WESTMINSTER HOSPITAL.

BELLADONNA IN INCONTINENCE OF URINE.

Under the care of CHARLES BROOKE, Esq., F.R.S.

[*From notes supplied by* G. NAYLER, ESQ., *House-Surgeon.*]

Daniel H., aged 7, a pale, delicate looking boy, was admitted January 21st, on account of incontinence of urine, which had existed for several months. He had been carefully watched, and various plans of treatment adopted, among which corporal punishment appeared to have been not forgotten. The urine dribbled from him by day as well as night. He was ordered one-sixth of a grain of extract of belladonna, dissolved in a teaspoonful of water, three times a day; no fluid was allowed after 5 P.M.; and the nurse was ordered, as usual, to see that he passed urine at night. This plan was perfectly successful. After its adoption he only wetted his bed once at night; and left the hospital quite cured three weeks after admission, making water only two or three times a day.

We shall give some other cases of the treatment of this annoying and frequently obstinate affection by means of the same drug in an early number.

Original Communications.

PUNCTURE THROUGH THE ABDOMINAL PARIETES IN IMPASSABLE OBSTRUCTION OF THE BOWELS.

By SIR HENRY COOPER, M.D.Lond., Physician to the Infirmary, Hull.

THE following case of obstruction of the intestines occurred to Mr. J. H. Gibson, of this town, and myself, in the latter part of 1855. Mr. Gibson agrees with me, that the publication of it may be useful. I have therefore, at his request, and aided by his notes, drawn up the following notice.

The interest of the case chiefly arises from the simple, easy, and effectual means used for its relief, and from the successful result of their employment. I do not find any records of this simple expedient having been tried; and it certainly is not a proceeding recognised by the authorities. Perhaps its very simplicity and want of pretension have caused it to be overlooked. At all events, I think the attention of the profession should be directed to it, as affording a chance of relief from a distressing and desperate condition but too often occurring.

Records of intestinal obstruction constantly appear in our periodicals; and monographs of value have, from time to time, been published, shewing at once the frequency of the affection, its importance, and the difficulties surrounding its treatment. My friend Mr. B. Phillips's paper, in the *Transactions of the Royal Medical and Chirurgical Society* (1848), has been the guide to most later writers. It contains valuable statistics; and sums up with still more valuable propositions, which the author considers to be proved by his observations. In 1853 (*Lancet*, Feb. 26th, 1853), Mr. Phillips reviews and modifies these conclusions by the results of his subsequent experience, and sums up the present state of our knowledge and practice. He recommends the avoidance of active purgatives, the administration of calomel and opium till the system is affected, and the application of emollient enemata. "I am now of opinion," he says, "that surgical operation is not justified, unless there be satisfactory evidence as to the point at which the obstruction is situated. If no such evidence is obtained, I am of opinion that an exploratory operation—a voyage of discovery, as it were—is not justifiable. The present state of our knowledge enables us," he says, "to conclude that the occurrence of complete cases of obstruction is by no means unfrequent; that the causes and seat are various, and, in most cases, cannot be discovered; but the presumption always favours the idea that it is beyond the cæcum; that in a considerable majority of cases the termination is fatal; that if symptoms are urgent and obstruction continue, and there is a distinctly marked tumour which is the probable cause, we are justified in cutting down upon it, releasing the bowel, or forming an artificial anus; or, if we have proof that the cæcum or descending colon are distended, we are justified in opening the left iliac region in the one case, or the right or left lumbar in the other, for the purpose of forming an artificial anus."

I purpose to dismiss the subject of medical treatment with the remark, that I believe all judicious and experienced practitioners now agree in Mr. Phillips's condemnation of the use of purgatives after the active symptoms of obstruction have once set in, and in his estimate of the value of opiates, though there may be a difference of opinion as to the extent to which mercurials should be carried. I shall take up the case at that point at which these means having been ineffectually used, the obstruction remaining, the fæcal vomiting exhausting, the tympanitic distension extreme, and the vital powers failing, relief by operation is faintly and doubtfully proposed by the medical attendant, and probably declined by the patient and his friends, as scarcely lessening the risks of the disease itself, and superadding dangers of an equally formidable character. The operations which have been for the last one hundred and fifty years recommended, are indeed of a severe character, and involve great shock to the system, and much subsequent risk. In the earlier operations, gastrotomy was performed by Littrè, and the colon reached through a large opening in the belly, and after much handling of vital organs. Callisen's and subsequently Amussat's operation were a scientific advance upon this, avoiding the peritoneum and much abridging the amount and gravity of injury inflicted. But the object of these operations was the formation of an artificial channel of relief, and not the reestablishment of the natural passage.

The desire to *cure* and not merely to *relieve*, led to the adoption of the exploratory operations, the purpose of which was to set the intestine at liberty, the cavity of the abdomen having been laid open for that purpose. But the uncertainty of attaining this object, and the certainty of greatly aggravating the patient's danger if the attempt failed, has led to the abandonment of these operations, except in cases where the indications of the seat of stricture are unequivocal, and such as to make it probable that the stricture, if traced, would be easily unravelled or removed. Mr. Phillips states, in the paper above alluded to, that there are not more than two well authenticated cases in which the integrity of the intestine has been respected, and the obstacle successfully removed; but there are many in which life has been saved by the establishment of an artificial anus: "and I apprehend," he adds, "it is to that point our attention must be earnestly directed."

