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ON

RUPTURE OF THE PERINÆUM,

AND

ITS TREATMENT.

ILLUSTRATED BY CASES.

READ BEFORE

THE MEDICAL SOCIETY OF LONDON.

BY

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LONDON:

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MDCCCLII.

ON

RUPTURE OF THE PERINÆUM,

AND

ITS TREATMENT.

The laceration of the perinæum in the process of parturition is certainly no uncommon accident. It occurs during the last stage, whilst the head and shoulders of the child are making their way through the os externum; these cases may and do take place occasionally in labours, under the conduct of most skilful accoucheurs, and therefore we may conclude that, in some rare instances, they are unavoidable; at the same time, it must be stated, that careful and judicious management will, in the majority of these cases, obviate such a result.

There is a degree of opprobrium felt to be attached to these cases; they have not, therefore, met with that amount of attention and consideration due to accidents of so important a character.

My desire is to meet these cases candidly and fairly, to acknowledge they have occurred in my own practice (though

not of a serious description), in spite of the greatest care and caution.

The condition of the parts predisposing, and the causes which produce this injury, are too well known to most accoucheurs to need their being stated very fully here; but before we proceed further into the subject, I will briefly describe the anatomy of the perinæum.

The perinæum extends from the orifice of the vagina, or rather the margin, called the fourchette, to the anus; its breadth from these two points varies in different females from an inch to an inch and a half in the quiescent state; when put on the stretch, it measures four or five inches, so extensible is its structure.

It consists of skin, fasciæ, and muscular fibre, the latter being composed of the constrictor vaginæ, transversalis perinei, and sphincter ani muscles; these all meet at the centre of the perinæum, which is, in fact, their common insertion; it is therefore evident that, as they converge towards a common centre, which becomes divided by the laceration, they tend by their contraction to keep apart the two sides of the torn structure. More deeply seated are the deep fascia and the levator ani muscle; the fibres of the latter would also, doubtless, assist in separating the lacerated parts. The firmness of the perinæum depends not only on the muscles and rigidity of the skin, but more particularly on the strength of the fasciæ.

These structures are all torn through when the rent extends into the rectum.

Occasionally considerable hæmorrhage takes place from the rupture of branches of the pudic and hemorrhoidal arteries. The importance of these cases is in proportion to their extent; by far the greater number are, happily, only partial, and indeed some are so slight as to be unknown to the patient, and may even escape the observation of the medical attendant; the consequences are, therefore, unimportant, little, if any, inconvenience resulting. The wound more or less heals during convalescence, and if any alteration of the parts be observed by the patient afterwards, it is usually considered the natural result of the labour; but when, unfortunately, the laceration of the soft parts is so extensive as to run quite through the entire perinæum into the rectum, the alteration of form, and the imperfection of the functions, are so great that the patient soon becomes sensible she has sustained some serious injury, the melancholy results of which I will relate when speaking of the worst form of this rupture.

There are *four* different forms or degrees of extent into which the ruptured perinæum may be conveniently divided,—

First,—A portion of the distended perinæum may be torn to the extent of an inch from the fourchette. This injury is so trifling, and becomes so small when the parts return to their quiescent state, as to require no particular treatment, and is, therefore, quite unimportant to the patient.

Secondly,—Where the perinæum is torn from the fourchette to the rectum, but not either through the sphincter ani or recto-vaginal septum. If this be noticed immediately after its occurrence, it may be easily managed, by bringing

the parts together with sutures, by keeping the thighs in close approximation, and by drawing off the urine by catheter. I have seen three of these cases, and they all did well under this treatment.

Thirdly,—Where the perinæum, during its state of distension, becomes torn between the constrictor vaginæ and sphincter ani, without lacerating either of these muscles, and the head and body of the child, if small, may, in fact, pass through the opening thus formed.

These cases are rare; by immediately bringing the parts together by suture, the treatment will generally be successful.

Fourthly,—Where the rupture is through the constrictor vaginæ, through the entire perinæum, and sphincter ani, and sometimes also through the recto-vaginal septum. This last form of rupture is the one to which I wish specially to allude in the following paper, and to illustrate the treatment of by cases terminating successfully.

The *causes* to which these accidents may fairly be ascribed are *three* in number,

1st. Laceration may be produced by a sudden and violent action of the uterus, before the os externum has become dilated.

