped fecal masses, or are passed down through the sphyncter at stool, and are strangled by its contraction; then congestion and inflammation follow. Microgymes penetrate the intima and the *first* most tangible pathological change is announced by a *coagulation* of the blood.

Now should our patient possess a good constitution and septic influences are escaped, then the more intense the inflammation, the more prompt and radical will be the destruction of the hemorrhoids, and in a short time no trace of them will remain but their shriveled, atrophied stalks.

Many, however, do not run the gauntlet so safely. If the patient be *tuberculous* there is a tendency to a low grade of inflammation following. The work of resorption of the inflammatory products is imperfectly performed. The walls of the hemorrhoid break down and its base is the starting point of an ulcer, a fistula, a fissure, or an opening into an artery.

If our patient is *syphilitic* an inflamed hemorrhoid is the nidus from which an annular spread of hyperplastic changes begin, and should ulceration follow, on ac-

count of its painless character, it may work great havoc, or even lead to cicatrization and stricture before one is aware of its presence.

It is not the general opinion of pathologists that hemorrhoids are an exciting cause of cancer or *epithelioma*, but so many cases have come under my observation in which cancerous disease has followed in the wake of hemorrhoids and the proliferating tissue has maintained the character of piles in the embryonic elements that I now no longer have any doubt of the frequent and direct relation.

Septic or *local* processes are more often responsible for hemorrhoidal implication than anything else.

The rectum is the excretory channel and other residence of digestive excrementitious substances of the body. Therefore when a hemorrhoid becomes inflamed, if its surface-epithelium be at all abraded, pathogenic germs are certain to enter and excite suppurative changes. For this reason too, all operations on the anus and lower rectum are inevitably exposed to infection after mutilation of the soft parts, as a clean, aseptic wound in this situation is manifestly impossible.

Symptomatology.

The recognition of hemorrhoids is not attended with any difficulty, for they can be seen and felt. It is only in chronic cases of a mixed character that experience and tact are required to distinguish each type and complications. The symptoms of the malady are not uniform, definite or reliable.

A proctitis limited to the verge or the lower third of the rectum may simulate piles. But clinically it is readily recognized.

Pain, *itching* and *hemorrhage* are the most constant symptoms. One will usually be able to determine the site of the affected parts by certain signs.

If, for instance, our patient complains much of tenesmus of the bladder we may be confident that the affected tumors are lodged in the anterior wall, and that the vesical symptoms are dependent on the propagation of inflammation, in the male through the prostate. We never have bladder symptoms in the female.

A patient with acutely inflamed piles derives some relief from straining at stool: when he feels them with his finger, and can tell how many there are, and give their size. Polypoid growths of the rectum may simulate hemorrhoids in the symptoms which they give rise to. They are very uncommon and almost invariably have their origin high up. They are not painful, but they frequently have a thick vascular tissue, and by their size produce a constant sense of fullness. I saw a case last summer of vascular polypi of the rectum which by the constant hemorrhage which they kept up reduced the patient to a state of the most profound anemia. They were fully a finger's length above the verge and all had long independent pedicles from the anterior wall of the bowel.

Pain is quite a constant symptom of hemorrhoids. Sometimes it is of a most agonizing character. There is no affection in the anus except fissure which can produce such acute suffering.

Rectal tenesmus is quite pathognomonic of piles in the absence of dysentery. This must not be confounded with another symptom closely allied to it in malignant disease when the patient is the subject of advanced years and has a constant desire to empty his bowel because of a sense of constant fullness. When one comes to us with the latter symptom after middle age it must be regarded a symptom of very serious import.

Itching.—Varices anywhere situated are sometimes the cause of the most furious itching in the legs, the vulva, or the scrotum, as well as in the anus.

Hemorrhoidal itch, however, has characteristics peculiar to it. It is mostly nocturnal and comes on suddenly, but generally in short exacerbations. In children pin worms may excite this state, and so may pediculi in the adult.

Tubercular ulceration of the bowel is often made manifest, chiefly by a sort of an itchy sensation and a feeling of uneasiness. It is never acute, but is constant without sharp exacerbations. In those of a tubercular diathesis we may suspect the true condition, though when in doubt, nothing will decide the matter, except a thorough inspection.

Rectal Hemorrhage, Bleeding Piles.—Hemorrhoidal hemorrhage is of two varieties, namely, one, the most common veinous, and the other, arterial. The former may be recognized by its sparcity in quantity and its color.

But, when blood comes in considerable quantities after an evacuation, of a bright red color, it is arterial,

and strictly speaking, is not hemorrhoidal, for it does not escape from varices, but papillomata or angiomata.

But in every case of the type under consideration, the common site is low down, near the verge.

It is well to remember that *tuberculous ulcers* are a common source of rectal hemorrhage, and in elderly people blood following a painful stool is strongly suggestive of *cancer*.

In all cases of rectal hemorrhage in those past the meridian of life, a rigorous examination alone will reveal its etiology.