It is to that point that my case tends.

CASE. M. A. K., aged 34, a robust, healthy, unmarried female, sent for Mr. Gibson on December 10th, 1855, and stated she had had no relief from the bowels since a scanty and imperfect evacuation on the 2nd. She had for many months suffered from abdominal pains, constipation, difficulty in passing stool, and distension, and tenderness in the right iliac region. She had now the usual symptoms of obstruction, with eructation and nausea, but little or no actual vomiting. Calomel and rhubard, with saline purgatives, were given. O'Bierne's tube was then used, and passed fourteen inches, and large quantities of gruel, castor oil, and turpentine, were injected, but returned unchanged. This plan was followed till December 13th. She then took two grains of opium every three hours, up to six grains, with no other result than that of abating the pain, which had become intense, and procuring refreshing sleep. At this time I first saw her, and formed a very unfavourable opinion of the case. There was great prostration; a sunken, anxious suffering countenance; rapid weak pulse; very great abdominal distension; hiccup and occasional vomiting of offensive matter. Careful examination of the abdomen detected no tumour or induration, but a uniform tight distension, except a slightly prominent roundness about the right iliac fossa, where was some additional tenderness. Opiates and enemata, with fomentations, were used till the evening of the 15th, when the symptoms being all aggravated, and the powers of life flagging, it became necessary to determine whether any and what operation should be performed. In determining this question, the following points were important. The rectum and sigmoid flexure were not the seat of obstruction, as was clearly showed by the passage of the tube, and the large quantity of injection (three or four pints) retained. The situation of the prominent distended point indicated the cæcum as the seat of the stricture, the distension probably consisting of the caput coli or immediately contiguous portion of the tube. The tenderness at this point indicated that some peritoneal action had been set up here, and that *probably* the bowel and abdominal parietes might be adherent. The abdominal walls, as proved by percussion, were thin at this point, and no important part would be endangered by piercing them. These considerations, pressed on us by the extreme urgency of the symptoms, determined us to puncture

this prominent part of the gut with the largest sized trocar, and thus, at all events, to secure temporary relief. The operation was precisely that of paracentesis abdominis, except that it was not performed in the median line, and had therefore to pierce muscular fibre, an incident not without a favourable bearing on the after issue of the case as affecting the patency of the opening. The situation of the puncture was about three inches to the right and one inch below the umbilicus. The immediate result of the withdrawal of the trocar was the escape of an enormous quantity of flatus, followed by fluid fæces, producing instant tranquillity, and a decided general improvement in our patient's condition. It was an essential part of our plan that the canula should be retained in the bowels at least for three days, as by that means the parts were *pinned* together, and extravasation rendered mechanically impossible. This state of parts would also favour the surrounding and isolating of the puncture by lymph, and the limiting of peritoneal inflammation, should such be set up. The operation was unattended by any difficulty or after complication; the system was relieved from the moment of the puncture, not having to rally from the shock of a long and severe operation; nor did any symptoms whatever arise from the simple procedure adopted, except a slight local irritation, due rather to the dressings and apparatus than to the operation itself. For three days the canula was retained in the wound, and a moistened bladder was attached, into which flatus and fæcal matter were freely repelled, and removed from time to time. Afterwards a gutta percha tube was inserted into the opening, and closed by a plug. A saline aperient was administered to keep the fæcal matter in a semi-fluid state, and the bowels generally emptied themselves spontaneously when the plug was removed. Some difficulty was experienced in fitting the opening with a tube, which should be large enough to retain its position and to discharge the contents, and not too large to pass readily into the bowel. Sponge-tents were found of very great use in dilating the opening, which might have been increased in this manner to any desirable extent. Eventually the patient managed the opening herself with a tent or rolled linen plug well greased. The course of the recovery was two or three times retarded by coughs, febrile attacks, and nervous debility; but these conditions were successively overcome as the summer advanced. She acquired more skill and confidence in managing her tents and bandage, and regulating the condition of the bowels; she left town for the sea-side for a few weeks, and returned in good health. She now (thirteen months after operation) is able to walk several miles, and to attend to her household duties; her functions are naturally performed: she is as stout as usual, and is free from local or general uneasiness. She takes a small quantity of Epsom salts every morning, and has a free semi-fluid discharge with much flatus daily. There is a tendency in the opening to close; it is of about the size of the little finger, and might doubtless be much increased if the patient could be prevailed upon to use sponge-tents for a week, and then adopt a permanent tube instead of the linen plug, which she still uses on account of its easy manipulation. There is some permanent enlargement of the abdomen, probably from over-distended bowel, which has lost its tone. No fæcal matter has ever passed *per anum*, only a little flatus and inspissated mucus occasionally.

