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1844

(10)

FURTHER OBSERVATIONS
ON
THE USE OF NITRIC ACID
AS
AN ESCHAROTIC,
IN
VASCULAR TUMOURS OF THE RECTUM.
BY JOHN HOUSTON, M. D.

FROM THE DUBLIN JOURNAL OF MEDICAL SCIENCE FOR SEPTEMBER, 1844.

ART. III.—*Further Observations on the Use of NITRIC ACID as an Escharotic, in certain Forms of Hemorrhoidal Affections; illustrated by Cases.* By JOHN HOUSTON, M.D., M.R.I.A., Surgeon to the City of Dublin Hospital; Lecturer on Surgery at the School of Medicine, Park-street; Corresponding Member of the Institute of Washington; Member of the Society of Naturalists and Physicians, Heidelberg, &c. &c.

SINCE the publication of my Essay on the Use of *Nitric Acid* in *vascular Tumours* of the rectum,* I have had many additional opportunities of putting the medicine to the test, and thereby of determining still further the amount of its value as a remedial agent; and the result appears to me of sufficient interest and importance to be made the subject of a supplemental communication.

Having already detailed fully my views of the pathology of the disease—views which, I am happy to say, have met with approval from excellent judges,—and explained the *modus operandi* of the remedy, I shall, in this communication, confine myself to the statement of a few additional cases. These cases I have selected from hospital practice, exclusively, in order that, as having been seen by pupils and others, and made the subject of clinical lectures, they might, therefore, carry with them the full force of authenticity. I have reason to know that, in reliance on my recommendation of it, the nitric acid has been used extensively, and in many cases with complete success. Such failures as have occurred in other hands may, perhaps, be often traceable to some want of discrimination as to the fitness of the case for the remedy, or to some imperfection in the mode of application of the latter, rather than to a failure in its efficacy. As I have known errors of this kind to happen, I must again repeat, that the

* See Dublin Journal of Medical Science, vol. xxiii. p. 5.

only case which the nitric acid will serve is the *internal* bleeding pile,—that soft, red, strawberry-like elevation of the mucous membrane, for which I have used the term *vascular tumour*, and which the acid removes by the production of a slough of its surface. The surface to be thus acted upon must be soft, and free from any coating of cuticle, such as is apt to form on it by persistent prolapse; for, if the acid be used in a case so circumstanced, nothing more than a removal of the cuticle may be expected from the application; and further, to ensure to the caustic its full effect, the part to be touched by it should, beforehand, be dried and cleared of all mucous or other adherent fluids. There is no danger, that I know of, to be apprehended from the application of the acid; I have never seen any consequence from it beyond what I have stated in my reports. But, to be successful, the remedy must, of course, be used with decision. The acid must be laid on in quantity, and rubbed in with force, enough, to be pressed into the pores of the surface. At the best, it produces only a very superficial slough; and, on this account, it will be necessary in some cases, as where the tumours are old and firm in texture, to make a second, and even a third, application. Of this, the patient should, of course, be informed beforehand, that he may not be taken by surprise, in case any such necessity should arise.

As stated in my former communication, I do not take upon me to recommend the nitric acid as an infallible remedy in all such cases, nor even, perhaps, as the most effective in any; and, in illustration of the efficacy of another mode of treatment—that by the *actual cautery*—even after a failure by the acid, I shall introduce a case, in the sequel. The great value of this remedy lies in its applicability to general practice, and in the readiness with which invalids can be prevailed upon to submit to its employment. It is not so much the fear of pain, in the abstract, as of the instruments by which it is inflicted, that prevents many from submitting to the

means necessary for a removal of such diseases ; and if the surgeon can thus, by the substitution of an acid for the knife, the noose, or the red hot iron, succeed in stripping his services of their terrors, he will, by gaining upon the patient, steal a march upon the disease, and thereby find an opportunity of applying to it an easy, because an early, remedy.