2nd. The continuance of a more moderate degree of pressure in persons of lax fibre.

3rd. The improper and injudicious employment of instruments.

There are *three conditions* of the soft parts which I think should be here referred to as necessarily existing in concur-

rence with the above-named causes in the production of these results.

The first is an undilated state of the os externum at the time when a violent expulsive action of the uterus drives the head of the child with bursting force through it.

The second is structural; there is a want of sufficient dilatability of the os externum to allow of the passage of the head, without its tearing more or less, even though the uterine contractions be not powerful.

The third condition arises from the formation of the perinæum. In some women it is so deep, or rather advances so far forward towards the pubis as to oppose the descent of the vertex, and itself to become distended into a bag, while the os externum remains nearly quiescent,—unaffected by the propulsive efforts of the womb, which are directed against the broad surface of the perinæum, instead of towards the external orifice; in these cases either a sudden or a continuous action less forcible will often rend the part.

Under these circumstances, it is not only necessary to support the perinæum with the greatest care, but to insinuate the thumb and fingers of the right hand through the os externum up to the vertex; this gives not only command of the head, but enables you at the same time to dilate the os externum, and as the head descends to help the distended vagina and os externum over the prominences of the parietal bones; in this way the expulsive force is prevented from being directed principally against the fourchette, at which part the tear generally commences.

I will now proceed to relate some of the deplorable consequences resulting from a laceration of the most extensive kind —of my *fourth* division. In these cases—

The rectum is so much injured as to lose its retentive power, and its contents pass out involuntarily, though ultimately it may in a degree recover some control over them; the pelvic viscera are deprived of that support which the perinæum naturally affords them; they feel as if they were suspended, dragging downwards from the hips, and a sensation of hollowness is experienced, the uterus usually descends and even protrudes when any exertion is made, the bladder is thus more or less affected, the patient is unable to stand for any length of time; ascending and descending a staircase give great uneasiness—indeed, so many ills afflict the poor sufferer that she becomes deprived of all personal comfort, she cannot mix in society, she is incapable of attending her domestic duties, and in extreme cases life becomes a burden.

There are few conditions more truly pitiable than this; indeed, a female becomes an object of great sympathy and solicitude, who has during the painful process of giving birth to her infant sustained the serious injury of extensive laceration of the perinæum.

Unfortunately the difficulties to be overcome in an attempt at restoration in these bad cases are neither few nor small.

The situation of the wound, its nature, the structure of the parts, formed as they are of a combination of skin, cellular substance, fascia, and muscle; the necessity for functional action; the time which may have elapsed since the occur-

rence; the retraction that usually results, together with the difficulty of retaining these parts in apposition sufficiently long to become united; the irritation, inflammation, and even sloughing, produced by sutures in some constitutions; the greater tendency to the formation of mucous membrane than to unite by the first intention, or by granulation; the management of the bowels and bladder during the healing process, are so many and great obstacles in the way of success in our endeavours to restore the function of those parts by a surgical operation, that the most skilful attempts have often been frustrated, many bad cases have been abandoned, and the sufferer left to pass a miserable existence with only that amount of amelioration which nature unaided could effect.

Smellie relates several cases of laceration in different degrees; but all the severe cases were either left to nature, or were unsuccessfully treated. Dr. Blundell, in his Lectures, when speaking of lacerations of the perinæum, states a case of partial chronic rent of that part treated successfully by a Mr. Rowley, which he says "did great credit to his surgery," and he also remarks that, with the greatest care and nicest management, these cases are seldom remedied by operation.

The operation, however, which I desire to illustrate in this paper has been several times performed by M. Roux in Paris, and that gentleman gives the credit to Lamotte for first suggesting the character of the operation. Dieffenbach has also related many interesting cases of cure, and some of our English surgeons, Davidson, Arnott, Lane, &c., have also been successful; but the reverse applies also to many cases

on which an operation has been attempted. It will be seen that I dwell forcibly on the division of the sphincter ani in the operation, and this important step appears not to have been taken either by M. Roux or Dieffenbach, though it has been by some of our own surgeons in England.

I purpose to narrate two cases of cure to illustrate the treatment I desire to recommend. The first case I have the honour of bringing before you is one which, in spite of a combination of difficulties, such as we have noticed, has been conducted to a state of complete restoration, both as to structure and function.

