The past and present treatment of intestinal obstructions, reviewed, with an improved treatment indicated / by Hugh Owen Thomas.

DIET & OPIUM
IN
INTESTINAL OBSTRUCTIONS

HUGH OWEN THOMAS.

Rushton Parker

Dec 1879

Later Hours

DIET AND OPIUM

IN

INTESTINAL OBSTRUCTIONS.

The

PAST AND PRESENT

TREATMENT

OF

Intestinal Obstructions,

REVIEWED,

WITH AN

IMPROVED TREATMENT INDICATED,

By

HUGH OWEN THOMAS.

(SECOND EDITION).

LONDON:

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1879.

Dedicated

To his Friend

THE REV. A. J. PARRY,

OF CLOUGHFOLD,

BY

THE AUTHOR.

ERRATA.

Page	11,	line	22, *for* month *read* mouth.
,,	60,	,,	12, foot note, *for* opinion *read* opium.
,,	72,	,,	2, *for* casualities *read* casualties.
,,	78,	,,	1, *for* here *read* there.
,,	107,	,,	10, *for* course *read* coarse.
,,	108,	,,	4, *for* adhesions *read* adhesion
,,	121,	,,	28, *for* not even *read* even.
,,	133,	,,	10, *for* uninterupted *read* uninterrupted
,,	137,	,,	15, *for* symptoms *read* symptom
,,	142,	,,	13, *for* repititions *read* repetitions.
,,	144,	,,	20, *for* begining *read* beginning.
,,	145,	,,	7, *for* acceeded *read* acceded.
,,	147,	,,	9 and 10, *for* peritontis *read* peritonitis.
,,	149,	,,	4, *for* carrage *read* carriage.
,,	do.	,,	24, *for* apendix *read* appendix.
,,	154,	,,	11, *for* preceeded *read* preceded.
,,	156,	,,	16, *for* MEMORANDA FOR TATMENT. *read* MEMORANDA FOR TREATMENT.
,,	157,	,,	29, *for* lion *read* loin.
,,	158,	,,	12, *for* excelent *read* excellent.
,,	160,	,,	1, *for* amendable *read* amenable.
,,	171,	,,	5, *for* cheshnut *read* chestnut.
,,	176,	,,	13, *for* differental *read* differential.
,,	177,	,,	12, *for* lion *read* loin.
,,	182,	,,	14, *for* rampart *read* rampant.
,,	186,	,,	8, *for* emmollients *read* emollients.
,,	187,	,,	21, *for* inuendo *read* innuendo.
,,	do.	,,	26, *for* ambitous *read* ambitious.

CONTENTS.

"And what is more conducible to perfection, then the knowledgye of symples, with their names and natures: in suche wise that knowinge the nature of the infirmity, there may therby, throughe naturall reason, (ye thoughe there were no practice,) be procured a spedy remedye: Oh that ever we shoulde call oure selves men of science, and yet as thoughe there were no science, we be ignorant of those thinges that we shoulde chiefflye knowe, being planted amongest us.

* * * *

For thoughe some may note it a kinde of presumption, to vary from the common opinion; yet may I answer with Aristotle, that Plato is my freud and so is Socrates; but the truthe before them bothe. And as mine opinion agreeth myth the truthe, I wishe it onlye accepted, and where it will not stand myth reason and truthe, to be rejected as an untruthe, and a thing not morthy of credite."

JOHN HALLE, Chirurgien, A.D. 1565.

PREFACE.

This paper originally appeared in the Liverpool and Manchester Medical and Surgical Reports, and is a review of the past and present treatment of gut occlusions, and also an epitome of the method of treatment matured and practised by the author during the last seven years. Observation of clinical occurrences gradually forced him to the policy of treatment advocated here. He regrets that his spare time will not permit him to do justice to a subject so difficult of treatment, and so fatal under the present method of aid, as it is only too plain that, even at this date, in many cases the sufferer has to contend not only against the complaint, but if he invites professional assistance, this sometimes adds to the difficulty, further testing his powers of endurance. Every remedy, mechanical and therapeutical, is tried, and

should the patient live the last practised or given is lauded and credited with the result ; but should he succumb, his attendant reports he has done his duty, by trying many or every mode and medicine. The literature of this subject informs practitioners of recoveries of so many cases involving occlusions of the gut, and where a serious degree of lesion was present, that it is reasonable to expect that with an improved method of aid the mortality in these difficulties may be much diminished. It is notable that the therapeutical remedies administered, frequently have been given by wilfully ignoring their physiological effects ; consequently, on the occurrence of a slight variation in the attendant symptoms, the remedy is changed, when perchance the correct one may be substituted for one that is injurious. This change of hands is continued so long as the difficulty lasts or the patient lives. Success depends not only upon the use of the proper method and remedy, but in knowing how to use each, so as to be able to control the symptoms, so prolong life, and further, be able to detect early the medicinal loss of control over the symptoms, and then operate. The demonstrations of Brinton have instructed the profession in the mechanism and causes of obstruction in these hollow viscera, while the experiments of Dr. Harley

and the late Professor Bennett have given the profession sufficient data as to the physiological and toxic effects of the principal neurotics, and now they can be given by the sub-cutaneous method with confidence, once the prescriber has decided the rationale of treatment. But to Sydenham should be conceded the credit of first advocating the use of the remedy that has given, and can give, the most successful results, while Nelaton has left us a "dernier resort," should therapeutical aid fail, in the operation of gastro-enterotomy, conjoined with an ignoring of the locality of the lesion. (part occluded). This operation whether performed early or late will not in all probability add any more to the risk already present. The author inclines to the belief that some cases which have terminated fatally, though the obstructions were relieved, and where a post-mortem examination showed nothing to account for non-success, may be explained by the supposition that the sufferer was one of low vitality, not having in store sufficient stamina to withstand the shock of the derangement of so important and large a portion of the chylopœtic viscera, this conjoined with the fact that the defect often extends over a period of many days or weeks. It is an argument for early operation, say about the fifth day,

should the patient's history and appearance, &c., not indicate much stamina. Many readers may think that perhaps the author's comments upon the practice of gentlemen whom they may deem better able than him to give instruction on this question, indicates an exceeding confidence on his part. They may think that he "rushes in where angels fear to tread." His excuse is, that hitherto the "angels" have by no means trod gently when traversing this ground. Clinical observation is open to all, and is an inexhaustible field which has and will always repay the careful and unprejudiced explorer. Here was gained the experience which enables the author to assert the principles of treatment, urged with such confidence in these pages.

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Liverpool.

The Review.

Hippocrates refers to ileus and its treatment, but to my mind it is very apparent he was not able to distinguish between a loaded rectum and what in latter times is affirmed to be ileus. Yet, it is evident that when he treated a case of genuine ileus, his treatment was as far astray, as that of most of his successors, which is apparent from his mentioning the seventh day as being usually the limit of the patient's endurance.

His treatment consisted principally of inflating the intestines, and the administering of enemata The same treatment seems to have been practised by Celsus, Paulus Ægineta, and Aretæus. The last though he says that

"In ileus it is pain that kills, along with inflammation of the bowels, straining and swelling;"

yet, informs us that no "respectable physician" would administer a narcotic except in extreme cases.

Until we come to a date so late as the 17th century, this complaint seems to have been looked upon as nearly always fatal. The father of English

medicine Dr. Sydenham, appears however to have been in advance of many physicians living even in our own times. He appears to have used opium freely, and with marked success in intestinal irritation, much in the same way as the late Dr. Brinton would have practised, but with this exception, that the former, on most occasions, commenced with a sharp purgative, for the purpose, as he says, of clearing the way for the action of other remedies. One original remedy he refers to, and reports highly of, but which Dr. Brinton very properly ignored, is the application of a live kitten to the stomach during the continuation of any vomiting, insisting upon the necessity of not removing this pleasant companion until the vomiting should cease. As a contrast to this harmless advice, and indicative of Sydenham's careful clinical observation, I quote his remarks on the value of enemata. In his "Medical Observation" he says:—

"Hence I have more than once remarked that the repetition of even the mildest glyster has induced serious symptoms."

Here he not only anticipates all modern teachers, but also surpasses them in this one item of rational treatment. My own experience is that the administration of a single enema of water only may give rise to serious symptoms. On two occasions (in my own practice) serious symptoms

occurred, though the water given as an enema in one case, did not exceed four ounces in the other twenty ; both cases were fatal ; yet did well up to this injurious interference.

He records that in the month of August, 1671—

"The most noble Baron Annesly, who was suffering some days from bilious colic, accompanied by intolerable pain and a frequent desire to vomit, sent for me to see him at Belvoir Castle. He had already tried two kinds of glysters and other remedies to boot, and these had been ordered to him by the most learned medical men of the parts around. I made no difficulty in prescribing the repeated application of narcotics after the plan described, by the use whereof he mended every day, and returned along with me to London a healthy man."

He reports another case :—

"A poor neighbour of my own, who is still living, was during the years in question afflicted with a most violent bilious colic which he had tried in vain to subdue by purges, glysters and swallowing leaden bullets. I ordered him to use narcotics frequently ; this he did, and as often as he did so, found himself relieved. The disease, however, was only palliated not cured, it returned when the virtue of the anodyne was spent."

The author records that this case ultimately recovered by this treatment.

Dr. Sydenham's methods, despite his determination at the commencement of treatment to get rid of "peccant humour" by purging, and the application of the Sydenham placebo, a live kitten, appears to have been the best treatment up to the advent of Dr. Brinton's demonstration. But I have reason to believe that his treatment fell into disuse among those practitioners immediately after his

time, probably he would be the only one of his contemporaries that practised the opium method, for we find some of them—as for example, James Cook, Surgeon—commenting on the treatment of ileus, stating that "narcotics have no place in colic," the specifics advised were composed of the dried viscera and appendices of animals, powdered and mixed in sack. Probably, Mr. Cook would be one of those gentlemen to whom Sydenham refers as

"learned men of the parts around."

After making diligent search among the records of cases reported during the 18th century, and the early part of the present century, I have failed to find any account of cases of intestinal obstruction treated by Sydenham's method, or by any approach to it. Among those I examined were the "Medical Physical Journal," the "Lancet," the "Medical Times," "The British Medical Journal," and some other medical periodicals; but I have not been able to find the record of a single case of intestinal obstruction, no matter from what cause, treated by the administration of opium only, and combined with the utmost possible prolonged rest of the parts affected. The discussion of this subject by the Royal Medico-Chirurgical Society of

London, reported in the "LANCET," of the 18th December, 1875, apprised me for the first time that the rationale of the treatment of this difficulty by opium was not known even to leaders in the profession. From the report of that discussion, as given in the "LANCET," it is obvious that the treatment of Intestinal Obstructions has retrograded since the death of Dr. Brinton.

Dr. Brinton's volume on Intestinal Obstructions is undoubtedly not so well known as it should be among the profession; and it is my opinion that few questions have ever been so thoroughly and exhaustively demonstrated as the one to which Dr. Brinton's work is directed; yet, though the author promulgated his views in the Croonian Lectures, delivered before the College of Physicians in 1867, it is shewn both by the discussion before referred to, and the reports of our weekly Medical periodicals, that the treatment of Intestinal Obstructions has not advanced from where it was previous to his researches.