It would be a prejudice against the acid, not founded in fact, to have it go abroad that the treatment by its means was very painful, for there is no peculiar or unusual amount of pain produced by its application, and sometimes the pain is very trifling. I assisted my friend Dr. Fleming, in his own study, in the application of the nitric acid to a vascular tumour of large size in a young gentleman, who, after leaving us, thought so little of the matter that he walked for amusement to witness the ascent of a balloon ; and, nevertheless, the application was shewn afterwards to have been sufficiently effective, by its curing completely the disease. The fact is, that, as in every other operation of the kind, the amount of pain experienced will be very much in proportion to the irritability of the patient and the sensitiveness of the affected part, and, therefore, in all cases where there is much apprehension on this point, where the application of the acid has been extensive, and, particularly, where there is a prolapse to be kept up, it will be well to administer an opiate, and let the patient retire to bed.

CASE V.—*Vascular Tumour, with Prolapse of the Mucous Membrane of the Rectum.*

Edward Cullen, a shoemaker, unmarried, admitted into the City of Dublin Hospital, December 26, 1843, at the recommendation of Dr. Bigger. About sixteen years ago he first observed a slight discharge of blood from the rectum, appearing periodically at intervals of two or three weeks. At the end of two years (the hæmorrhage continuing all the time) a prolapse of the bowel began to form, at first easily

returnable, but, in time, giving trouble in its reduction, producing great distress, and obliging him to employ pillows and pads on his chair, to ward off pressure from the prolapsed and tender bowel. After about another year's suffering in this way, he sought and received admission into Stevens' Hospital, but went from thence in a fright, on hearing that he was to become the subject of an operation. From this time he became a constant attendant on dispensaries in town, getting from them castor oil, electuaries, and ointments, from which he derived, variously, more or less of relief, but never any permanent good. On several occasions, subsequently, after fits of intemperance, his ailment was very much aggravated. The prolapse, on these occasions, ceased to admit of return: there was a feeling as if a red-hot coal of fire had been thrust up the rectum; the bowels became obstinately constipated, and cups-full of blood were lost. He could, then, neither sit nor lie, and was obliged to stand continually, with his feet far apart from each other, his forearms resting on a table, and his face buried down in his hands; a posture which, by bending the body to a right angle with the thighs, and thereby taking the weight of the viscera off the pelvis, afforded him more relief than any other. On these occasions, too, he had frequency and distress in making water, and troublesome *pruritus ani*. Thus years of pain and misery passed on; and to his other ailments there were soon added, as the consequences of the repeated losses of blood, palpitations of the heart, giddiness, and lightness of the head, with singing in the ears, and weakness in the thighs and knees.

State on Admission.—There is almost continual prolapse of a small portion of the mucous membrane of the rectum, and when he strains at the night-chair, or coughs, or walks at all fast, the bulk of the protrusion is increased. The part thus protruded is flat and broad. It presents an irregular aspect, being in some parts formed of shining rolls of œde-

matous mucous membrane, in others, of blue, varicose veins, and in others, of red, *vascular tumours*,—the latter, three in number, being the source of all the hæmorrhage and pain.* He bleeds more or less at every time he sits at the water-closet, but commonly to the amount of a wine-glass full; and there is no doubt whatsoever, for it is to be seen by the eye, that all the blood lost comes from the vascular tumours. His face is pale, and the lips *exsanguis*. The tongue is white and flabby. There is acidity of the stomach, and the bowels are constipated. There is great muscular debility. The pulse is quick and weak, and there are frequent palpitations of the heart, more especially after losses of blood by stool. The man is quite disabled from following his trade.

Dec. 30. I applied the *nitric acid* to the vascular tumours, and to them exclusively, in the manner which I have formerly described, rubbing each tumour several times with a piece of stick dipped in it, so as to make some of the acid soak into the tissue of the part, and immediately thereafter smearing the whole over with oil. The prolapse was then carefully returned, the man put to bed, and an opiate administered.

Jan. 1. He says that he did not suffer as much pain from the operation as he has endured during many of his former severe attacks. Has slept, the last two nights, as usual. Complains to-day only of a soreness, and of a feeling as if there was something hard preventing the descent of the bowel. There is a pale, œdematous, lumpish rim at the margin of the anus, tender to pressure, the result of inflammatory action. Within, and on a level with this projection, the spots which had been touched by the acid may be discovered, by pressing open the anus, to be in a state of slough, to the exact extent acted upon by the caustic, and no farther. These spots are soft, and have a brownish, gelati-

* I have preserved, by drawings, the appearances in this, and several of the other cases.

nous appearance, somewhat like ripe, dark-coloured grapes. Pulse natural; tongue white; bowels not opened since the operation. Ordered a poultice.