I purpose first to state the case and its treatment, and then to offer some general remarks in connexion with the principal points of treatment on which, in my opinion, we may fairly consider the success mainly to depend.

The lady who is the subject of it is living some distance from London; she is now thirty-seven years of age, and the mother of six children; she is a fine, well-proportioned woman, of good constitution and active disposition; was twenty three years old when the first child was born; her labour was rather protracted and difficult; it lasted nineteen hours. During the passage of the head, the perinæum gave way, and the rent extended through the sphincter ani into the rectum; the laceration had not passed in the usual straight direction, but had either bifurcated from the fourchette, or, when it had reached the rectum, returned upon itself, so as to isolate or separate a triangular portion from the front of the rectum and recto-vaginal septum, which was gone, most probably

by sloughing; the result was, that a considerable deficiency existed in the anterior part of the rectum.

No attention whatever was given to this lady's case, nor was it intimated by the medical attendant to the patient: we must, therefore, conclude he was not aware of the occurrence of the injury; and strange to say, though this lady has had five children since, and suffered for fourteen years the several distressing consequences, she was ignorant of the nature of her case and of the cause of her ailments until she came to London. She was then suffering from prolapsus of the mucous membrane of the bowel and a small polypus uteri, as well as this extensive laceration; she had very little control over the contents of the bowel at any time, and when the slightest relaxation took place, was quite unable to retain them. Any exertion would bring the uterus down to the os externum; and on one occasion, when endeavouring to ascend a hill, the womb became prolapsed, and inflammation succeeded, which required the application of leeches, with rest in bed for some days, to subdue. She was quite unable to stand for any length of time without suffering severely, and riding in a carriage produced much uneasiness.

I removed the protruding mucous membrane and polypus, and advised her to submit to an operation for the restoration of the lacerated parts. She gave her consent after due deliberation; and after consulting Dr. Locock, returned to the country for two months, and then came to town to place herself under my care.

On the 15th of August, at 3 P.M., I proceeded to perform

the following operation, assisted by Messrs. Coulson, Lane, Ure, Smith, J. Lane, and Webb; Dr. Snow administered the chloroform.

We placed her in the position for lithotomy. I then pared off the cicatrices on each side, and mucous membrane, to the extent of an inch backwards into the vagina, and to about two inches in length from the rectum to the vagina within the labia; the edges of the bowel, which were drawn back by the absence of the anterior portion of the sphincter, I also cut away, and brought the whole together by a triple suture, *i. e.*, by passing the suture through one labium at the posterior angle, then through the bowel, and thirdly, through the opposite labium. I then passed two double sutures deeply (at least an inch in depth) through both labia, and fastened them over two quills externally, then I stitched the margins of the labia with small needle sutures; finally, on passing one finger down the vagina and another up the rectum, I found there was a space not in apposition, I therefore introduced another suture through the vagina and rectum, thus making sure of every portion being in close apposition.

The operation lasted one hour. After sponging the parts perfectly clean with cold water, I applied cold water dressings under a bandage, and gave my patient two grains of solid opium, and at seven o'clock one grain more. Ten o'clock: I introduced the catheter.

16th. At 2 A.M. I did so again. 4 A.M.: gave her some wine and water, after which she obtained four hours' sleep 9 A.M.: used the catheter, every time carefully sponging the

parts with cold water, cleaning away every portion of secretion: there was no undue swelling of the labia. 4 P.M.: the catheter was again used, &c. &c. She had some wine and water: coffee allowed, but no tea.

16th. 11 A.M. Catheter used; one grain of opium given.

17th. 6 A.M. Catheter. 9 A.M.: one grain of opium, and also at 1 P.M. 10 P.M.: the catheter used, and one grain of opium given. No sleep to-day; had wine and water and some mutton—one grain opium.

18th. Passed a bad night, from having been disturbed early in the night. 4 A.M.: used catheter and gave two grains of opium. 11 A.M.: used the catheter; wine and brandy were given freely to overcome faintness. 5 P.M.: the catheter. 11 P.M.: the same.

19th. Has passed a better night. She complains of pain within the vagina,—an aching, and sometimes a sharp pain; the discharge was free. 4 A.M.: used the catheter. She has taken two grains of opium during the night, in two doses. 11 A.M.: the catheter. She still complains of pain within. I removed the last *external* suture. Half-past 2 P.M.: the catheter used; ordered sponging and warm fomentations. 9 P.M.: the catheter, and one grain opium.