By the death of this talented physician, which took place while the republication of his lectures was in progress, the medical department of our art lost an able and most persevering demonstrator of a rational and successful method of treating these cases. It is not a matter of surprise to me, that in

the discussion before the Royal Medico-Chirurgical Society, some gentlemen doubted the correctness of Dr. Brinton's statistics. This may be accounted for by the fact that the method of treatment which he demonstrated as being necessary to increase the probability of success has been generally ignored, which has certainly more than trebled the mortality.

In the volume for 1853 of the "BRITISH MEDICAL JOURNAL," page 433, Mr. Joseph Hinton gives a table of cases of Intestinal Obstructions, with a brief outline history of 137 cases, inclusive of herniæ. Over 100 of these were cases of intussusception, volvulus and enteritis ; the remainder were herniæ, malignant tumours, and strictures ; yet, in not one of these cases was an exclusively opium treatment tried.

Some of the cases are recorded as having been treated with opium and bleeding, but on reference to the source of information I notice that calomel and enemata were also used.

Mr. Hinton's table is both instructive and interesting to those having a special interest in the subject.

In order to illustrate how little Brinton's discoveries have influenced the treatment of this disease, I append a condensed report of a case long anterior to his time, and recorded in the

"MEDICAL PHYSICAL JOURNAL," 1824, page 116 :—

ENTERITIS.—The treatment commenced on the

First day—Bleeding, purgative, enema, and jalap powder.
Second day—An enema of tobacco water.
Third day—Castor oil, opium, and purgative draught.
Fourth day—Purgative draught.
Fifth day—Bleeding.
Sixth day—Anodyne enema.
Seventh day—Laudanum injection, bleeding, and calomel.
Eighth day—bleeding, cold applications, calomel, common salts, senna, tobacco injection.
Ninth day—Tobacco injection, enema of salts and senna, calomel and antimony.
Tenth day—Doses of calomel, antimony, castor oil, extract of hop.
Eleventh day—Castor oil only.
Twelfth day—Purgative draught.
Thirteenth day—Purgative draught, and apple dumplings.
Fourteenth day—Sore in the mouth, but convalescent.

The reporter of this case states in page 120 of the same volume, that the purgatives were "sparingly used." What must a liberal system of purgation have been in those days? With the treatment above set out, wonderful to relate, the patient recovered. There was no action of the bowels until the fourteenth day; in fact, not until the probable period of resolution.

Another sample of the treatment adopted about that period is reported in the "LANCET," vol. 16 p. 145. The patient was suffering from supposed enteritis, and he was treated with

Hot fomentations, five grains of calomel, and purgative on the first day.

And this was repeated on the second day. On the third day there was a repetition of this treatment, with the addition of an enema night and morning. Fourth day—calomel, colocynth, castor oil, enamas. On the fifth day a change of tactics took place. The body was immersed in warm water, and the abdomen rubbed with oil, followed by the administration of croton and castor oils. On the sixth day a powerful purgative, and an enema were given. On the seventh day, croton and castor oils with enema of aloes. On the eighth day, another change of front took place ; scammony, gamboge, senna, magnesia, and tincture of rhubarb were freely administered; and on the ninth day, croton oil. After the administration of which we are informed that "despite the treatment, the patient sank at 10 o'clock." Two hours before his death an anodyne was given. This is an illustration of the treatment in 1828.

These two reports may be compared with what is done in our own time. We take for example a case reported in a number of the "London Medical Record," June, 1877, page 233, when on the

First day—the treatment commenced with castor oil and enema. Second day—croton oil, two enemata of senna, and soda sulph in the morning and evening ; the same day third enema of senna and soda sulph, and belladonna to the skin over abdomen. Third day—calomel, jalap and belladonna every two hours, and insufflation of air ; the intestines being distended by forty strokes of the bellows. Fourth day—enemata and purgative pills and insufflation, this latter was repeated "with redoubled energy." Fifth day—thrice action of the bowels. Sixth day—"the belly was electrified, and an enema of mercury," which produced abundant motion and blood. Seventh day—"a glass of castor oil."

The treatment failed in this case to kill the patient. He recovered.

Again, in "Lancet," for the year 1876, a case of

Intussusception of the large intestine is reported. The treatment adopted was copious warm soap and water injections. The case was fatal, the post mortem examination showing that an advanced degree of recovery had taken place, and that had even an expectant policy been practised, there was a great probability that the patient might have recovered.

In the same volume, in the column devoted to correspondents, another case is mentioned, the treatment of which was commenced by an enema of castor oil and turpentine, an 'internal compound to stimulate the intestines,' the enema being repeated while the patient was sinking.

It may probably be fresh in the memory of the reader, the report given in the 'British Medical Association Journal' of the treatment adopted in the case of the late Madame Du Devant (better known as George Sand). In her case, evidently one of the elite of the profession was invited from Paris to her Chateau, near Mohant, to assist "the learned men of the parts around" as to the treatment to be adopted, with the result, it appears to me, of a repetition of that treatment which some of the contributors to the 'Medical Physical Journal' of 1824 would have advised. In fact, the patient's chance of recovery would have been better had she had no advice at all, rather than the injurious interference

to which she was subjected.

I will take another example from a recent number of the 'Dublin Journal of Medical Science,' in which a case of Intestinal Obstruction is recorded which was treated.

On the first day with enemata of "various kinds," "purgatives of different sorts," "including castor oil, scammony, calomel, and croton oil." This treatment was continued for several days, when a change of plan seems to have been decided upon, and extract of opium was given by the mouth every fourth hour. On the sixth day a return was made to the previous treatment with purgatives; rubbing the bowels with warm oil had been constantly persevered with, during intervals of the administration of medicines. Sometime between the 6th and 9th day, the distended abdomen was relieved of gas by puncture, and the opium treatment was again resorted to; then about the 10th day, galvanism was applied. On the 15th day, castor oil and rhubarb were administered, with the result of producing a return of most of the symptoms which had begun to abate. This case, wonderful to relate, survived the treatment.

From the foregoing examples and others which have come under my notice during the last ten years, I am convinced that there are very few in the profession who are acquainted with Brinton's labours, and fewer acquainted with the correct treatment of this disease, and many who are cognisant of his views want the confidence to apply them undeviatingly in practice.

Having myself, in my earlier practice, previous to my study of Brinton's work, used the methods of purgation, (though never in the heroic manner that I have noticed in others) I can confidently say that the opium method involves as great

a probability of success, as the other methods increase the improbability of the patient's recovery.

The 'British Medical Journal,' of July last, contains the report of a very instructive case of intestinal lesion partially treated by opium, for perusing it I notice that the treatment was commenced by calomel, opium, and enemata on the first day, the enemata being repeated twice the same day, and the latter being repeated on the day the practitioner judged the patient had been relieved of the difficulty.

This case is the nearest approach to Dr. Sydenham's method that I have met with amongst reported cases, and very strongly confirms the opinion that I have formed during my own experience, that in the majority of these cases the administration of opium by the month is of little avail, having but slight control over the complaint. Judging from the symptoms recorded, I should class this case as one of enteritis progressing to resolution unaffected by opium. I have frequently met with cases in which, from some cause, opium given by the month in large medicinal doses seemed to have none of its usual physiological or therapeutical effects.

These examples indicate that the treatment in the early part of the present century differed in no way from that of our time, except that we have added to

the treatment another objectionable feature—Galvanism. It may be interesting to notice the practice in use twenty years ago, but it seems to vary but little from the practice in vogue in the present year.

This can be further shown by a comparison of the paper contained in the 'BRITISH MEDICAL ASSOCIATION JOURNAL' for 1853, p. 117, where is recorded a series of nine cases. I append a condensed account of each.

The first case was treated by opiates and enemata, with metalic mercury, and the patient took 7 lbs. of this metal and yet recovered.

The second case was treated by calomel, colocynth, black draught, castor oil, enemata, turpentine stupes, and a pint of newly fermented yeast, and recovered.

The third case was treated by calomel, opium, castor oil, and enemata, and proved fatal, the patient succumbing in 12 hours.

The fourth case was treated with purgatives, and died on the third day.

In the fifth case nearly all the list of purgatives was tried, also quicksilver and tobacco enemata, and the patient died on the sixth day.

The sixth case was treated by purgatives, and proved fatal in thirteen hours after the commencement of the treatment.

The seventh case was treated with purgatives and tobacco enemata, and also proved fatal.

The eighth case was treated with purgatives, and opium, and proved fatal.

The ninth case was treated with mild aperients, opium, and enemata, and was fatal on the third day.

In comparing the treatment of these cases with that of one reported and discussed before the Clinical Society of London so late as last October, and reported in the 'LANCET,' of the 21st of the same month, I am forced to the conclusion that we are not improving upon the treatment practised in times

gone by, but rather, retrograding. This case, the details of which were discussed before the Clinical Society, appears to have been diagnosed as one of intestinal obstruction, and yet the details of treatment were, daily enemata, hot fomentations, castor oil, croton oil, turpentine; the passage of a long tube up the bowels, inverting the patient and shaking her in the inverted position, trocaring the bowels, kneading and manipulating the abdomen, galvanism with the intention, it is reported, of exciting peristaltic action, the administration of extract of aloes, and a combination of enemata and kneading; and still more remarkable, it is reported that death occurred suddenly and unexpectedly on the 59th day, despite this heroic treatment. Surely, death could only be expected, as, to all the remedies so trying to the patient's powers of endurance, there existed also a very serious complaint,

In no recorded case but this can I recollect such a systematic negation of the principles which should guide us in the treatment of such cases, and it is certainly notable that in the discussion which followed the reading of the report, none of those engaged in it are reported as having dissented from the mode of treatment, although the editor of Dr. Brinton's volume took part in the discussion. It appears to me that Dr. Brinton's valuable demon-

stration, as far as its practice is concerned, has been buried with him. This patient's remarkable power of endurance both of the treatment and complaint terminated at the end of 59 days. I should judge from the report, that, under a more rational treatment, even if ultimate recovery was not possible, life could have been prolonged three times that period. Dr. Brinton asserts:—

"With all the resources of medicine directed to the sustenance of life, and in a constitution of exceptional tenacity, I am persuaded that a duration of at least 4 months would be attained."

He further adds that:—

"The treatment hitherto practised has trebled the rapidity of the malady."

It is astonishing what control opium has over the pain, vomiting, and other symptoms which usually accompany these difficulties, even when, as in this case, ultimate recovery is not probable. In confirmation of my assertion as to how imperfecly the principles of treatment are understood in the present time, I subjoin a quotation from Dr. J. S. Bristowe's recent volume on the Theory and Practice of Medicine, published last year, advising treatment for Intussusception, page 728.

