

fecal pressure upon the rectal veins, or from other causes, these veins should be kept permanently engorged or filled with blood, what would result? Inevitably there would be over-distension of the veins, accompanied at first by thinning and afterwards by hypertrophy of their walls. In other words, these veins would become varicose, and such varicosity would be most marked at their inferior termination, near the anus, where, as you observe in the diagram, the venous trunks inosculate freely, and form lips or pouches. That portion of the varix which forms above the sphincter ani, and which is covered by the mucous membrane of the gut, is known as the internal pile. That which is developed below this muscle, and which has a muco-cutaneous covering, is the external pile.

In its incipient stage, the interior of the dilated or varicose vein is usually patulous, so as to permit the free passage or circulation of blood. In a short time, however, clots form, especially in the external pile. I shall doubtless have frequent occasion to show you how, by an incision of such a hemorrhoid, a clot can be evacuated from the containing cavity. It often, too, happens that these sacs suppurate and discharge their contents, and there are left only those pendulous folds of skin, tabs, as patients call them, which we so frequently observe fringing the external margin of the anus.

I have spoken to you, thus far, of a hemorrhoid as a varicosity or dilatation of a vein. But it may be, and most frequently, indeed, is something more, especially when the affection has been of long duration. For then we find that besides the distention of the walls of the vein, there is also thickening and hypertrophy, and that upon the outside of the venous parietes a thick, projecting velvety growth develops. This is well supplied with small arteries, which bleed freely when examined, and which bleed, too, most copiously, during the evacuation of the patient's bowels. Occasionally this hemorrhage occurs at almost every evacuation; but usually, I think, the bleeding is only severe at intervals of two or three weeks. In the interim there may be some bleeding, but generally far less in quantity, and often, indeed, sufficient only to constitute a stain.

The external pile inconveniences its possessor by the sense of weight, distention, and irritation which accompany it, and by its tendency to undergo attacks of acute inflammation. It is oftentimes, too, attended by an intolerable pruritus. The internal pile, in addition to most of the above-mentioned inconveniences is marked also by the bleeding from which it derives one of its synonyms, and which, as I have stated, is not infrequently periodical and prodigious.

With these preliminary remarks, let us proceed to the examination of the patient upon the table. Bearing in mind the long period during which he has labored under this distressing affection, you would naturally expect to find considerable structural lesions. To prepare him for this examination, and for any operation which may be necessary, I have caused his bowels to be freely acted upon by castor oil, followed by the employment of a full injection. He

has also been directed to strain over a bucket of hot water, in order to force down the offending growths. Now, as I separate the buttocks, you observe the large size of the hemorrhoidal mass, projecting from above the external sphincter. Mark, if you please, its dark, villous appearance, and its extent of base embracing almost the entire circumference of the bowel. The surface of the tumor is studded with hemorrhagic points, and, as I press upon the mass, the blood flows freely. Underneath the pile you observe a projecting ring or fullness surrounding the anus. This is caused by a partial prolapse of the lower portion of the rectum, dependent, no doubt, on the long-continued habit of constipation into which the man has fallen; for he states that his bowels are rarely moved twice a week, often, indeed, but three times in two weeks. The removal of the hemorrhoid will doubtless relieve this prolapse.

The case is evidently a bad one, of internal or bleeding piles. Now, how shall I proceed to their cure?

Excision by the knife or scissors is out of the question. Such an attempt would certainly be followed by terrible bleeding. Removal by the ecraseur, or by a platina wire heated to a white heat by the galvano-cautery, are also objectionable, for both of these methods are, at times, apt to be followed by troublesome hemorrhage. So, also, is the destruction of the growth by the actual cautery, after the method of Dr. Henry Smith, of King's College, London.

The method which I adopt in all of these cases of internal piles, and which I confidently recommend to you, is that of ligation. If you follow me closely you will see how this is effected. The patient will now be brought under the influence of ether, and while this is being done, I will draw your attention to the *modus operandi* of the ligature in these cases. I have here a stout curved needle, with a large eye. This is armed with a strong double ligature, in fact a piece of fishing line, which cannot be broken by any strain my hands can put upon it. With this I intend to traverse the base of the tumor, and I shall then strangulate the mass in segments. It will at once occur to you that this procedure may be productive of great pain to the patient when he shall have emerged from the effects of the ether. Not so, if the ligature be properly applied.

In this diagram the mode of nerve distribution at the anal orifice is correctly represented. It is copied from Mr. Hilton's book on "Rest and Pain." You see here the internal pudic nerve sending a shower of branches from above downward through the thickness of the rectal walls. A little distance above the anus these nerve filaments rest *beneath* the mucous membrane, and they pierce this latter, to be distributed cutaneously on the line at which the mucous and cutaneous surfaces become continuous. This locality you can recognize in the living subject by a whitish line; see, here it is, on our patient.

He is now fully under the anæsthetic, and I proceed to my operation. First of all, I grasp the hemorrhoidal mass with this strong, toothed forceps, draw