20th. Half-past 12. She has great pain, especially about the orifice of the urethra, darting and aching pains; used catheter, and sponged the parts well. 6 o'clock: the catheter used. I examined with my finger within the vagina, and found that the discharge, which is now purulent, escaped through the lower opening by the sphincter ani, but did not escape without pressure from within.

She now tells me, for the first time, that for the last two days, when wind has passed from the bowel it has escaped from the front passage; ordered warm bread-and-water poultice. On examination to-day I find there is a recto-vaginal opening. I removed all the sutures, and divided the sphincter ani at the posterior part, and immediately the united portion of the perinæum retracted towards the vagina, and was drawn closer together. Half-past 1 P.M.: very free discharge, of a pure sanguineous character—the catheter introduced; she is much more free from pain. Half-past 4 P.M.: catheter again used—10 likewise; the discharge more purulent.

21st. Half-past 2 A.M. The catheter used. Half-past 6: ditto. Half-past 11: ditto. 4 P.M.: ditto. 10 P.M.: ditto—the discharge free.

22nd. Half-past 2 A.M. Catheter; great pain in the rectum, from the matter not escaping freely. Half-past 6: catheter; she is easier, and the granulations going on well. Half-past 2 P.M.: ditto. 10 P.M.: has been very well all day.

On the tenth day the urine was passed, by the patient supporting herself on her knees and hands.

26th. I consulted with Mr. Lane, and determined to pare the edges where mucous membrane existed; for this purpose I put the patient under the influence of chloroform.

27th. I injected some warm water into the rectum, first plugging the vagina, to prevent any escape of feculent matter into it, and the bowels were relieved for the first time since the operation.

28th, 29th, 30th, 31st. All going on well; the granulations growing up freely.

September 1st to 12th. Going on the same, when the catamenia appeared.

19th. The catamenia having subsided for 24 hours, I examined carefully, and was pleased to find the fistulous opening by the side of the anus much less than it was a week since, but that the mucous membrane had joined the skin on the left side of the opening, thus arresting all granulations there, and of course preventing a complete closing of the tissues. I therefore determined to pare the edges of the entire opening, and take one good deep stitch with a double silk suture; this I did at 10 A.M., and found, afterwards, by passing one finger up the rectum and one into the vagina, that I had effectually closed the passage.

The *new perinæum* I found half an inch in thickness and very healthy; I gave two grains of opium, and one grain every two hours to prevent pain and arrest the action of the bowels; at 8 P.M. I emptied the bladder by catheter, and watched all night; at 3 A.M. on the 20th she was very sick and vomited freely, after which she slept at intervals; at 11 A.M. I emptied the bladder again, there were several clots of blood filling the vagina which now came away. I directed her to pass the urine herself next time by kneeling on the bed. 6 A.M.: has passed urine freely in the way directed, and some more clots have come away: there is no undue swelling of the sutured parts: has taken solid nourishment and some wine.

24th. I removed the suture, and found that only partial and slight adhesions had taken place close to the orifice of the anus, which is now quite complete and circular; there is,

however, still a sinus, communicating with the vagina from the perinæum, of the size of a goose quill.

25th. On examination to-day I find the adhesions have given way; the bowels have acted by means of warm water injections and seidlitz powder; she has now perfect control over the contents of the rectum. I painted the orifice of the sinus with acetum lyttæ to stimulate the granulations, and ordered the bowels to be kept daily gently relaxed.

29th. The sinus is diminishing in size, and the granulations rising from the anterior edge of the anus towards the new perinæum; the acetum lyttæ was again applied over the granulating surface.

October 5th. The acetum has been brushed over the granulations several times during the last few days, but the process of granulation is very tardy, and as the patient is very anxious, being so nearly well, to return home, I determined to make use of the actual cautery this morning: it was therefore passed into the sinus, and effectually denuded the surface of all mucous membrane. It is quite evident now that the case is all but well, for there is a good strong perinæum, and the sphincter ani performs its functions perfectly; the small sinus is contracting and filling up with granulations; therefore, on 7th inst. my patient will return to her home, once more to enjoy a degree of personal comfort she has not felt for years.

Nov. 1. This patient returned home, and gradually recovered health and strength, rode out on horseback daily, and took walking exercise; her bowels have acted comfortably, she has had no prolapsus of the uterus, and is, in fact, in

good health and comfort. The case may therefore be truly said to be completely successful.