"In those cases, however, in which the symptoms of obstruction come on vaguely and without evidence of association with inflammatory mischief, it is generally advisable to commence the treatment with the administration, either by the mouth or rectum, of moderately powerful purgatives, and to persist in this treatment until, by their failure to act, and by their causing vomiting and painful but fruitless peristaltic movements, their inefficacy is distinctly shown. It sometimes happens that, after drastic purgatives have failed, a large dose of

some simple laxative, such as castor oil, acts with singular efficacy. In aid of this treatment, hot baths, fomentations, or ice or electricity to the surface of the belly, and voluminous enemata of gruel or of water may severally be employed. If those measures are without avail, it is generally advisable to give the bowels rest, and to relieve pain by the repeated use of adequate doses of opium or of belladonna; the persistence in which treatment will, by relieving spasm, or otherwise promoting the return of some length of bowel to a comparatively healthy condition, not unfrequently result, after a shorter or longer time, in an effectual and sufficient evacuation. If this treatment fail in its turn, it may be necessary again to solicit the action of the bowels by the employment of purgative medicines, enemata, and the like. Such is the routine which must be generally followed in cases of simple obstruction, in which the cause of obstruction is obscure; and in many cases also even when the cause is distinctly ascertained."

Here we are advised to commence with powerful purgatives, and to persist in their use until we have evidence of their injurious action, then mild laxatives can be tried, and to aid all these by hot fomentations, electricity, and enemata, failing in all these, opium and belladonna are to be given; after which if they fail, a return to purgatives and enemata, &c., is counselled. In fact, it may be noticed that there is, in the treatment recommended, an utter absence of any systematic method based on the etiology of the difficulty under consideration. These lesions are of such serious import to life that it were better to practice an expectant method, than to incur any risk by giving remedies not based on rational ground or successful clinical or experimental observation. Many cases have been reported as having recovered even after the most inefficient treatment, which to my mind

is strong evidence that with a more rational treatment the mortality would be decreased.

As an instance of remarkable recovery from Intussusception, there is recorded in volume 16 of the 'LANCET,' p. 7, a case in which three feet of intestine, with a portion of its messentery attached, came away. This case is reported by a Professor of Anatomy a guarantee that it was intestine that was passed. In volume 11, p. 565, Mr. Abernethy reports a case where a portion of the intestine sloughed and came away. The treatment is not given in either of the above cases.

In the transactions of the 'BRITISH MEDICAL PROVINCIAL ASSOCIATION,' 7th volume, a case is reported of recovery after five inches of intestine had passed, though treated by the purgation method.

My friend, Dr. Turnour, of Denbigh, informed me that he had a case where a large portion of intestine sloughed and came away; his treatment being the administration of opium, the use of which he strongly advocates in these lesions. Dr. Bristowe, in his recent volume, reports on the authority of Dr. Peacock, of London, a case in which the sufferer passed twelve feet of gut, and recovered. This extraordinary and unprecedented report induced in me some doubt of its correctness. I communicated with Dr. Peacock, who very readily favoured me

with a reprint of his paper "A case of invagination of the intestines followed by the passage of a large piece of bowel by the rectum," originally published in Transactions of the Pathological Society, vol. xv. From a perusal of his paper I find that instead of twelve feet, the portion passed measured only thirty-five inches. The author gives us a short history of twenty cases of invagination with sloughing of portion of intestine. Case 18 is reported on the authority of Drs. Harley and Bristowe, as having passed the almost incredible length of four feet, with recovery; the period of separation in these 20 cases varied from the sixth to the thirtieth day. One case is mentioned in which

"portions were passed at intervals during a period of three years."

In my opinion, this was a case of chronic catarrh of the bowels, attended with the occasional passage of casts of the intestines. In case 18, where four feet of gut is reported to have passed per rectum, this might also have been a large cast of the bowel; but as the previous history of the patient is not given, it is not possible to form a decided opinion. My own doubts arise from the report, which describes the portion when examined

"as the mucous membrane not the whole of the bowel."

As to the causes of Intestinal Obstructions, the immediate ones are generally peritonitis, enteritis,

paralysis of the musular fibres of the bowel from contiguous inflammation, occurring in the condition of peritonitis, enteritis, or after herniæ reduction, or operation. Paralysis may also arise from over distension, from compression during and previous to reduction of, or after operation for herniæ, invagination, rents in messentery, twisting of the gut, stricture, and malignant growths. It has too frequently hitherto been thought that obstruction arising from herniæ is practically on a safe way to resolution after reduction or operation, when in my opinion the reduction or operation frequently only places the patient in a condition fit for rational therapeutic treatment, and he should be treated by the opium method, and dieted as strictly after reduction or operation as though it were the first day of any of the varieties of obstruction before enumerated.

Some writers mention spasm as present in enteritis and lead colic, &c., and a cause of obstruction in some cases. My own conviction is, that spasm is never a cause of obstruction, and if its occurrence is granted, its presence in enteritis is impossible, as the inflammation would temporarily suspend muscular action. Our knowledge of the etiology of lead colic, does not as yet justify any one in asserting or denying the occurrence of spasm in this condition. Tobacco has usually been judged

a valuable and efficient remedy in this disease ; if this is correct, it rather negatives than confirms the spasm theory, inasmuch as tobacco is a stimulant of the muscular coat of the intestine. The treatment of lead colic is no exception to that of any of the other varieties of intestinal lesions. I have always, in these cases, followed a mode of treatment exactly the same as that here advocated for Intestinal Obstruction, with unvarying success. My appointment as Medical Officer to a "Benefit Society," composed exclusively of painters, has given me a few extra opportunities of noticing the effect of opium in these cases during seven years. At one time I tried alum in lead colic, a remedy much advocated by the late Dr. Inman, but failed to find that it had any effect in the disease, more than an expectant method would have.

A diagnosis of the existence of intestinal irritation or obstruction is not always easy at its onset, and may easily, and in my opinion often does, escape notice ; especially a slight acute or a chronic condition of peritonitis or enteritis, which is often considered as merely general malaise, and so not subjected to special treatment which would avert a more serious condition at a later period.

The subjective symptoms usually present at the onset of intestinal complications are a feeling of fulness,

weight, and tightness of the abdomen, as though its contents were heavier than usual, slight thirst, headache, and vomiting more or less frequently. These, if not relieved, are followed by the objective symptoms : tenderness on pressure, perceptible distention, at first gaseous, and then fluid and gas. These are the general symptoms present in the majority of cases, and may become intensified by injurious, continued from neglect, or diminished by appropriate treatment. As, for instance, where purgatives are administered they aggravate the above symptoms, without one exception, and prolong the recovery of the patient, or ensure his dissolution at an earlier date than would have been the case had he been neglected, or appropriately treated.

Neglect, is attended with symptoms of lesser severity than those present during inappropriate treatment, while with appropriate treatment all the symptoms become much diminished in intensity and frequency, and the patient often has such relief that without a knowledge of his history and an examination of the abdomen, the practitioner would not believe him to be a subject of suffering. It is certainly easy, with ordinary care, to diagnose even at the onset the coming intestinal difficulties, but the attainment of a differential diagnosis is difficult.

Here I am conscious of my own deficiencies, and that also the same defect is only too apparent in the writings and teaching of others.

Those who have studied the records of reported cases will probably have noticed that a differential diagnosis is generally arrived at after some days of treatment and careful watching of symptoms; as, for instance, in peritonitis and enteritis, where we have principally gaseous distension with evacuations at an early date, and a gradual relief of distension. (I am supposing the opium treatment is practised.) In invagination there is a longer period of constipation, nearly normal temperature and pulse, also the abdominal distension is mostly fluid and a sudden relief of distension occurs. In the various forms of constricted gut and volvulus, collapse occurs at a time corresponding in period to that of herniæ collapse, and indicating that operative interference is advisable. It may be broadly stated that a differential diagnosis is easier guessed than demonstrated.

Under the circumstances it is a source of satisfaction to know that a differential diagnosis of the varieties of occlusions is not necessary to successful treatment. It may be asserted, as a general rule, that the treatment is similar for all the varieties of intestinal complication.

Accumulations of fæces whether in the gut or rectum may be classed as a form of obstruction, but can be differentially diagnosed, as it is nearly always accompanied by pain parturient in character with intervals of perfect ease. It is also palpable as a tumor like swelling, if the abdomen is examined by careful manipulation ; or if a case of rectal accumulation digital exploration of the rectum reveals its character at once, simple accumulation requires no treatment beyond abstinence from solid food, occasional enemata, and the witholding of purgatives by the mouth. This form of obstruction may, by injudicious treatment, be converted into some of the other forms.

The mechanical remedies usually employed in the treatment of these obstructions are, medicated enemata, inflation with air or carbonic acid gas, the administration of liquid mercury, the passage of O'Byrne's tube, the inversion of the patient and shaking him ; and one of our medical periodicals lately reported the administrations of copious enemata of warm water whilst the patient was in the inverted position. Trocaring the intestine, galvanism, kneading, external applications, and gastrotomy, may be classed among mechanical remedies for intestinal obstruction. To these I may also add a remedy which I claim as peculiarly my

own, namely, that of retaining the patient upon an inclined plane, the shoulders and head being dependent, and the pelvis elevated ; this position I have observed to be of decided advantage in severe cases.

It is with some diffidence that I differ from so high an authority as the late Dr. Brinton with regard to the value of enemata in these cases, whether they be administered for the purpose of diagnosis, or supplying nourishment, or giving sedative medicine, or for mechanical purposes, even should they be but two or three ounces in bulk they may again cause the recurrence of all the symptoms that the sedative medicine may have controlled. In the treatment of these affections they should, in my opinion, be totally discarded in every form and for all purposes, whether the bowel below the obstruction, which it seldom is, be loaded or not. Should there be some accumulation below the obstruction, this accumulation can do no harm. Most of my readers will agree with me that it is the accumulation above—not below the obstructed part, which constitutes the difficulty in occlusions ; and interference with the contents below, readily excites peristaltic action, even in the parts above the obstruction, and adds to the practitioner's difficulties in successfully treating the case.

I have observed that the passage into the rectum of even a soap suppository, to cause a return of symptoms that had been controlled. Indeed the call for nutritive enemata is never so urgent in these cases as to justify this practice, pain is the principle cause of emaciation and death, not starvation, and it will I think be granted that with the suitable forms of aliment now so readily supplied to us by art, and with opium to allay the pain and its sympathetic irritation, it would take a very long period to seriously emaciate the patient. On this head there should be no anxiety, as we know that from 14 to 60 days is the usual period of recovery or death, which results from the lesion, but never from emaciation ; and it may be laid down as an axiom, that the more the patient abstains from imbibition and aliment (though suitable,) the sooner his recovery, and, consequently, a shorter period of abstinence, and return to the usual routine of diet will be attained.

Dr. Brinton has very properly remarked :—

"Nature herself is preparing within the obstructed bowels the best of all purgatives, the most admirably adapted by its quantity and quality—and especially its consistence, to accomplish whatever an aperient can do towards opening a passage."

My own opinion, based upon my observation in practice is, that it should be the study of the practitioner to restrain the action of the bowels so long

as possible, as by so doing he decreases the consistancy of the abdominal contents, and so makes more safe, certain, and gentle, the action of the aperient when the time arrives; that prolonging the constipation is no longer possible. For myself, I have never noticed, where constipation has been well maintained by opium beyond the 14th day, the patient pass solid fæces; it has always been liquid or pultaceous.

As to the proceeding by inflation it appears to me a useless torture. With regard to the value of quicksilver, this can only accumulate at the obstructed point, and is, by its weight more difficult of expulsion by vomiting than the accumulated liquid already there; and this the patient must relieve himself of by occasional vomiting.