REMARKS. In reviewing this case, and the ease and freedom from danger with which relief was afforded and life saved, one cannot help feeling that the simplicity of the procedure has been one cause why it has been hitherto overlooked, at least as a recognised operation. The disadvantages are: the wounding of both layers of peritoneum, and of the bowel itself. With the precautions described, however, the chances of peritoneal inflammation do not seem to be materially greater than in ordinary tapping; and a wound of the intestine is implied in every case where an artificial opening is formed. The uncertainty as to the part of the intestine perforated is a disadvantage shared in common with other operations. The part chosen is the most distended part, and therefore of necessity a point *above* the stricture, and certain to give relief: so that there need not be any hesitation or delay in searching for particular portions of the intestine. The opening is of necessity small; this is a serious objection, but it may be obviated by the size of the trocar and canula used, by the free use of sponge-tents, and by maintaining a mouldable state of the fæcal mass.

The advantages I have already partly pointed out in the course of my remarks; they are briefly, that the puncture is momentary, and unattended with pain or shock to the system at the time, or with any after constitutional effect; a most important consideration where the patient is already in the last stage of an exhausting malady; the certainty of immediate relief if the prominent part is selected; and hence the absence of any doubt or difficulty in determining the site of the obstruction; and if the puncture does not succeed, the patient's death is at least not accelerated. There are some advantages also as regards the management of the opening afterwards; it is altogether under the patient's control; it is not liable to the prolapse and tension of the mucous membrane or closure by septum which interfere with other artificial openings; and, lastly, it is not so deep seated as the lumbar anus, and therefore not so liable to obstructions and infiltration between the inner opening and the skin.

The operation is applicable to any form of intestinal obstruction where there is great distension (and this condition is rarely absent); and is particularly indicated in the later stages of schirro-contracted rectum, or other malignant disease, where the object is to prolong life for a few days or weeks, and mitigate suffering at little or no expense of vital power.

DEATH FOLLOWING THE INHALATION OF CHLOROFORM IN SURGICAL OPERATIONS.

By T. HOLMES, Esq., F.R.C.S.

[*Concluded from page* 68.]

As a summary of the preceding tables, I would adduce the following facts.

They contain the records of 50 deaths under chloroform, occurring during the eight years 1848-1855 inclusive, in 39 of which *post mortem* examinations were made; in the great majority, the chloroform was given by qualified medical men.

1. *Sex.* This is noted in 44 cases: 21 were males, 23 females.

2. *Age.* All were persons in the middle period of life; no children, and only one man above the age of 60.

3. Most of the operations were of a comparatively trifling character.

4. The chloroform was given on a handkerchief, cloth, towel, or piece of lint, in 27 cases; on a sponge in 4; on an inhaler or other apparatus (not described) in 8; on Dr. Snow's inhaler in 3. In 8 cases the apparatus is not specified.

5. The quantity used was ʒj and under in 13 cases; ʒij and under in 12; ʒij-ʒss in 3; a larger quantity in 8; not specified, 14.

6. The time is noted in 32 cases: 2 minutes and under in 15 cases; 2-5 minutes in 6 cases; 5-10 minutes in 6 cases; above 10 minutes in 5 cases (in one of them, 40 minutes).

7. The symptoms are intelligibly described in 36 cases.

In 19 there was no previous struggle; in all of these, except one, the pulse ceased before or at the same time with the inspiration.

In 17 there was previous struggle; in 4 of these lividity and failure of respiration was next noticed; in 13, failure of the pulse, or of the bleeding from the wound, generally preceded by pallor.

8. Of 33 cases in which *post mortem* examinations were made:—

(*a*) Eight, viz., Nos. 15, 22, 31, 32, 34, 42, 46, 50, showed no appreciable morbid appearances, *i.e.*, referrible to chloroform: for one (No. 34) is said to have presented extravasation of blood in the spinal canal.

(*b*) The *heart* is reported *soft or flaccid* in 10 cases, Nos. 3, 9, 16, 19, 20, 23, 24, 27, 30, 46; *fatty* in 9, Nos. 26, 29, 33,* 35, 36, 37, 38,* 41, 45. The cases marked thus * were two of the oldest patients in the list, and the morbid appearance seems not to have exceeded the traces of fatty degeneration usually found at that period of life. The heart was *flaccid* and *empty* in 7 cases, Nos. 2, 5, 8, 9, 10, 14, 48; *full* in 1, No. 1.

The *blood* was usually fluid; air was found in it in 3 cases, Nos. 2, 5, 24.

(*c*) The *lungs* were congested in 14 cases, Nos. 1, 2, 5, 8, 9, 10, 16, 19, 20, 23, 28, 45, 46, 50.

(*d*) The *brain* was congested in 7 cases, Nos. 1, 14, 16, 20, 23, 28, 44.

(*e*) *Other viscera* were congested in 6 cases, Nos. 1, 10, 16 20, 24, 30.

(*f*) There was organic disease in 4 cases besides that of the heart, viz., aneurism, No. 39; phthisis, No. 3; atheromatous arteries, Nos. 33, 38. The latter had also granular degeneration of the kidneys. It will be observed that the latter two had also fatty degeneration of the heart; but to a slight extent.