Jan. 3. Œdema much diminished; sloughs nearly detached. Ordered a purgative draught, and a poultice.

Jan. 5. The sloughs are found to have disappeared, leaving granulating sores in their stead. There is no protrusion at stool, and no hæmorrhage. Went out of hospital, by permission, on account of some domestic affairs.

Jan. 14. Returned, free from bleeding, and with a trifling prolapse of only one of the piles, when at the night-chair. It was evident that the acid had not, in the slough which it caused, removed sufficient depth of texture to effect a cure. It was, therefore, again applied as before, and with the same effects.

March 11. He was discharged, perfectly cured of his protracted local disease, and restored to good health.

CASE VI.—*Vascular Tumour, with Prolapse, &c.*

William Gray, æt. 32, a tall man, a tide-waiter, temperate, and much exposed to wet and cold, admitted Feb. 12, 1844. He has laboured under his present indisposition for about five years, but during the first year he did not regard it much, as his only inconveniences were those of constipation; out of this arose a habit of taking aperients, which by producing tenesmus, long sittings at stool, pruritus ani, prolapse, and hæmorrhage, only made matters worse. About six months ago, he suffered a more than usually severe attack of this kind, with considerable prolapse, pain, and loss of blood, and from this period these symptoms did not, as formerly, go off; on the contrary, they became aggravated and accompanied in addition with muco-purulent discharges, which, in spite of his best efforts at cleanliness, kept his linen soiled. The part was touched with solutions of sulphate of copper, caustics, astringent tinctures, &c., and purgatives were ad-

ministered, by different medical gentlemen, but such treatment only irritated, without diminishing the protrusion or lessening the discharges.

State on Admission.—The muco-purulent discharges are now constant; the blood, occasional; he has almost continually pruritus; he finds difficulty in controlling his inclinations to sit long, and strain at the night-chair, after the evacuation is completed, notwithstanding his long experience of the fallacy of the sensation of there being still something to come away, and his conviction that he has the power of at once relieving it by returning the prolapsed part to its place. He has rarely a stool, unless as the result of medicine; the tongue is white, and he complains of thirst, bad appetite, and flatulence. He suffers from an uneasy sense of fullness, with a glow of heat, and pulsatory throbbing inside the anus.

On straining in the sitting posture, a protrusion takes place, at least an inch and half in length, spreading broad over the sides of the anus, and exhibiting three large, blood-red tumours on its mucous surface. The whole texture of the protruded part is tumid from congestion, but the *vascular tumours* stand out beyond the general surface of the prolapse, although they do not, to the feel, exhibit any greater density or hardness than the other parts. Blood oozes from them if they be allowed to remain protruded for any time; the prolapse is not at present at its worst, nor is it accompanied with pain; there is little appearance of varices in the neighbourhood, either inside or outside the anus.

On the evening of the 13th I administered a purgative draught. On the 14th, while the prolapse was at its greatest projection, I applied the nitric acid effectively to all the tumours. The application caused them to bleed freely; but this was more from the friction on their turgid surface, than from the escharotic effects of the acid; oil was then applied, and the protrusion carefully reduced. The man was placed

on his back in bed, with directions not to allow the prolapse to recur; an opiate was administered. The pain of the application was not much complained of.

15th. He says that he suffered some pain, heat, and throbbing yesterday, after the touching, but that it was not of a distressing kind; he was lulled from the opium, but did not sleep; he had, unexpectedly, a free motion during the night, unattended with any unusual pain, and occurring without prolapse. There is, this morning, a projecting, pale, œdematous ridge of the mucous membrane at the margin of the anus,—an evidence of inflammatory action, inside, induced by the irritation of the caustic.

16th. Found him walking about, at the hour of visit; he feels no pain or discomfort whatsoever, except when he coughs or makes some bodily exertion, and then he is only reminded of his ailment by the part being hurt a little in the effort.