Sydenham thus comments on the value of this remedy :—

"Whatever may be said about bullets and quicksilver; things which whilst they can effect but little good, can do much harm."

The passing up the rectum far into the colon of O'Byrne's tube, I cannot and never could see its purpose, not even in a loaded and over-distended, consequently a temporarily, paralyzed rectum. As a general rule, in the latter condition it is a spoon or spatula that is wanted; or should the load be too high to be reached by the spatula, frequently

repeated doses of diluents by the mouth, enemata and abstinence from solid aliments and purgatives must succeed, opium in this condition would prolong unnecessarily the treatment.

Inversion of the patient has been practiced frequently of late in supposed intussusception. This, to have any chance of success, must be practiced very early, within a few hours, and previous to agglutination between the intussuscepted parts ; otherwise, as has been demonstrated, it may be impossible to reduce the intussusception even when the bowels are under direct manipulation as after operation. Inversion with shaking, if practiced at a late period, should it succeed in reducing the invagination, the result might be calamitous to the patient, as agglutination and absorption with or without sphacelus may have taken place ; and to confirm this opinion, I refer the reader to an early number of the " LANCET," for 1876, in which is reported a case of intussusception where gastrotomy was performed, yet the invagination could not be reduced immediately after operation, or afterwards at the post-mortem ; in fact, the case was in progress to spontaneous cure had it not been operated on. In the 12th volume of the " LANCET," p. 580, Charles Bell, in a lecture on Intussusception, emphactically objects to mechanical inter-

ference, as advocated by Hunter. The following are his words :—

"At a certain period, if the contraction were fairly in your hand you cannot undo it.——Fixed by inflammation, and then no power, I believe, that you have will undo it."

Sydenham and Charles Bell appear to give correct explanations to several questions in the etiology of this subject, anticipating Dr. Brinton ; as, for example, Sydenham explains the mechanism of vomiting ; and again, Charles Bell lucidly instructs us as to the mode of formation of, and subsequent changes in invagination. Again, the direction of the invagination is to be considered, but it is not possible to diagnose this ; consequently, the inversion of the sufferer may increase the difficulty ; shaking and injecting water into the intestine while the patient is inverted, is open to the same objection as inversion alone is.

Kneading the abdomen, perchance, might do something ; but in all probability, that something would be injurious. Of all the mechanical methods, none in practice has appeared to me so decidedly beneficial as confining the patient to the inclined position, with pelvis raised and trunk dependent. It diminishes distension by facilitating a more copious vomit, which is effected with much less effort, at the opportune period. I have assumed here that the patient is under the effect of opium,

given sub-cutaneously, and has the periodical and necessary vomit only. This inclining of the couch I usually obtain by placing two or three claybricks under the twin posts at the foot of the bedstead.

The next mechanical edition to modern treatment has been to trocar the distended gut. This, though in my opinion not essential to success at all times, is a means of temporary relief, and has to be employed with care, as some surgeons have observed post-mortem indications of leakage from the punctured bowel. In my judgment, this may have arisen from carelessness in the mode of withdrawing the trocar.*

To avoid extravasation of stercoraceous fluid into the peritoneal cavity after puncture, it is advisable, before withdrawing the canula, to cleanse its external orifice, then to place the thumb on the orifice, and secure counter pressure with the fingers around the canula. The instrument is thus plugged so as to ensure that a rush of air does not empty the contents of the canula into the peritoneum

* Messrs. Krohne and Sesemann have made a very suitable and effective set of trocars for this purpose, from my design. They are so arranged that the canula is within the needle; this is for the purpose of avoiding a shoulder on the needle, sometimes an obstacle to its entrance into the bowels; the canula also converts the lance point into a blunt one after its entrance into the bowels.

during its withdrawal, as is done when we wish to avoid spilling the contents of a catheter, while withdrawing it from the bladder. There is one condition in which it appears to me the operation of trocaring may be specially indicated, viz., when the obstruction occupies the descending transverse, or sigmoid colon, and the accumulation has extended up to, and is straining the, ilio-cæcal valve. Here the use of the trocar may relieve pain, which may require a very large dose of opium to control, and avert gangrene, or rupture, of the intestine. It may be stated as a rule, based on published post-mortem records, and which my own experience inclines me to believe, that while trocaring the intestines to empty them of flatus is perfectly safe, the removal of their liquid contents may not be so free from danger.

In the category of mechanical aids to the treatment of this difficulty, I have placed Gastrotomy and Gastro-Enterotomy. One of these operations is, in my opinion, at times urgently indicated. Gastrotomy, if performed early, has a probability of success; but then it would have to be performed at so early a period that medical treatment could not therefore have been fairly tried; and we know that, in most cases, therapeutical means do succeed, and involve in their practice a

fraction only of the risk attendant on this serious operation—gastrotomy. Again, supposing gastrotomy to be successful, the patient even then has to be subjected to an efficient method of restricted diet and therapeutical remedies in the after treatment. To perform gastrotomy in a case of obstruction from peritonitis, enteritis, few surgeons would, I expect, advise, as these are efficiently treated by medicine. Indeed, its performance, where the difficulty arises from intussusception, would be purposeless after the first few hours of invagination; as in all probability the intussusception could not be reduced if found; consequently, this operation would seriously compromise the chance of the patient's recovery. Past and recent records of operative interference by gastrotomy fully confirms this view. Performance even at an early stage in obstruction from intussusception would be a questionable practice, knowing, as we do, from records how much nature has done in these cases, even when retarded by misdirected art; much more success may we expect from improved treatment in this special class of cases. Dr. Brinton expresses his opinion thus—

"An operation ought not, I think, to be mooted."

Again, he gives his opinion that after a certain time operation in this condition "would at the same time literally withdraw the patient's chance of recovery."

In my opinion, the operation of *gastro-enterotomy involves a much greater probability of success than that of gastrotomy; because, first, after successful operation there is no occasion for a special diet or therapeutical treatment, as the obstruction cannot possibly continue if the gut is open above it; or, if sphacelus is suspected has having occurred, this should be the part of the gut operated upon, and should be attached to the external abdominal opening. Secondly, should any of the varieties of obstruction be complicated by adhesions, &c., there is no occasion to interfere with any progress towards recovery that may have taken place, as gastro-enterotomy relieves distension and makes reaccumulation improbable, if not impossible, so long as no new obstruction arises in any part of the intestine higher up than the part already operated upon. The cases which here follow confirm me in the opinion that the operation of gastro-enterotomy should be preferred, and performed only when symptoms of threatening, or of actual, collapse appear. It would be better to wait until these symptoms occur, than to add to the records of the cases operated upon

* By gastro-enterotomy, here is meant the section of the abdominal wall, incising the gut above the obstruction and attaching the opening in the gut to the opening in the abdominal wall.

to find that the patient might have recovered, if he had not been interfered with by operation.

In the "AMERICAN JOURNAL OF MEDICAL SCIENCES," the reader will find a collection of 13 cases of gastrotomy (abdominal section) for supposed intussusception, compiled by John Ashurst, M.D., which article is a serious indictment of the basis upon which this operation is undertaken. Dr. Ashurst also gives a table of 57 cases operated on for other causes (not intussusception), but as very imperfect details are given, it is not possible to glean any practical information from them. Of the 13 cases of operation for intussusception, two are of uncertain details, and may very properly be excluded; the remaining 11 cases are recorded with sufficient data, that it is apparent to me they were all, previous to operation, subjected to a preliminary treatment such as Dr. Sydenham would, and Dr. Brinton did, designate as the "grossest malpraxis." Appended here are the data pertaining to each case :—

No. 3. Male 50 years.—Primary treatment enemata, opium, calomel, laxatives, soap linaments, bougie up rectum, warm bath, tobacco enemata, and finally the operation of abdominal section. Twelve inches of adherent invagination, &c., was found, and the case ended fatally next day.

The post-mortem revealed a gangrenous condition of the bowel involved, consequently this form of operation in this case must have been detrimental.

No. 4. Male, 28 years.—Primary treatment—cathartics, enemata, bleeding, anodynes, liniments, baths, and metallic mercury. Tenth day—abdominal section—successful reduction of nearly two feet of invaginated gut. Patient recovered.

No. 5. Male, 12 weeks old.—Primary treatment not given. Operation of abdominal section, bowel adherent and gangrenous; also ruptured by the attempt at reduction of invagination. In progress to recovery—finally fatal.

This case must also be placed among those, calamitous from unnecessary interference, gastro-enterotomy could have succeeded.

No. 6. Male, 20 years old.—Seventeen days obstruction. Primary treatment, purgatives and metallic mercury; finally, abdominal section; invagination of ileum was found. "Disinvagination was effected by grasping the intestine above and below, and forcibly rupturing the adhesions, which were quite firm; the bowel and omentum were deeply congested and on the verge of mortification. This patient recovered."

Wonderful recovery, when we consider the primary treatment and the unnecessary and detrimental interference by operation with the part which was in progress to resolution.

No. 7. Male, 36 years.—Primary treatment, leeches, liniments, enemata—cold and hot, abdominal section. Unsuccessful as regards reduction of invagination, and fatal.

No. 8. Child, 4 months old.—Duration of complaint, 4 days. Primary treatment, injection, insufflation, sponge probang, then abdominal section. Disinvagination was effected with some difficulty; which latter indicates some degree of progress to recovery. Child was almost moribund just before operation, and died five hours after its termination.

The Primary mechanical treatment had exhausted the vitality of this subject, so that he cannot be said to have been further injured by operation.

No. 9. Male, 16 years old.—Primary treatment not given. .Operation—bowel gangrenous—no reduction of invagination—bowel opened and formation of artificial anus.

Patient died shortly after operation. Case for Gastro-enterotomy.

No. 10. Age not given.—Treatment not given. "Disinvagination was impossible on account of the existence of adhesions."

The case terminated fatally. From the report it can be fairly supposed that this case was also in progress to recovery, had it not been interfered with by section.

No. 11. Details not given, but mentioned as fatal.

No. 12. Female, 6 months. Primary treatment not given. Operation first day. Disinvagination was effected with great difficulty.

This means that adhesions existed, and it may be fairly inferred that this case again was in a fair way to recovery, had it not been disturbed by operative interference.

No. 13. Case 2 years old.—Intussusception. One month in formation. No treatment given. Operation successful.

To these cases of Gastrotomy, collected by Dr. Ashurst, I now add one of Gastro-enterotomy, reported by Dr. A. Brigham, Superintendent of the New York Lunatic Asylum, and published in the "AMERICAN JOURNAL OF MEDICAL SCIENCE," for April, 1845, page 355. This case may be described as one of Gastro-entrotomy, without primary interference, and is a remarkable example, both of

recovery and of the mode adopted by nature to secure the resolution of so extensive a mutilation, as the removal of seventeen inches of intestine.

"The following very remarkable case of recovery, after extensive loss of small intestine, has lately occurred. The patient, a married woman, who had had five children during the two previous years, was admitted into the Asylum with which Dr. Brigham is connected in June, 1843.