Dec. 8. Examined the patient, and found no fistulous opening, but a firm perinæum.

Now the practical remarks on this case are, *first*,—the importance of making frequent use of the catheter, generally every five or six hours for ten days. I am indebted to my friend Dr. Locock for urging this on me, as he stated that he had seen a very bad case fail at the *first* operation, from not attending to this point; and on the second operation, by attending to it the patient was cured. The greatest care should also be taken that none of the urine escape into the vagina, and trickle down on the united surface, for if it do, the result will almost certainly be, sloughing of the parts which you are anxiously trying to bring together by adhesive inflammation. 2ndly, The most important practical point is, keeping the bowels quite quiet,—allowing no action. In this case, I kept them confined twelve days by repeated doses of opium. The third important practical point is, constant personal watching and attention to the wound. I was in constant attendance on this patient for twelve successive nights. I studiously kept her on her side, her hips being on one of "Hooper's water-cushions."

It will be seen that I did not divide the sphincter ani on the day of operation, but a few days subsequently. This, I think, was wrong, and I shall for the future always divide it at the time, so as to prevent any retractile power of the muscular fibres from the very outset. I quite intended to do so before attempt-

ing the operation, having understood that Mr. Copeland and Mr. Bransby Cooper recommended it many years ago as an important point in the operation, but was over-persuaded to the contrary. The division should not be at the insertion of the muscle, but through the belly of the muscle, about one-third from the os coccygis. It may happen that both sides of the muscle may require division; at present I have found one sufficient. Nothing could prove the importance of this procedure more clearly than this case, for although adhesions took place anteriorly very satisfactorily, still, *prior* to the division of the sphincter, the posterior part seemed drawn asunder *after* the sutures were removed, whereas, immediately on the division, the gaping parts were instantly brought in contact, and steadily kept so. My second case will beautifully illustrate this point.

I was, of course, materially assisted in my treatment by the quiet and constant care of my patient in doing all I requested, especially in passing the urine by resting on her knees and hands.

I think this case, being one of the very worst forms of these accidents, offers good grounds for attempting more frequently than we have hitherto done a cure by surgical means.

The second case, which is of a similar kind to the first, but occurring in a very poor woman, rendered her sufferings and privations almost unbearable, and peculiarly distressing, as preventing her following the duties of her station. I prefer relating this case in the words of Mr. Bullock, the house-surgeon of St. Mary's Hospital, as inserted in my case-book.

Anne Judd, aged 40, admitted Nov. 7, 1851, into Victoria ward, under Mr. I. Baker Brown, with lacerated perinæum, which occurred two years since, at which time she had a difficult labour, and the vectis was used. A sudden pain came on, and drove both child and vectis through the perinæum. The sphincter ani is torn through, but there is a firm band which separates the rectum from the vagina, and which has put on the character of a mucous band. She cannot retain her fæces; had one child six or seven months ago. Has had nine children; all her labours have been difficult, but she has never had an instrument used, until the above occasion; health has always been pretty good.

12th. The edges of the lacerated surfaces were pared three-quarters of an inch deep, brought together by quill sutures, the edges being closely approximated by very fine interrupted sutures. The sphincter ani was first divided on the opposite side, half an inch from its insertion; water-dressing applied. The operation was performed under the influence of chloroform; as soon as she recovered from its effects, she was ordered opii gr. j. directly, and repeated every three hours. She was placed on her left side on a water-cushion; the urine was drawn off every four hours; port wine, one ounce in water, and beef tea.

13th. Has not slept, but has been quite easy; the wound is looking a little puffy, but the edges appear to be closely approximated; there is a little sanious discharge from the anterior part. Pulse 76; tongue clean; skin cool: continue wine, 2 ounces; mutton chop, cut up fine.

14th. Pulse 100; tongue a little white; skin rather hot; appetite good; has slept very well; wound looking well; still some sanious discharge from anterior part; water drawn off every 6 hours. P. c. pil. Wine and beef tea.

15th. Is quite easy, and sleeps well; the discharge from the anterior part is getting more purulent; pulse quiet; still some œdema. No pain; pulse quiet; tongue slightly white.