18th. The bowels have been moved without medicine; the evacuation consisting of fæces stained with pus and sanies (the discharge from the cauterized surface), but not with unmixed blood; there was no prolapse with the movement, and the tumours did not come into sight; nothing is now to be seen wrong, and there is only a slight soreness on pressure.

20th. He left hospital sufficiently well to go about his ordinary business. In the month of May, Gray paid me a visit. He told me that he had, now, no prolapse at stool or in walking about, as formerly. He had no bleeding whatever at any time; no throbbing, heat, or itching in the part; his bowels acted regularly without medicines; his appetite was good, and he had lost a feeling of thirst which used to be continually present with him, and which was, perhaps, more the consequence of the disturbance produced by the drastic medicines he had been in the practice of taking, than of the disease itself. He stated, in short, that he considered himself perfectly cured.

CASE VII.—*Vascular Tumour.*

Thomas Collins, a house painter, ætat. 35, unmarried, of short stature, and stout make, admitted November 21, 1843. He has been suffering for the last seventeen years from derangement of the rectum. He passes a little blood at every time he sits to stool. The blood is florid red. It sometimes only streaks the fæces, but often it trickles down his thighs after the evacuation is supposed to have been completed. It is sometimes mixed with pus. He never lost blood to any serious amount at one time. Although pale, his strength is not much impaired. There is at each evacuation a slight prolapse, which he reduces with his hand. He has often had exacerbations of pain and fever, brought on by sitting on cold window-stools in the exercise of his trade, during which he has been obliged to keep his bed for two or three days, and from which he was always relieved by a bursting and discharge of matter. But these attacks had no influence, either for better or worse, in the bleeding, which continued the same at all times. He has taken large quantities of medicine, especially castor oil, on account of habitual constipation of the bowels, as they always become confined when left to themselves. Senna he has found a good medicine; but salts always produced pain and tenesmus.

Inspection.—Nothing is to be seen outwardly, but when the patient bears down, especially after medicine, several soft, bright-red, strawberry-like tumours appear, protruding at the orifice, and bleeding when touched, or kept long out. The disease springs from the surface of the mucous membrane all round, but rises in the form of distinct tumours. The mucous membrane at the very verge of the anus is thrown, by œdema, into a soft, prominent rim, which looks like a frame in which the tumours, when protruded, are set. The affection, although sometimes very painful, is not so at present, and may therefore be regarded as in a favourable

state for being made the subject of an attempt at a radical cure.

Nov. 23. The prolapse being well borne down by the patient, and the nates held asunder by an assistant, the tumours were rubbed with the acid. Nothing unusual or untoward followed. On the fourth day he had a free motion from medicine, without much pain, and without prolapse or bleeding. He suffered so little disturbance from the application, that, at his own request, I took the opportunity of his being in hospital to operate on him, by slitting open the urethra, for the cure of a stricture at the orifice, the consequence of a chancre,—in the manner recommended by the late Professor Colles; and at the expiration of another week, finding that there was still a small bit of one of the rectal tumours remaining, and shewing itself at the anus, he consented to a second application of the acid, for its removal, radically. This was made as before, with very little distress to the man, for he walked about the ward every day, and with a still better effect than on the former occasion, as he left the hospital on the 21st December, cured of both his infirmities.

In June, 1844, I saw this man: his urethra was then perfectly patulous and wide; and he was not any longer troubled with prolapse or hæmorrhage, but I could observe a small, hard, reddish tumour, about the size of a large pea, in the situation of one of the former vascular tumours. A slight touch of the caustic might readily have removed this, but as it was not subject to the same erethism, and did not bleed, or give pain, as formerly, it was not considered necessary to meddle with it.

CASE VIII.—*Vascular Tumour, with Prolapse.*

For the report of the following case, which occurred in the practice of my friend Dr. Bellingham, in St. Vincent's Hospital, I am indebted to Mr. Edward Doyle, the intelligent clinical clerk of that Institution.

“ Ellen Read, ætat. 36, a servant, was admitted into hospital November 4, 1843.