As some fears were entertained that she would attempt suicide, she was strictly watched, and placed in a room where no instruments by which such purpose could be effected were kept.

No material alteration in her case was noticed until Oct. 24th, when about nine o'clock in the forenoon, she obtained a pair of large scissors that had been accidentally left in the hall, which she took to her room and with which she made two wounds into her abdomen, one about an inch and a half above the umbilicus, the other half an inch below it. From the upper opening she took out part of the small intestines, from which she cut off a portion, seventeen inches in length, when she was discovered by another patient, and alarm being given, she was forced, not without some resistance on her part, to cease from further injuring herself.

Dr. Buttolph, the assistant physician, was near, and saw her immediately, and discovering that the intestine was entirely separated, and also a considerable portion of the omentum, and that one end of the intestine was withdrawn into the abdomen, concluded the case would soon prove fatal under any treatment, and therefore returned the end of the intestine that protruded into the abdomen, stitched up the wounds carefully, and covered them with adhesive plaster,—applied a bandage around the body, gave her an attendant to remain with her constantly. While thus dressing the wound she vomited, but did not appear to have much pain.

On examining the detached intestine, which she had cut into in several places, it was found to contain a small quantity of fæces, and weighed one ounce and one drachm ; the omentum, which was separated from it, weighed one ounce and two drachms. The ends of the intestine were ragged, and had been cut off obliquely. For a few days she was disposed to vomit, and was not able to retain anything on her stomach but a trifle of water. Injections of laudanum and broth were administered, and she was kept constantly quiet. After a few days she called for food, and was able to retain a very

little, and in about ten days she asked "if she had not ought to take some physic." She was reminded of the accident, and told that it would be improper to give her physic; but she did not appear to think so, and said she "felt as if it would do her good, and that she ought to have some."

She continued without much change, very quiet by aids of injections of laudanum, eating a little several times in the day, and vomiting occasionally, but without any marked tenderness or inflammation of the abdomen, until the 26th of November, thirty-three days after the accident, when she had a small discharge from the bowels of hardened fæces, and on the next day a copious one. This, she said, gave her great relief, and from this time she began to improve. The wounds had already healed, and she was soon able to walk about. Since then she has continued to have regular evacuations from the bowels, though there is rather a tendency to diarrhœa, for which she often takes laudanum. She now eats tolerably well, though inclined to vomit when she eats heartily. She is able to be about the house, and sews and knits, and is as well as she was for several weeks previous to the injury. She is, however, still feeble, and does not gain flesh, but is calm and quiet, though her mind is in rather a demented state."

Dr. Brigham, in the "AMERICAN JOURNAL OF MEDICAL SCIENCE," for January, 1846, page 44, reported the death and post-mortem examination of this patient in 12 months after from some disease unconnected with the intestinal lesion. His second report I here append in extenso :—

"The portion of the intestine removed at the time of the injury was found to be the colon, it having been divided about four inches from the entrance of the small intestine. The divided portions were drawn together at the place of injury and united by organized lymph, which also connected the intestines to the parietes of the abdomen where the wound was made. The passage between the divided ends of the intestine was small and crossed by a few ligamentous-like bands, but still large enough to permit the passage of semi-liquid fæces.

Judging from the size of the intestine removed, which was diminished by being drawn out at a small opening, we had erroneously supposed, without particular examination, that it was a portion of the small intestine, and so stated in our former communication."

In the "MEDICAL TIMES AND GAZETTE," vol xviii, page 769, is the reprint of a paper by Professor Dieffenbach, entitled, "Case of Excision of portion of Ileum and Mesentery;" again, in vol. xx. of the same periodical is a condensed republication of the same treatise. This latter I reproduce here :—

"A strong man, aged fifty, had suffered for fourteen days from strangulated inguinal hernia of the right side. Several ineffectual attempts at replacement had been made. At this time Dieffenbach saw the patient. In addition to the usual symptoms, there was reason to suspect sloughing of the protruded parts, and escape of fæcal matter into the hernial sac. An incision of about three inches in length was made into the swelling, when there escaped an ichorous fluid, with fæcal matter, and portions of mortified intestine. The diseased intestine was drawn outwards, and three inches of it which were partially mortified, softened and thickened, together with a corresponding portion of mesentery, were cut away. A small artery of the mesentery required to be tied, and the ligature was cut close to the knot. During this process the ends of the intestine were held by assistants. The angular incision in the mesentery was first united by ligature ; and then the extremities of the divided intestine, by means of separate threads, so inserted as to bring the peritoneal coats alone into connection. The mucous membrane was not perforated. The parts were then carefully replaced. Shortly afterwards castor oil was administered, and repeated with some croton oil, until very large evacuations were produced. These were followed by great improvement in all the symptoms. Mild aperients and the antiphlogistic regimen were the only means required during the process of cure, which was complete in the fourth week after the operation.

The individual returned to his usual employment, which was laborious, and some weeks subsequently, after very hard work and the use of very indigestible food, he was suddenly seized with all the symptoms of intussuception, with which he died."

A careful perusal of the complete history informs us that the intestine removed had been fourteen days strangulated, during which time

"Fruitless attempts had been made by different surgeons to reduce it."

When Professor Dieffenbach visited the patient, he had all the symptoms which would seem to "threaten speedy death;" and on the second visit

"The poor man was now sinking fast, and the anxiety of death was evident."

At this time the Professor operated, and removed three inches of the intestine, with a portion of the mesentery; after excision, the ends of the intestine were sutured together and returned into the abdominal cavity. Castor oil, and croton oil were given on the first and second days; and though the after treatment included a course of mild purgation, this case recovered; but, on a recurrence of obstruction from accumulation arising from his indulgence in an

"Immoderate meal of fat meat and other indigestible substances,"

he succumbed to the primary treatment, which consisted of purgatives and bleeding.

The details of operative interference of neither Professor Dieffenbach, nor Dr. Brigham, satisfy me with regard to the mode in which Gastro-enterotomy should be performed, so as to secure the greatest probability of the sufferer's recovery. It would have been better in both cases to have followed Nelaton's usual practice of securing an external opening, by connecting the gut to the incision in the abdominal wall; thus the patient would be spared the risk, during "after treatment" and the surgeon much

trouble and anxiety. To my mind Dr. Brigham managed the after treatment of his case "secundum artem" if we judge it from the standard laid down by Sydenham and Brinton; whilst Professor Diffenbach's patient recovered, despite a method of treatment of injurious after aid.

Granting the theory and practice I have advocated to be correct, the majority of these cases were injuriously treated before operation; and in some cases the operation was undertaken ere symptoms of urgency had manifested themselves; and the particulars of symptoms recorded as present before, and acquired after, operation, inform me that the operation in many of these cases was a remedy for a remedy (primary treatment) rather than directly a remedy for the obstruction. With an expectant or opium treatment, most of the first 11 cases would have had a great probability of recovery with or without operation. With an exclusive opium treatment I would not expect indications for operations to occur before the seventh or the fourteenth day; and this delay is rather an advantage to the patient if he has been kept well under the influence of opium, which diminishes the shock of an operation, and keeps in abeyance peristaltic action: an item to the good for the treatment after operation.

Collapse occurring at about this period (seventh to fourteenth day) I would judge to indicate, probably one of those forms of obstruction caused by twist of gut, rent in mesentry, fibrous bands, adhesion, tumors &c., and these can only be palliated by medical treatment ; and must, when diagnosed as probably existing, be subjected to operative interference ; though I at present believe them to be not amenable to therapeutical remedies, there being no trustworthy evidence on record of such having recovered. Yet it is not impossible that this opinion may be proved to be fallacious after an extended practice of the opium method has been the subject of clinical and post-mortem observation. Dr. Brinton, commenting on this point in his treatise, page 100, after discussing the probability of spontaneous cure, says—

"One or two such recoveries have to all appearance occurred in my own practice. Fortunately for the patients, however, the exact details of the process remain uncertified.'

At page 705 of "THE BRITISH MEDICAL JOURNAL," 1876, is recorded a case of volvulus, occurring in the the practice Dr. McCall Anderson, of Glasgow, which appears to me as though there had been in this case an attempt at spontaneous cure. Another case of obstruction from bands is reported in the same page, and had been under the care of Professor

Gairdner. In both of these cases, it appears to me that if by some method, the gut could have been kept nearly empty, pain relieved, and constipation prolonged long enough, recovery would not have been impossible. Again, on the same page, a brief report is given of a case, supposed to be volvulus, having been cured by opium and scanty diet. Experimental tests on the dog have wonderfully confirmed the hopeful prognosis Dr. Brinton had of recovery in cases where volvulus, stricture, bands, &c., existed. W. Bathurst Woodman, M. D., in the "LONDON MEDICAL RECORD" for May 19th, 1875, reports experiments :—

"Sales-Girons on the mode in which the circulation of Fæcal Matter is re-established after Ligature of Intestine. "LA REVUE MEDICAL," for March 22nd, 1875, contains a paper of extreme interest which, in the absence of any name, we suppose must be attributed to the editor. He states that, whilst making the experiments on the way in which temperature is affected by ligaturing the intestine, he was surprised to find that most of the dogs experimented on, after vomiting and obstruction of the bowels, and refusing their food, began gradually to recover after the fifth day ; and about the tenth day they resumed their normal appearance and all the functions of life seemed carried on as before. He thought at first that the ligature was not properly tried. This led him to make fresh experiments—with similar result. He thinks the mechanism of recovery deserves special notice. When a segment of intestine is ligatured with silver wire, so as completely to obstruct its calibre, if the animal survive and be killed after ten days, it will be found the portion of intestine is adherent to the abdominal wall, and to adjacent coils of intestine, by false membranes, which are easily torn, and often circumscribe little collections of pus. If, without disturbing the relations of the parts, sections are made above and below the portioned ligatured, we can easily demonstrate, by injecting water, that the bowel is once more

pervious. There is no perforation of the bowel, but a circular cicatrix shows where the ligature was applied—the two surfaces of intestine brought into contact by the ligature are, so to speak, welded or soldered together. The calibre is normal, except that at the level of the cicatrix, there is a slight circular constriction of the mucous membrane. The metal ligature is found attached to one side, and floating loop like in the calibre of the bowel. It is easy to understand that, under the influence of the peristaltic action of the bowels, the intestine is cut through by the ligature ; but during cicatrisation of the external coats, the mucous membranes have succeeded in separating, thus the patency of the calibre is re-established. Two things help to bring about this result. The first is the thickness of the walls of a dog's intestines; and the other, the nature of the mucous membrane preventing the adhesion of two mucous surfaces. This is, then, a true recovery. The cicatrix is a genuine cicatrix made up of the three tunics, and is demonstrated to be so by microscopic examination. Similar results were obtained with hempligatures. It was once found that one of these was burst by the intestinal juices. An India-rubber ligature was found encysted, its elasticity doubtless causing this result. If, instead of including a loop of intestine, the ligature was simply tied round the bowel, the results were similar, but never rapid, five days sufficing for the process. (These observations appear to the reporter of extreme interest, as illustrating the probable mode of recovery in some cases of intestinal obstruction in the human subject; and as explaining the circular (annular) cicatrices sometimes seen in the intestines in post-mortem examinations."