16th. Going on well; no blood mixed with the discharge; the anterior part of the wound has not quite united; the posterior part seems to have done so; less œdema; feels well, &c. Continue the pill night and morning.

17th. Is rather flushed, with quick pulse; some little pain. Not to have her chop to-day or wine.

18th. Is easier, though she still complains of being flushed occasionally; the quill sutures were removed; there is much less swelling; the greater part appears to have united well. To go on with her chop and wine.

19th. Is pretty comfortable to-day; urine still drawn off every 6 hours; the anterior part has not quite united.

20th. Going on well; has frequent desire to pass her water, and occasionally lets a little dribble from her; urine still drawn off every 5 or 6 hours.

21st. Still has frequent desire to make water; union seems pretty firm. 10 P.M.: has passed a copious motion, without apparently disturbing the union, and without taking an aperient; feels now much more comfortable; still continues the opium.

23rd. The union seems quite firm; externally there is the appearance of a small opening near the anus, but it cannot

be felt on the inside with the finger; bowels have not been again open. This morning, she for the first time passed her water herself, supporting herself on her hands and knees, and having the parts washed afterwards whilst still in that position: she suffered no scalding or other pain; to omit the opium.

24th. She passed three or four motions in the course of the day, having power over them, and being able to retain them; health improving; she is getting more cheerful.

25th. Bowels open; the small opening still remains; when the finger is passed into the vagina, and pressed over it, pus oozes out; nitrate of silver was applied to it; the remainder has perfectly and firmly united, a mere line marking the junction; the wound of the rectum has not quite healed.

26th. Bowels opened; the fistulous aperture touched with tinctura cantharides; appetite and spirits good. Wine and meat every day.

Dec. 3. Three weeks since the operation. She is perfectly well, and the bowels act freely and are under entire control.

Dec. 12. This patient left the wards of the hospital, and returned into the country perfectly cured.

This case is one of great interest, union having so rapidly taken place without a single unfavourable symptom; there has been no retraction of any of the sutured parts, and I attribute this to the division of the sphincter, as alluded to in the first case.

There is one point in both these cases which I think deserving of observation, viz., the generous diet allowed; this is contrary, I believe, to the usual practice of adhering

to plain farinaceous diet. Yet I am convinced that much depends on it in the recovery of the patient, and these cases clearly show that no bad effects result from such a course, even although the bowels are not allowed to act.

I shall be glad to learn the opinion of the Fellows of the Society on this interesting *obstetrical operation.*

When I read this paper before the Medical Society of London, several Fellows asked me some practical questions, which, I think, may with advantage be dwelt on here. The first important question was,—

Why did I give such large and repeated doses of opium? Did it not retard the recovery of my patient, by interfering with the powers of digestion and assimilation? I answered, that I gave the opium for a specific purpose,—viz., to allay any movement of the bowels, and, consequently, keep the united surface free from disturbance, and also to allay all nervous irritability necessarily occasioned by the pain of the operation, and by the process of adhesive inflammation; that as soon as pain returned, so as to disturb the patient, either by its effects on the nervous system, or by producing peristaltic movement, I immediately gave another dose, and so on as it was required; that I had never seen the least ill effects from the opium: it did not disturb the powers of digestion, nor annoy the brain so as to produce headaches; on the contrary, it seemed to uphold the patient by its very sedative influence. In the first case, I gave 48 grains in twelve successive days,

and in the second, 40 grains in ten days; yet in neither of these cases did I perceive the slightest bad effects of over-doses of opiates. My experience on this subject was not derived from these two cases alone, but from nearly one hundred cases of operation which I have performed upon the rectum, perinæum, and vagina; I cannot, therefore, resist urging it as a powerful and important agent in the treatment of this especial operation. This subject is altogether so interesting, that I cannot apologise for introducing to the profession some excellent observations by my friend and colleague, Dr. Handfield Jones, which he wrote after hearing my paper read at the Society.

"It is always a matter of much interest to watch the influence of any medical agent in modifying the vital processes which go on in external parts, where they are open to inspection,—as well from the importance of the fact in itself, as also from the valuable information we thereby obtain of its doubtless similar action on the more vital, delicate, but concealed organs lodged in the internal cavities.