“ *History*.—Some years ago, whilst on her passage from Wales to Dublin, she could find no opportunity to relieve her bowels for thirty-six hours together, although she had much desire to do so. On landing she succeeded in doing so, but the effort caused a great deal of pain, and she passed about a pint of blood, and fainted. Her bowel also came down at the time, and continued so, until returned by her mistress. Since then she has been the subject of frequent protrusions of the same kind.

“ *Present State*.—General health pretty good; suffers great pain at stool, and passes nearly a pint of blood each time, causing her sometimes to faint. Her bowels are habitually constipated. A painful tumour, of a vermilion colour, smooth, soft, and easily made to bleed, descends from the anus whenever she sits at the night-chair, or makes any straining effort. It is the vascular tumour of the rectum described by Dr. Houston, accompanied with some prolapse of the mucous membrane.

“ On the 10th November the tumour was touched freely with the acid. nitr. fort. The woman fainted, partly from the pain, and partly from the fright, but soon recovered again.

Habeat haust. anod. statim.

“ 14th. Her bowels have been opened by laxative medicine; the bleeding has not returned.

“ 20th. Her general health and appearance have much improved. The bleeding has not returned. Her bowels are opened by ol. ricini, and occasionally by infus. sennæ c., which agrees with her.

“ 27th. The tumour has altogether disappeared, except a small bit about the size of a pea. Ordered an injection of oak bark and alum. Left hospital.”

CASE IX.—*Vascular Tumour, with Prolapse.*

May 28, 1844, I was requested by Dr. Bellingham to look at a patient of his in St. Vincent's Hospital, a young man, 24 years of age, a stone-cutter, who had just been admitted, and was in great distress from piles. He had been complaining for four years, and had suffered variously, during that period, from constipation, pain, needing, hæmorrhage, and prolapse of the bowel. Latterly, the mucous membrane of the rectum had remained constantly prolapsed, except while he was lying in bed; otherwise, his health is very good. On examination, we found a protrusion, as large as a hen's egg, and surrounded with a thick, œdematous welt, formed of the marginal skin of the anus. On the protruded mucous membrane, towards the back part, we discovered two vascular tumours, each as large as a shilling, in a state of ulceration, and bleeding; and in front, lying midway between the latter, a prominent round tumour, about the size of a marble, red, smooth, and shining on the surface, exquisitely tender, and imparting to the touch a feeling of fluctuation. When the patient strained, in the sitting posture, the bulk of the protrusion increased, the vascular tumours became of a more intense deep colour, and poured out blood more abundantly; and the inflammatory tumour, which was an abscess of the submucous cellular tissue, felt more acutely painful.

While the parts were still thus exposed, I applied, with Dr. Bellingham's sanction, the nitric acid to the vascular tumours, and then ran a lancet across the abscess; and as the prolapse could not be got reduced, I gave directions to have the whole enveloped in a soft poultice. I heard nothing more of the patient, then, but I have, this day, July 14, 1844, learned from Dr. Bellingham, who saw him very lately, that the treatment had cured him, and that he is now at his work—a sound man.

Observation.—This case, in addition to its value, as showing the efficacy of the nitric acid, forms also an excellent commentary upon that of Collins, No. VII. It explains a symptom recorded there, but of which I have not taken particular notice, namely, the occurrence, during his illness, of attacks of pain and fever, relieved only by burstings and discharges of matter *per anum*, but which passed away again completely, leaving him free from any consequences of them for long intervals, and which did not influence, in any manner, the course of the vascular tumours. Collins had, likewise, no doubt, from time to time, submucous infiltration and abscess of the kind recorded here.

CASE X.—*Vascular Tumour, with chronic Prolapse and Dilatation of the Anus.*

The following case I shall report, as an illustration of what may be done when the remedial power of the *nitric acid* fails; or, of what would be, perhaps, the best thing to do, at once, in all bad cases, if patients could be prevailed upon to submit to it as a remedy, viz. to resort to the application of the *actual cautery*.