These experiments are examples of obstruction from annular bands, and are specially instructive from the fact that annular strictures are occasionally causes of gut obstruction in the human body. The "MEDICAL TIMES," for Nov. 25th, this year, p. 594, contains the report of a case, where post-mortem examination demonstrated the existence of

"Annular stricture caused by fibroid thickening of uncertain origin."

The explanation I will give of this "fibroid thickening" would be, that this case was originally one

of short intussusception, and then there had occurred, that which usually occurs in slight intussusception, agglutination and partial absorption of the agglutinated part. When a long portion of intestine has become invaginated, then of course sloughing of the free portion occurs; agglutination only existing at the primary portion of the invagination. This case was treated by the "all sorts" method; that is many remedies were given, and the last credited with the result.

The details of this case are, to me, very instructive, and especially confirmatory of my opinion, that the direct relief of the mere symptoms of constipation is not to be aimed at, nor is it a trustworthy sign of resolution, inasmuch as early and repeated evacuations, as in this case, are of no benefit to the patient if the intestine is not allowed time by treatment and abstinence to become normal in condition and fit to resume its natural function. The post-mortem of this case, like that of mine, (case No. 7) revealed nothing beyond some defect in the treatment.

In the preceding remarks I have attempted to indicate the conditions justifying gastrotomy or gastro-enterotomy. If the former operation has being selected and performed successfully, the real question that presents itself is, What may be the

therapeutical treatment that should follow ? I can best illustrate my views on this important point by a consideration of the medical after treatment of hernia operations, which coincides with that of gastrotomy,*

Operation on hernia would be attended with greater success if before and after operation, constipation (rest of part) was well maintaind by opium, and restricted and limited diet for a period long enough to enable the constricted, paralysed, and sometimes inflamed bowel, to recover its normal function. It is often forgotten that a patient's gut, with its muscular power in abeyance from or after over-distension, is practically impervious in the living subject ;† consequently it should be treated after operation as a genuine case of obstruction. These conditions occurring after the operation of hernia, explains why the patient may have no relief from symptoms of obstruction, and why post-mortem-examination sometimes give no clue to the immediate cause of non-success.

* I adhere to the familiar term gastrotomy, though it does not correctly indicate the nature of the operation. A more correct term for the latter would be the name suggested by Dr. Ashurst—Laparotomy.

† Both Dr. Habershon and Abercrombie attempt to explain this condition. The latter thus expresses his observations :—"For we have seen it fatal without obstruction, and we have seen everything like obstruction entirely re-

The dread of a few extra days of constipation during the after treatment of hernia operations has been, and is, in these times, not unfrequently the sole cause of non-success after successful operation. Constipation should be prolonged as long as possible. The surgeon may be able, with opium and suitable diet, to delay the action of the bowel until the third week ; to prolong the constipation beyond

moved without relieving the obstruction." And the former accounts for it by the supposition that "either enteritis was present, or the bowel twisted." This explanation by Dr. Habershon is not consistant with his own remark, that "no cause of strangulation or obstruction was detected after death." The explanation—where no Pathological evidence is present—I hold to be the correct one is this: the intestine, being confined to an area small in comparison to the length of the intestine, are necessarily packed and folded in the abdominal cavity, so that they collapse at their points of replication. This in the healthy gut is corrected by peristaltic action, whilst in a gut paralysed from over-distension, &c., correction by this means is not possible ; consequently, obstruction must arise at the points of replication, to avoid which accumulation and distension must be avoided, and rest secured, so as to regain the muscular power of the temporary palsied gut. Post-mortem examination in this condition would reveal nothing, as the slightest unavoidable disturbance of the parts in examination would remove the condition : even during treatment it might be corrected by a change in the patient's position, but probably only to recur at another point. If the course of the intestines were so arranged that from the stomach to the rectum they formed nearly a straight line, this form of obstruction could not occur. Any of my readers accustomed to manipulate rubber tubing will have noticed that a sharp bend of this tubing will arrest the flow of liquid, even though it is circulating (when arrested) under some degree of pressure ; this, however, I admit, but an imperfect simile. No form of obstruction exists of which its cause can not be accounted for on rational basis.

the third week is very difficult to attain. The constipation is a "consummation devoutly to be wished" rather than to be guarded against. As evidence of the opinions taught concerning the after treatment of hernia operation, and especially illustrating my preceding remarks, I append paragraph 10 of Prof. George H. B. McLeod's paper, entitled "Remarks on Intestinal Obstructions," with special reference to diagnosis, published in the "BRITISH MEDICAL JOURNAL" for December 2nd of this year. Those specially interested in the question here discussed will find in this very interesting and exhaustive paper the latest and most complete resume of the principles and treatment now in vogue, and to the refutation of which Dr. Brinton devoted much of his talent, energy, and time :—

"Paralysis of the bowel, after operation for strangulated hernia, either by the taxis or knife, is by no means uncommon, and constitutes one important source of danger from that affection. The bowel, after being long strangulated, does not recover its function, even though restored to its place in the abdomen. Passive obstruction occurs, and unless means are used to arouse the dormant action, the patient dies."

In the treatment of the intestine, set forth in this quotation, any attempt to rouse it would probably fail, and be the cause of prolonging the dormant state and of failure. The best method to restore action (it cannot be aroused) would be to practice an expectant method; or, if anything is done,

it should be to prolong rest, also to hinder accumulation in the gut, and its consequent over-distension with paralysis. This rule should also be our guide, even when inflammation has succeeded hernia operations. We have a parallel in inflammation and temporary distension of the bladder.

From Prof. McLeod's paper, and others read before the Edinburgh Medical Society, which can be seen in the "EDINBURGH MEDICAL JOURNAL," for 1873, 1868, 1866, it is only too evident that our medical brethren beyond the Tweed hold the principle, and practice the method so general in England and Ireland; and from what I have been able to glean, the practitioners of our art in both the old and new continent can reform their methods of treating these difficulties with advantage.

In the treatment of these casualities, so many diverse methods and remedies are tried, and strongly advised, that I am reminded of Sydenham's remarks,

"Where is the particular importance in just telling us that once, twice, or even oftener, this disease has yielded to this or that remedy? We are overwhelmed, as it is, with an infinite abundance of vaunted medicaments."

What I hope to see is such treatment of these diseases general among us, so that—

"By a long continuance and a frequent repetition of his (the physician's) experiments, he may lay down and prescribe for himself a "Methodus Medendi," from which, in the case of this or that disease, he need not deviate a single straw's breadth."—Sydenham.

When certain symptoms are present, gastrotomy is justifiable, and gives the patient one more chance; but in my opinion converting abdominal section into gastro-enterotomy would more than treble the chance of the patient's life being saved.

This double operation—Gastro-enterotomy—was first performed for intestinal obstruction by Renault, in the year 1772, and in that case with success. In latter times M. Nelaton appears to have performed this operation for intestinal obstruction, and so frequently that it may be inferred that he had a special preference for this double operation in cases of obstruction, when operative interference was called for; and this practice appears to have been very successful with him.

The advantages attending this operation are that (supposing the gut opened above the obstruction, or should the intestine be gangrenous, this would be the site for the formation of the artificial anus, and the intestines could then be immediately and certainly relieved of their contents and symptoms of obstruction) there need not be any special anxiety as to the after therapeutical treatment, nor would there be need for a strict surveillance of the dietary. Again, if the gut invagination is adherent, as probably it would be, it should not be disturbed;

or should a stricture, or any of the many pathological conditions known to occur be present, they can be ignored until nature has rectified the difficulty, which it would do in the majority of cases. Lastly, time is of no object; the gut can be allowed either one month or one year; and during that time the patient is free from suffering, and requires but ordinary nurse skill and attendance.

As to external applications in these cases, it has been my habit,* of late, to apply a single fold of linen steeped in cold water over the abdomen. I regret that it was not always my practice. In times past I have tortured, and, no doubt, added to the difficulties of recovery by external applications, such as linseed meal and mustard, cantharides cataplasms, hot water fomentations, linaments of supposed stimulating virtues, &c. Remedies, when applied in contiguity to the peritoneum, or any other serous sac, no matter for what complaint, are objectionable. This is the opinion forced on my reluctant mind.†

* Here the patient's feeling should be consulted. At times cold external applications after giving ease. Cease to do so or are objected to as painful. So with ice given by the mouth. After being much enjoyed by the sufferer it may begin to disagree, and should be discontinued.

† That which further drew my attention to the subject of counter irritation in general was, the teaching of the late Prof. Syme, that effectual

The next class of remedies are those applied or given with the intention either of exciting or arresting the peristaltic action. To the former class belongs galvanism, the various therapeutical remedies, designated purgatives and belladonna ; whilst opium and its various forms arrest peristaltic action. On the merits and correct mode of the administration of these, the patient's chance of recovery mainly depends. The frequency with which excitants of the intestines are used, even in these days, necessitates the consideration of their value. Galvanism has only been introduced in the treatment of this affection during late years ; consequently our predecessors were spared this injurious torture. In those cases in which its use was resorted to during the last ten years, there has been no evidence given that it was of any benefit. It is true that in some few cases its application was followed by recovery. In those cases, its use, in my

counter-irritation applied on the skin over the knee-joint produced irritation on the corresponding surface within the joint. Again, I noticed an attack of Herpes on any portion of the abdominal or thoracic wall induced an obstinate localized peritonitis or Pleuritis corresponding to the track of the Herpes. Most physicians must have noticed the obstinacy of the after-pain which often remains after the disappearance of the Herpetic eruption, while an attack of Herpes on the neck, arm, or lower limb, leaves no such after pain. This latter fact indicates to me that the after pain remaining after Herpes of the abdominal or thoracic region cannot be referred to nerve lesion, or it would follow Herpes of the head, neck, arm, or lower limb.

opinion, failed to thwart recovery, as the patient's powers of endurance and tenacity were more than the injurious galvanic stimulation of the intestine could wear out. Galvanism, when applied so as to effect the intestinal canal becomes a mode of purgation. And the use of purgatives, in these difficulties, I can only designate as the "main force" treatment, and to me it would be quite as reasonable if immediately after a case of railway tunnel accident, the authorities in charge of the "line" requisitioned the aid of an artillery corps, armed with the "Woolwich Infant," to clear the debris; with the effect, I would expect, of injuring the tunnel more than effecting a clearance of a passage for traffic. Neither agument nor records of experience give any ground of justification for the use of purgatives at any period during the treatment of these lesions. The records of cases treated during this century unmistakably show, first, the high mortality attending intestinal obstructions; second, that persistant purgation was the usual method of treatment and the principal cause of this extreme fatality. And purgation appears generally to have been persisted in upon no other grounds than that of "symptomatic treatment,"* i.e., inasmuch as consti-

* Dr. Brinton, "LANCET," April 11th, 1863, refers to the purgative method as "grossest malprixes."

pation was present, a purgative was supposed to be indicated. As a practical illustration of the evil of prescribing purgatives, I subjoin a case of intestinal obstruction occurring in my own practice :—

During the latter part of 1875, a Shetland sailor called, requesting me to prescribe an aperient to relieve some discomfort he felt in his bowels. He had had already a black draught from a druggist. I neglected to examine him, and wrote a prescription for a draught of Deco ; Aloes, Co. This was in the morning. In the evening of the same day, I was sent for to Duncan Street, and found my morning visitor in great pain—vomiting frequently, abdomen tender and distended, indicating obstruction. I at once commenced the opium treatment, and was able to keep in abeyance pain, partially arrest vomiting, and prolong the constipation to the fourth week, when the intestines resumed their natural functions; and in the sixth week he went to sea. Had I repeated the purgative once or twice after my first careless prescribing, this man would, in all probability, have succumbed to the treatment before the end of the first week. This opinion is based on the serious symptoms so rapidly developed by the purgatives. His case was, as far as I was able to diagnose it, one of enteritis. The prescribing of an aperient, however mild at the commence-

ment, may do so much harm that the practitioner may fail subsequently to undo it; and as a general diagnosis is so easy at an early period, there is no explanation for this mistake except omission of duty on the part of the consulted, as in this case.