"This interest, I think, cannot but be excited by the perusal of the above cases, in which opium—one of the most active and easily-abused articles in the materia medica—was so skilfully and successfully employed. Dr. Pereira notices the efficacy of small doses of opium (ten drops of laudanum three times a-day), in such instances as the chronic or callous ulcer, the so-called varicose ulcer, in recent ulcers from wounds, in which granulation proceeds slowly, and especially

in elderly persons, and in those whose constitutions have been debilitated by disease, labour, spirituous liquors, &c. 'It appears,' he says, 'to promote the most genial warmth, to give energy to the extreme arteries, and thereby maintain an equal balance of the circulation through every part of the body, and to animate the dormant energies of healthy action.' Its use, on the other hand, is stated to be prejudicial in ulcers attended with inflammation, in the florid and sanguineous temperament, and in childhood.

"If we review the different diseases in which opium is known to be beneficial, we shall find that they are all such as bear the stamp of excitement or irritation with deficient power, of more or less marked asthenia. Delirium tremens, ataxic fever, inflammation, either low from the commencement, or whose ϛθενος has been broken by active treatment, irritable states of the intestinal or pulmonary lining membranes, accompanied with profuse watery or mucous exudations; many cases of subacute rheumatism, the low, melancholic forms of insanity, diabetes, the hemorrhagic state, the syphilitic cachexia,—nay, even anæmia,—all exemplify the truth of the above position. Hurried, imperfect, excessive action, aberring from the normal pathological condition, is one of the main features in the instances where opium usually proves beneficial, and this state opium stills and subdues.

"If we look at its action on the healthy system, we see that it produces corresponding effects. A moderate dose exhilarates and animates the mental faculties, rouses and sustains flagging powers, enables the votaress of fashion to endure

her nightly toil, and the Tartar courier the fasts and unrepose of his long journey. In a young cat, to whom I had given six doses of tinct. opii. ♏ vi. in the course of thirty-six hours, and who had eaten some food three hours before death, I found all the intestinal parts in the most perfectly healthy state: gastric juice was secreted by the stomach, absorption took place in the villi, the liver formed sugar, and, in short, in no organ did a careful microscopy detect anything abnormal.

"As now considered, opium is supposed to be given in small doses, or, to speak more accurately, in not very large ones; but in all pathological states, the magnitude of the dose is to be determined, not by the number of grains, but by the intensity of the symptoms it has to meet and subdue. This golden rule was expounded to me by M. Trousseau, the celebrated physician at the Hôpital des Enfans Malades in Paris; in his lively manner, he would say, 'The disease being twenty, give opium twenty-one.' The indications, therefore, of the amount to be given will vary in each case; but if they be well apprehended, the dose will be sufficient, but not excessive.

"In the cases recorded in this paper, opium was given, not chiefly for the purpose of directly promoting the healing process, but of preventing its disturbance by mechanical and forcible disruption of the coalescing parts. For this it was freely given; and this most important end it well accomplished. But had not this end been all-important, I own I should have feared before trial, that the quantity of opium administered—three or four grains sometimes in a day—would

have had the effect of disturbing, by its influence on the organic functions, that reparative healing process, which issued in so beneficial and happy a result. For in these cases there does not appear to have been any marked asthenia, or undue irritability of the system. The terrors of surgical operations of earlier days, when the anæsthetic spell was unrevealed, may well have inflicted on the system a disturbing shock that opium alone could calm; but now there cannot be the same need for this potent agent.

"It is, however, clear that if in these cases opium did not promote the vital healing process, at least it did not retard it; or such obstacles, as the first case presented, would not have been overcome, and the second would not have progressed so steadily and favourably. This circumstance in itself is, I think, novel and instructive.

"Perhaps, however, if we consider the matter more closely, it may appear not difficult to understand why no unfavourable, but, on the contrary, a beneficial result was produced by the opium. The condition of an ulcer, healing by granulations, may first be referred to as an extreme instance, illustrating the great waste of plasmatic material which occurs in such cases, and more or less in all that approach to it. Much of the effused plasma—effused too rapidly to be organized—is cast off as effete matter, having taken the form of pus; much is organized into the low type of the granulation structure destined to future re-absorption. This waste is needless, nay, injurious as a drain on the system, and if it can be prevented, as sometimes it may, by applications that exclude the

air, or restrained and limited, as is done by the common water-dressing, the reparative process goes on much better, and with less constitutional disturbance.