The general symptoms of rectal hemorrhage are the same as those which present themselves after the loss of blood in other districts. Many times one goes on, sustaining a steady depletion, until dangerously exsanguinated before the origin of the leak is discovered.

In aggravated cases of hemorrhoidal bleeding consti tutional symptoms are well marked. Anemia is obvious; the heart palpitates on the least over-exertion or excitement. The patient suffers from giddiness, has flashes of light cross his visual field, with insufferable noises in the ears.

In these serious cases we will find on examination that the spleen is more or less hypertrophied.

Treatment of Hemorrhoids.

Modern advances in science have greatly simplified the operative treatment of piles. In the larger number of simple uncomplicated cases, chalogogue cathartics, one or two doses, with, rest, local bathing, a soothing

salve, or lotions, will suffice and our patients promptly recover.

As to consider this class and the various measures of treatment would occupy more space than is permitted, I will pass on to the surgical treatment of aggravated cases. *A thorough examination of the rectum* is an indispensable preliminary to the treatment in all chronic cases.

The plan of treatment which I have advocated and practiced is designated "Pressure-Massage." By it there is no division of the soft parts with consequent danger from secondary hemorrhage or stenosis of the passage from cicatricial contraction.

With the aid of a Paquelin cautery it will succeed in every type of hemorrhoids when all its details are fully carried out.

The procedures may be divided into five stages:

1. Preparation of the parts.
2. Subcutaneous cocainization.
3. Complete anal dilatation.
4. Pressure, torsion and massage.
5. Irrigation and return of prolapsed parts.

In all cases as soon as one begins to arrange for an operation the patient should be given half an ounce of brandy, or its equivalent in wine, every fifteen or twenty minutes before manipulation of the sphincter is commenced; while the parts are being shaved and scrubbed and the rectum is being well cleared by an efficient lavage.

Cocainization.—The index finger warmed and well

lubricated is now introduced up to the webbing, being pressed gently but steadily in. Now its tip is flexed so as to give the digit a hook-shape and the sphincter is drawn outward slightly when we take the hypodermic in hand (in the right).

A fresh *one* per cent solution is safe and of ample potency. From *sixty* to *one hundred* drops are enough for hypodermic use in every case. Now the needle is sent in in such a manner and to such a length that its point penetrates the seat of each large tumor and two or three drops are deposited within it. It is then partly withdrawn making one hub and several spokes in four districts. One anteriorly, one posteriorly and one on each side. To make this clearer I may say that the point after being sent home is withdrawn *to*, but *not through*, the integument when it is re-introduced and withdrawn to the surface until a circular area is sprayed.

Hypodermic cocainization, complete *sphincteric dilatation* is commenced. In order not to rupture or lacerate an old, cord-like contracted sphincter one must proceed slowly until all resistance is overcome when the entire hemorrhoidal area of the lower rectum rolls out through the opening. The parts are now well cleansed and dried when they are lightly swabbed with a four per cent solution of cocaine, and in a few seconds we commence the *pressure manipulation* of each pile.

Each one is seized between the thumb and index finger and first so *crushed* that all except the *external coat* is reduced to a pulp, then *fully extended* in its pedicle

or base and *twisted.* The extent and thoroughness of force in each case applied will depend on the size of the masses and the thickness of their coats. This part must be radical and complete. We will now *irrigate* with sterilized water, return the crushed masses within the sphincter, introduce an opium suppository, when our manipulations end and dressings are applied.

Bleeding hemorrhoids demand essentially the same technique, only that the bleeding sulci or minute papillomata need touching with Paquelin's cautery.

Conclusions.

The advantages of the above described technique may be summarized as follows:

1. The total dispensation of pulmonary anesthetics which are always attended with more or less danger to life in those suffering from functional or organic disease. A more complete composure of our patient with absence of straining, vomiting, or besmearing of the parts with feces during our manipulations, besides we may succeed with fewer assistants. Certainly in highly sensitive or hysterical individuals ether narcosis may be required.

2. Analgesic dilatation is not so apt to be attended with rupture of the sphincter because, though the pain-sense is annulled, the patient yet preserves sufficient sensation to warn us when excessive force is being employed.

3. As there is no mutilation and no hemorrhage, the danger of tetanus, infection, ulcerative fistula and sec-

ondary hemorrhage is obviated. Acute aseptic inflammation follows after the hemorrhoids are replaced, which ends in resorption of their contents, so that in a short period nothing remains to mark their former site but short, atrophied stalks.

3. *Shortened Convalescence.*—By this manner, as there are no sequellæ to be feared, the after-treatment is almost *nil.* As a general rule our patient may be about in a few days, or a week, though it is always well that the body be kept in a state of rest and the parts be daily bathed for two or three weeks in severe cases.

4. This method has something more than speculation and theory to support it, for in my hands, in a large number of cases of every type of hemorrhoids, during the past two years, it has invariably succeeded, and in no single instance with which I am acquainted, has it failed, or has it been followed by relapse. I may add, however, that in females it is not as satisfactory as in the opposite sex because they are commonly so refractory to the action of cocaine.