In the narcotic class of therapeutical remedies, three only—belladonna, tobacco and opium,—merit notice. The two first mentioned are nearly similar in therapeutical action on the intestines, but as tobacco is seldom prescribed, belladonna only will be considered, especially as Dr. Brinton has recorded one case in which it appeared to him to be beneficial. It is with extreme reluctance that I again venture to differ with so able and painstaking an observer as to the value of belladonna in these lesions. My conclusions with regard to the actions of both belladonna and opium, either separately or combined, I have arrived at after experiments on the horse, rabbit, and man; and though they are not quite satisfactory even to myself, have nevertheless, given me sufficient basis for guidance to their therapeutical value. And where I have applied this knowledge in clinical practice, the results have confirmed many of the deductions already gained from experiments. The actions here attributed to belladonna and opium are sometimes at variance with what has been assigned to them by Dr. Harley,

whose careful and extensive record of experiments, published in his volume on the Vegetable Neurotics* I perused some years ago; but at that time failed to coincide with some of his deductions. When belladonna is given in these lesions, it is usual to justify the practice by asserting that it may relax muscular spasm. Disbelieving, as I do, in the existence of spasms in any conditions that give rise to obstruction, and believing further that if spasm existed, belladonna would intensify it rather than relax it, inasmuch as this drug is a stimulant to the muscular coat of the intestinal tract and to the whole sympathetic system; in fact, the most valuable and effective nerve stimulant we possess in the Pharmacopia (given in medical doses subcutaneously). This action, Dr. Harley's experiments conclusively convinced me of when I first perused his volume.

The action of belladonna, when applied to attain dilatation of the pupil, is in my opinion, to stimulate the sympathetic; and as the radiating muscle of the iris is supposed to be specially under the control of the sympathetic, it calls into action the radiating muscle more than the circular one, and consequently we have dilatation of the pupils. In the same way,

* This volume instructed me on the value of belladonna as a potent stimulant, and those who may be interested in the actions of remedies daily prescribed will find in Dr. Harley's volume very valuable information.

I believe, belladonna has a stimulating action on the muscular fibres of the intestinal tract, and especially so on the longitudinal ones, under the control of the sympathetic, while the circular ones are supposed to be more under the control of the spinal system ; consequently, this drug in gut obstruction would increase the frequency of vomiting, inasmuch as the stimulation would be developed in that portion only of the intestinal tract that is free from lesion ; the excitement of peristalsis in which would thwart any efficient rest (so much needed) at the situation of casuality where the natural function is suspended, and cannot possibly respond to any form of stimulation.*

It may be asked what explanation can be given of the recorded observations of Dr. Brinton, of its undoubted efficacy in relieving pain in one of his

* Bretoneau, Trousseau, and Niemyer refer to belladonna, and strengthen my view of its action. The latter, page 555, vol. i, says :—"Unfortunately I cannot at present distinguish the case of habitual constipation when belladonna is indicated from those in which it is not. It is to be hoped that future observations will determine the cases proper for the use of this remedy, which is so excellent in some forms of constipation." However, to discuss its value in the various forms of so-called habitual constipation would be foreign to the subject at present under consideration, and as it is of importance, that some amount of liquid should accumulate to render down in consistant the fæces, and fit them to pass early through the diminished calibre of the gut. As, for instance, when the calibre of the gut has been diminished to $\frac{1}{8}$ of an inch in diameter, it would require the consistency of the gut contents to be reduced more than if it was only $\frac{1}{2}$ inch in diameter.

reference cases, page 110 of his volume on "Intestinal Obstructions." This case is also more fully reported in the "LANCET," for April 11th, 186, from which report it is very apparent that Dr. Brinton had no definite knowledge as to what the action of belladonna—physiologically or therapeutically is, as he refers to tobacco and belladonna, and their actions on the—

"Muscular tissues, which they cause to relax."

Afterwards he expresses his belief that belladonna neutralized the constipative effect of opium; consequently, I hold, it must excite peristaltic action of the gut, and not relax it, which would cause obstruction, as the contents of the gut are propelled by the contraction of the two arrangements of muscular fibres, not by relaxation.

The explanation of the supposed efficacy of belladonna in Dr. Brinton's reported cases is very apparent to myself, viz., that it had no effect at all, for he never gave the patient enough to develope any therapeutical effect; as on reference to the "LANCET" report I find that at the commencement of treatment a very inadequate dose of opium was given, but at a later period a more liberal use was made of opium, and with which was combined a fractional dose of belladonna; yet to the latter was attributed the beneficial result that followed. I feel certain that the belladonna in this case had no effect,

for it was given in the proportion of one-sixth of a grain of belladonna to two grains of opium, equal to 1 belladonna to 12 opium, and 1 belladonna to 9 opium, or one-third of a grain of belladonna to three grains of opium, the proportion Dr. Brinton mentions in this article. After careful consideration of Dr. Harley's experiments, and in particular of the crucial and careful observations of one who was always so exact in his experiments, the late Professor Bennett, as recorded in his report on the "Antagonism of Medicines," and of my own experimental and clinical observations, I am forced to the conclusion, that the administration of belladonna is contra indicated in all of the varieties of lesions considered in this paper. When referring to belladonna as a stimulant of the intestinal tract, I refer to the healthy portion, as its functions must be in abeyance at the place of obstruction. It has been the custom with many to administer a combination of opium and belladonna. These two remedies are, in my mind, in some degree antagonistic. *From Professor Bennett's

* Professor Bennett's report on the antagonism of remedies clearly shows that their effect on the pupil of the eye is a very certain indication of their physiological action, when given in non-toxic doses. Again, the mode of death, when given in toxic doses, is another indication of their physiological action, as he records some of the animals experimented upon as dying, with

report it is apparent that a dose of belladonna will partially neutralise a corresponding dose of opium. I can better explain my meaning by supposing belladonna to be represented by S_{st} (sympathetic stimulant), and opium by $S^{sed.}$ CS^{sed} (cerebro-spinal and sympathetic sedative), thus a dose of $S^{st.}$ i.e., belladonna, will only neutralize that action of a dose of opium represented by $S^{sed.}$ and is wholly inoperative as an antagonist to that effect of opium represented by CS^{sed}; consequently had belladonna been a stimulant of cerebro-spinal system as well as the sympathetic, it would in proportionate combination exactly neutralize the effect of a toxic dose of opium. I hold the correct antagonistic proportionate dose of atropia and morphia to be about 1 of atropia to 5 of morphia.†

It is often asserted, that the combining of belladonna and opium is so far beneficial that the vomiting, so often resulting from the administration

symptoms of convulsions predominating, while others died from symptoms mainly tetanic, just as the poison happened to have a stimulative or sedative action on either the sympathetic or cerebro-spinal system; indeed, the reader can, by noting the action of each remedy on the pupil and the mode of death, predict the consculsion, that appear in the statistical portion of his text, and also correct a few slight innaccuracies of deduction.

† I note that in the experiments of Dr. Harley on the antagonistic effect of atropia and morphia in no one recorded experiment was the atropia in sufficient dose to fairly test its antidotal power.

of an opiate, is thus avoided. This is very probable, inasmuch as such combination would be nearly neutral, if we except very large medicinal or toxic doses of opium.

The next remedy to be considered is opium. This, when correctly and opportunely administered, is as certain, safe, pleasant, and successful in its action as all the previously discussed drugs and modes are uncertain, unsafe, painful, and disastrous. As with belladonna, the physiological action of opium on the pupil of the eye is some guide to us as to its action on other muscles of the non-striped class. The pupil is usually contracted, when influenced by this drug. This I explain on the supposition of its special and paralysing effect on the sympathetic; consequently, the radiating muscle of the iris under the special control of the sympathetic is paralysed in a greater degree than the circular one. Thus we have a contraction of the pupil. On this view of its physiological action, its effect on the intestinal canal would be to paralyse longitudinal fibres more than the circular ones. When opium is given with the intention to benefit a case of intestinal lesion, the benefit that may accrue to the patient arises from its action on the normal portion only of the canal, by as much as possible suspending peristalsis; i.e., maintaining

rest of the part to enable it to progress towards resolution of the local cause of obstruction.

Opium, to ensure its action appropriately to the treatment of these difficulties, must be injected under the skin, commencing with one-sixth of a grain of morphia for an adult, and gradually increasing it, until its sedative effect is produced, and not repeated at fixed periods, but given when, either from information received, or personal enquiry, the physician finds its action, previously apparent, gone, or wearing off.*

The injection should be given at gradually extended intervals after apparent resolution of the difficulty. For subcutaneous injection, I prefer

* Through the kindness of my friend, Dr. Wallace, I read as soon as published vol. vii. of the "Cyclopædia of Medicine," by Dr. H. Von Ziemssen, the article on Constrictions, Occlusions and Displacements of the Intestines, which is by Leichtenstern, with comments by the Editor. In this monogram is to be found a very full, able, and systematic description of the etiology, diagnosis, prognosis, and treatment; and there appears a decided progress towards the opium method, which he advocates, but also advises enemas, but of water only. A perusal of page 649, convinced me that the writers have no knowledge of the opium treatment in these difficulties, when practised exclusive of all other modes of interference. Their dread of prolonged constipation has induced a policy of treatment to be advised that must undo any benefit arising from the opiate; in fact, it is very apparent that while opinion is advised, Dr. H. Von Ziemssen has no knowledge of its effect or efficacy, when its use is prolonged, uninterruptedly, without interference with other remedies therepeutical or mechanical.

Lig. Morph ; Sulph., as it remains long unchanged if kept in stock, and is not so painful as the other combinations of morphia. Its advantages were brought to my notice by my friend, Dr. Adam, of this town, who also coincides with my views of treatment of the difficulties here considered, and in conjunction with whom I have had, on many occasions, the pleasure and instruction consequent on a comparison of our mutual practice.

Opium, in the form of morphia, when injected under the skin, in adequate and opportunely repeated doses, in these cases, has the therapeutical effect ; first, of diminishing the frequency of vomiting by arresting peristalsis, thus diminishing thirst, and also permitting of the solid contents of the gut becoming thoroughly reduced in consistence, by admixture with the thus longer retained fluids. This result explains again how the opiate acts as an aperient ; for as soon as the consistency has been sufficiently reduced, it may pass through the paralysed or narrowed gut long before the gut has become of normal calibre or function. Second, it eases pain, and consequently keeps in abeyance constitutional sympathetic irritation. Third, it makes the partial but prolonged abstinence from food more tolerable.