"Again, if, as in the cases before us, two fresh incised surfaces are brought together, and the aim is to induce them to unite by the first intention, what can be more prejudicial to this than the effusion of much plasma, or any the least approach to the above-mentioned condition? To form a connecting medium across which capillaries may anastomose and fibres unite, the thinnest film of exudation is sufficient, and the thinner the better; for the organizing process is of necessity slow, far slower than the exudative, the capillary loops must take many hours to unite, the opposed fibres some days to blend by means of the connecting material, and the further the old surfaces are separated the longer this must be delayed, and the more of the exuded matter, which itself has produced the separation, will pass into the form of effete and purulent fluid. Now this tendency to the excessive effusion of plasma, opium very probably restrains, somewhat, it may be, as it restrains a flux from a mucous surface; the hurried action is stilled, the vascular excitement tending to inflammation allayed, the sedative influence of the drug assisting Nature in her work, by preventing that which would mar or delay it. The imparting of energy to the extreme arteries, which Dr. Pereira speaks of, we know from observation to be the restoration of their tonicity, enabling distended, relaxed, and congested vessels to resume their natural calibre, and thus to transmit a due and not excessive quantity of blood in a current of proper

velocity to the parts they supply. This restoration of the proper function of the arteries, 'the conductors and disposers of the blood,' as John Hunter accurately defined them, will manifestly tend greatly to prevent the excessive effusion of plasma, and thus remove at least one obstacle to the progress of reparation.

"It seems, therefore, reasonable to expect that opium, so long as it does not manifestly disorder the nervous system or the organic functions, would tend powerfully to promote the healing process, and this expectation is amply borne out by the results of these two recorded cases."

2nd. Some surprise was expressed that I had not dwelt on the consideration of the best means to prevent rupture during the process of parturition. I replied that this subject was so wide, and admitted of so much discussion, that I had studiously avoided it, as the paper would have been extended beyond the limits allowed by the Society; but that I was now glad to have an opportunity of saying, that I looked upon all the old plans of treatment as superseded by the last and most mercifully discovered one, chloroform. The various suggestions and recommendations of bleeding, tartar emetic, hot-baths, fomentations, greasy applications, &c., each had its own advocate; but since the introduction of chloroform by Professor Simpson, I had never failed in the most rigid conditions of the perinæum of inducing relaxation and elasticity by administering chloroform on a pocket handkerchief, and to such an extent that instruments may be employed with perfect freedom, and with

little risk of rupturing any portion of the perinæum. I therefore confidently recommend its use in preference to any of the old remedies.

3rd. I was asked to describe more distinctly what kind of cases I recommended for this operation. I replied, that decidedly the most fit and most deserving our serious attention, were those of the *fourth* division in the paper, *i. e.* where the rupture extended through the constrictor vaginæ, transversalis perinæi, and sphincter ani, where, in fact, the bowel was powerless to restrain dejections, and the vagina to uphold the uterus; but that those of the *second* division were more surely and efficaciously treated by this operation; where the absence of the power of the vagina permitted prolapsus of the uterus, and caused all the distressing results of that condition—then the same plan should be had recourse to.

4th. I was asked if I did not think these ruptures were often produced by the administration of the ergot of rye, or by too much interference as well as by too little attention to the perinæum during the passage of the head of the child through the os externum. I replied, that undoubtedly the injudicious administration of ergot of rye, inducing violent uterine contractions, did frequently expel the child with such sudden force that the perinæum had no time to dilate, and therefore ruptured, and I considered the frequent use of that drug most unjustifiable—that, in fact, any unnecessary interference with the natural process of parturition was wrong —that my old preceptor, Dr. Blundell, had taught me to beware

of "meddlesome midwifery," and I cannot too strongly repeat the caution in reference to this subject.

The objections against this operation, on account of the danger of rupture from future labours, is happily set aside by the fact, that such has not occurred in several of the recorded cases, as stated by the surgeons who have operated.

It will be evident to every surgeon, that much remains to be said on this subject, upon which I have not dwelt, but that my object was not, in drawing up this paper, to write "an Essay," but to place before the profession some practical points, which I think of considerable moment in the treatment of these cases. I would, therefore, merely say, in summing up my observations:

1st. Prepare your patient by careful medicine and regimen for the operation, and clear out the bowels.

2nd. Divide the sphincter ani *before* applying the sutures.

3rd. Use the catheter frequently.

4th. Give opiates freely, and quiet the bowels, so as to prevent any dejections.

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