Mary Johnston, ætat. 41, a washerwoman, married, and the mother of five children, admitted Jan. 9, 1844. She had had a very tedious labour in her first confinement, nineteen years ago. After delivery her bowels became confined, and continued so for eight days, although during that time active purgatives had been administered. At length her bowels gave way, when each evacuation caused her very severe pain, and was accompanied with a discharge of blood. The bleeding ceased at the time, but from a little time after that period, until now, she has scarcely ever had a motion without its being accompanied with more or less of blood, and which has been gradually increasing up to the present time, so that she now passes at every stool one or two wine-glassfuls of blood, sometimes clotted, sometimes in a fluid

state. For the last two years she has suffered from prolapsus ani. At first the bowel simply came down at each motion, and returned again of itself; but now it descends on many other occasions, and she finds much difficulty in replacing it. She is quite unable to retain her alvine discharges with certainty; they sometimes come away even while walking across her room. As long as she had only "piles," as she terms her first complaint, she was comparatively indifferent to her ailments, but since the bowel has come down she is both unhappy and uncomfortable, and for the last year, disabled, by headaches and palpitations, from earning any livelihood by her work. On making an examination, after causing the patient to strain a little, the mucous membrane of the rectum is found to be prolapsed for better than an inch, but when out is not much strangulated, as the sphincter has become permanently dilated and relaxed. Four prominent vascular tumours—two smaller ones on the left, and two, much larger, on the right—present themselves on the prolapsed mucous surface. The other parts of the membrane, although relaxed, appear of the natural colour and consistence.

This case was very unpromising, as the prolapse and the dilated state of the anus were complications, indicating curative ends to be accomplished different from those which the nitric acid is supposed to be calculated to effect. It was deemed well, however, to try the effects of the acid on the hæmorrhagic parts of the surface, and to be determined by the result, as to the treatment which should be applied to the prolapse. Accordingly, after a few days had been devoted to attempts at improving the woman's general health, on the 13th the vascular tumours on the prolapsed surface were smeared with the acid. The physical effects were those ordinarily produced, and the hæmorrhage ceased for some days, viz. while the sloughs remained adherent to the surface. But cicatrization did not follow the separation of the eschars; the bowel descended as before, and the hæmor-

rhage returned from the raw surface. In fact, the debility of the patient was such that the powers of reparation appeared totally at a stand.

On the 23rd, after the best endeavours to impart some strength to the woman had been practised, a second attempt with the nitric acid was made as before, and with this difference only, that the application was successful in checking any farther hæmorrhage, whilst it failed in curing the prolapse. The tumours, however, retained their red colour, and would, no doubt, have bled shortly again if left to themselves.

It was under these circumstances that I determined on the use of the actual cautery,—a remedy the same in principle as the nitric acid, and which may be brought in, *in extremis*, and where the milder remedy fails. I intended to use the red-hot iron with a double view: 1st, of destroying, radically, the bleeding piles; and 2ndly, of burning a vertical piece deeply out of the wall of the rectum, and of bringing about, in its stead, such a cicatrix as would prevent any farther prolapse. The instruments I made use of for the purpose were, a hollow, conical, steel speculum, closed at the farther end, and cleft with a slit, vertically, along one side, the handle being attached to the opposite side of the mouth of the cone from that in which the slit lay, and a cauterizing iron, with the end of a shape to pass out through the slit in the speculum. Having introduced the speculum into the rectum, and cleared and dried it well, inside, of the mucus and fluids which had been collected in it during its entrance, I introduced the iron, of a white heat, and laid it vertically through the slit in the canula, on the mucous membrane of the rectum, for better than an inch. In fact it became unnecessary to direct the iron out of the tube, for the mucous membrane was so pushed into the slit by the surrounding pressure, that enough of it found a contact with the heated iron to receive all the impression necessary from that instrument.

The woman was subsequently treated just as she had been after the other operations ; and she stated that the pain from the application was neither so intense nor so long continued as it had been after the application of the acid. There was a little soreness and tumefaction in the part for some days, but when the woman remained quiet she felt easy, and on the third day she had a full evacuation after an oil and senna draught. From the day of the application of the cauter, the bowels came down no more, the hæmorrhage ceased, and the woman began to improve in health. She left hospital on the 24th February, and on the 12th March, when she came back to shew herself, she had so much improved in health that I did not, at first sight, know her. She had no bleeding whatever, no prolapse, no pain, and no discharge of any kind from the rectum. She had altogether lost the head-aches and palpitations, and had greatly improved in strength. She said she was quite cured ; and had resumed her usual business.

Observations.—Cases of this description will, if looked for, be found to be more common than is supposed. Indeed the form of disease, of which the above examples may be regarded as extremes in severity, would appear to be that into which the mucous membrane of the lower end of the rectum is prone to run when long irritated by congestion or prolapse, and usually goes by the name of internal piles. The destruction of the vascular surface by the nitric acid stops the hæmorrhage, and if the relaxation be not immoderate, cures the prolapse by bracing up the textures underneath. But, it must not be forgotten that the cure by such means is only the beginning of an end. A course of dietary and of exercise must be instituted in conjunction with it, the very opposite of that under which the disease sprung up and got head, aided by cleanliness and appropriate topical and general medicines.

It will have been observed that, in the reports of the

above cases, I have always spoken of returning the prolapse, if possible, after having applied to it the acid, and this is a part of the operation which should not be omitted; because, when the parts are restored properly into their place, they are both in a predicament at once to grow aright while healing, and also to go through the steps of reparation with the least distress to the patient, and in the quickest time: whereas, if the protruded part be allowed to remain down until the inflammatory tumefaction, consequent upon the operation of the caustic, is developed in it, the bowel will, then, not only take a fixed seat in the prolapsed position, but the tumefaction will be increased by the constriction of the sphincter upon it, and the pain consequently aggravated, as well as the period of the convalescence prolonged.

The treatment of such affections by the *actual cautery*, although the most repulsive to the feelings both of the surgeon and the patient, is, nevertheless, that of all others the most effective. The nitric acid, in its *modus operandi*, comes the nearest to it; but, as shewn in the case of Johnson, No. X., falls short of it in efficacy. They both produce the death of the part they are brought to touch. The acid acts on a superficial layer only, the deeper parts being protected by the de-carbonized stratum first formed, and is, therefore, a fit and appropriate remedy whenever a thin layer is the extent diseased and requiring removal: the iron, on the contrary, at a white heat may, by having the period of its application prolonged, be made to cause death to any necessary depth, and is, therefore, applicable whenever the removal of a larger amount of substance comes to be desirable. In this way the hæmorrhage in the case of Johnston was, for the time, arrested by the acid, whereas the prolapse required the more deep operation of the actual cautery for its cure. If the red hot iron could be applied without the accompaniments of smoke, and noise, and smell, it would soon have many advocates for its use; for, even as compared with the effects of the nitric acid, the pain of its application lasts a shorter time.

and the inflammation which attends the detachment of the slough is more moderate. I have, on a late occasion, introduced the actual cautery through a metallic speculum into the rectum of a man, and seared the mucous membrane deeply, about one inch and a half up, and the patient never knew, either by his feelings at the moment, or subsequently, that any operation of the kind had been performed upon him.

With regard to the practicability of a cure in the cases which I have detailed by the means in common use, viz. the knife or ligature, I consider that the nature and characters of those affections were such as to render attempts at treatment by either of these modes both unsuitable and unsafe; and I believe that the only kind of remedy calculated to accomplish such an object, effectually, must have been some one whose principles of operation were the same as those of the nitric acid or actual cautery,—if not these very remedies themselves.

As to the question of the safety of drying up such hæmorrhoidal fluxes when of so long standing as that in several of the cases which I have described, the relief from misery and pain, and the rapid restoration to health which followed, and which, I may add, has continued unabated in those reported in my former Essay, afford a sufficient answer in the affirmative, as far, at least, as those cases are concerned. The fact is, that the most prominent ailments presented by these afflicted people were those arising from the loss of blood, such as palpitations, giddiness, faintings, weaknesses, &c., and the reparation of such ailments constituted some of the most important items in the cure. The cases must be few and hopeless, indeed, in which relief from such infirmities as these would not be acceptable at the risk of being subjected to something worse,—a risk, too, be it observed, in itself chimerical; and even should the apprehended evil arise, that evil admitting, perhaps, of a remedy, in the establishment of a counter-drain or issue in some other region of the body.