Fourth, as it arrests peristaltic action along the whole length of intestine, there are grounds for believing that as soon as the contents of the gut above the obstruction have been reduced to a consistency fit to pass through the obstructed point, then the contents below are in many cases subjected to the same process of mechanical reduction of consistency. This explains to me why, in these cases, under the opium treatment the patient so frequently passes per rectum with pultaceous fæces.* On the other hand, given by the mouth it may at times induce sleeplessness, with even delirium, or persistent and prolonged vomiting. I have observed, on many occasions, that a dose of morphia solution administered by the mouth induces obstinate vomiting, yet a corresponding dose given under the skin of the identically same solution arrested the vomit in the course of a few minutes. We know there are other remedies, some of which are either more uniform or more potent given under the skin, while others differ but slightly, either in character or effect or potency whether introduced into the system by skin,

* The patient may have relief of constipation ere recovery has occurred ; or, again, he may be well before relief of constipation, if any accumulation exists below the obstruction, as this has to be subjected to reduction of consistence, hence it is safe practice to prolong the treatment.

mouth, or rectum. The subcutaneous administration of opium, belladonna, digitalis, are more uniform and potent than when given by the mouth. I can testify from experience, that the three-sixteenth of a grain of morphia under the skin will equal one-fourth of a grain by the mouth; one twenty-fourth of a grain of atropine by the skin, is equal to one-eighth of a grain by the mouth; ten drops of digitalis tincture by the skin equals a dram by the mouth.

The recent investigations of Mr. Tuson, on the change of form that remedies may undergo in the alimentary canal justify me in supposing that in the administration of many of our remedies by the mouth, changes of combination and form take place; consequently physiological and therapeutical effects occur which the physician cannot foresee. The discovery, lately, of the form of opium termed apomorphia, and its strong emetic action, may explain the occurrence of vomiting after opium is given by the mouth. Again, other remedies appear uniform and efficient in their action whether given by the mouth or skin; as choral, strychnine, potass-bromide, &c.

The next consideration is the diet and drink of the patient. The diet should be limited in quantity,

and restricted as to quality, so as to prevent the introduction of an avoidable amount of excreta. But here the question arises whether the practice of this limited and restricted diet does not involve a serious amount of emaciation. In the first place it must be admitted that an avoidable degree of abstinence will involve some measure of emaciation; but it must be endured to secure the benefit arising from less excreta.* A still more potent cause of emaciation is pain. It would be a much easier task to emaciate a person by induced pain, which usually is accompanied by a loathing of food, rather than by a minimum of diet. It is wonderful how long a sufferer can tolerate even total abstinence of food when opium is given, which appears to allay the feeling of hunger. At the period of resolution, the opium not being given so frequently, ceases to keep the appetite in abeyance. I have known the case of a sufferer from acute enteritis

* Dr. Habershon in page 475 of his volume on "Diseases of the Abdomen," while insisting on the beneficial value of opium, restricted diet and so-called stimulants—brandy and wine, &c.; yet insists also on the equally beneficial value of medicated enemata. "In this way warm water, soap, castor oil or turpentine." This reminds me of certain theologians who whilst they stoutly deny the canonicity of certain books generally do battle the more earnestly for the remainder. The evidence contained in Dr. Habershon's reported case, shew that whatever reliance he places on opium in these affections, the enemas simple or medicated, which he recommends, more than negatives the benefit to be derived from the use of opium.

who retained nothing but a drink of iced water, frequently repeated in small quantities for 49 days, and yet recovered at the end of that long period of abstinence not much emaciated, though previous to this complication the patient had suffered from another painful affection.

* Of course it is not advisable, nor seldom necessary to prescribe total abstinence. Art supplies us with prepared food, the administration of which adds but slightly to the difficulties which the physician has to contend with. I usually restrict the patient to the following articles of diet—arrow-root, sago, linseed tea, extract of beef, filtered decoction of peas, rice water; all these being prepared with water given cold—milk being avoided. These should be administered in half-ounce doses every one or two hours. The drink should be confined to iced water, given in ounce doses every two or three hours; and as the patient takes but a mini-

* During the period I had the benefit and pleasure of attending the clinic of the late Professor Bennett, he expressed his disbelief in the existence of any therapeutical tonic. To this scepticism I incline also; food, well digested and assimilated, appears to me to be the only undoubted tonic; substitutes for the food are continually sought for even now, as the elixir vitæ in times past. It is not long ago since a learned Professor announced the discovery of a remedy that permitted exercise, with no loss of muscular power (force without fuel) even during active exercise. This discovery, I predict, will soon be numbered among the collections of unsolved riddles, such as the elixir vitæ, transmutation of metals, perpetual motion, &c.

mum of nourishment, it is well to economise carefully the natural heat by applying a warm bottle to the feet, and a blanket across the chest, whilst the abdomen should be exposed if practicable.

However valuable opium may be in intestinal casualities, a restricted diet is (if food can be taken) of equal importance. It has been during the last thirty years—despite the demonstrations of physiological chemists as to the place and value of so-called stimulants,—the prevailing fashion in nearly all diseases to urge the use of what are mis-termed stimulants, as brandy, wine, ammonia, &c.; the belief in their stimulating properties being based upon no better premises than the fact that the one is pungent to drink, and the other volatile and an irritant to the nostril. With regard to food, the sufferer is frequently pressed to secure quantity as well as quality, as though the former—not digestion or assimilation—were all important. It is often forgotten that the patient is suffering from disease, not from abstinence; that which has to be considered is, what amount can the patient's chylopoetic viscera prepare and assimilate? else the sufferer may actually go through a process of starvation while taking a quantity that would benefit him had he been in health.

As evidence of the prevailing mode of dieting

patients after important operations in the abdomen, an instructive case occurs in the "LANCET," of 1876, where is reported a case of abdominal section.* In this case all the operative details being excellently well managed, with, in my opinion, one exception, viz., the diet and therapeutics, which was of primary importance to success,

Yet consisted of milk, "milk gruel," or "well-boiled oatmeal gruel and sugar;" third day, tea and toast; seventh day, meat and vegetables and pudding; the fifteenth day, a dose of castor oil, which was given "in order to satisfy us that the intestine was permeable.

And again, in the "MEDICAL TIMES AND GAZETTE," of the same week, a case of Intestinal Obstruction is reported, where milk was given freely from the beginning; and about the tenth day, bread and milk, which forcibly reminded me of the apple dumplings allowed in the case reported in the "MEDICAL PHYSICAL JOURNAL," of 1824.

A copy of the "BRITISH MEDICAL JOURNAL," of this year, supplies us with an example of dietary which I think is a great advance in forms of diet, frequently reported as allowed to patients suffering

* This case was treated under the ægis of a new speciality—a "Temperance Hospital;" from which it may be gathered that intemperance in our national drink is an evil, while intemperance in food and purgatives is not; yet certainly the diet and purgative placed this patient in as great a danger, if not more, than an over dose of brandy would have done.

under intestinal difficulties; yet, great as is the improvement here advised, it is capable of still further reform.

The example I referred to is contained in a lecture delivered by a court physician when discussing Enteric Fever.

"In a case, now at the fourteenth day, there is looseness of the bowels. On examining the stool, I find a separate undigested curd of milk. This curd has acted as an irritant and induced the diarrhœa, therefore you must thin the milk, and replace it more or less by beef-tea. It has been too much the fashion to give much milk without due regard to its digestion. As remedies, you may give some starch with bismuth in enemata. At the next visit some hemorrhage was reported by the nurse. On inspection, it was found to be about half a pint of dark fluid blood. Now, the most important point is, that this patient does not sit up for any purpose. A case which occurred during my student days impressed me very much. He had had hemorrhage like this, but did not seem very bad; his pulse was 84; his mind clear; he was allowed to rise to the night-stool; the hemorrhage recurred, and ended fatally in a few minutes. A mesenteric artery had been opened. You must then, by position, take off the weight of the blood-column. Omit milk altogether, the curd might irritate; give beef-tea and arrow-root; a little softened bread; a little brandy, two drachms every three or four hours, to improve the nerve-tone; give him three grains of acetate of lead with acetic acid every four hours, and an opiate enema night and morning. Observe there is no great distension of abdomen, and there is no tremor. I conclude the ulceration is not deep. When tremor is disproportionate to other nerve-symptoms, it indicates more depth of ulceration. The patient did well."

This restriction in the quality of food is a great improvement on the diet too frequently allowed patients suffering from the intestinal lesion which accompanies enteric fever, and though the lesion

here is but a symptom of blood poisoning, yet as soon as it manifests itself, it should be treated as though it were originally one of intestinal inflammation, with this difference, that the beneficial effect of the opium is developed by the administration of much smaller doses. Regarding the defects of the diet advised in this lecture, viz., the softened bread, and thinned milk, they appear to me objectionable, and there is no occasion to use them so long as we have suitable varieties of food supplied to us by art which are beyond question. Again, the remedies here prescribed for this form of intestinal difficulty are open to some doubt as to their correctness, as for instance the "bismuth in enema," "opiate enema night and morning." Why this tickling of the rectum after the invention of Dr. Wood's subcutaneous syringe? and I should judge that the hœmostatic value of 3 grains of acetate of lead and acetic acid on 24 feet of gut would quite equal the tonic effect of brandy on the nerves.

The dietary and therapeutics insisted on by Sydenham, in his details of treatment for enteric fever, has not yet, in my opinion, been surpassed by any modern practitioner; his diet was more restricted as regards varieties, inasmuch as in his time, art had not supplied the many valuable forms of food now so general among us. The treatment

of the gut lesion, which occurs in enteric fever, is yet a disputed question among physicians, as can be seen by the perusal of the monthly periodical known as the "PRACTITIONER," for 1877, or the "DUBLIN JOURNAL OF MEDICAL SCIENCE," 1877.

In this is contained a paper read before the Medical Society of King and Queen's College of Physicians, Ireland, and written by a physician to a fever hospital. It is entitled "On the management of the bowels in enteric fevers." I append a condensed summary of it.

"It commences by deploring the "serious mishaps" that arise from a wrong use of therapeutics in this fever, and gives the opinion of Dr. Todd, "Restrain diarrhœa and hemorrhage in typoid fever, and when you have fairly locked up the bowels," keep them so, a patient will go for four, or six, days, or even longer without suffering inconvenience from the state of constipation."

* Certainly, this is what I have noticed and with benefit to the patient, and this is what Sydenham taught. It is perfectly safe though unnecessary at an early period to give a laxative (to drive the "peccant humours,") but lock up after, and you avoid, or will keep easily under control, by opium and a suitable diet, the usual intestinal difficulty.

* The late Professor Bennett, of Edinburgh, used to ironically explain the cause of the undiscriminating practice of purgation in fevers to arise "from a desire to have a clear field for future operations," which is certainly as reasonable an explanation of the cause as Sydenham's excuse, to remove "peccant humour."

The suitable diet is of importance, otherwise "locking up" by opium will not benefit the patient.

The writer strongly condemns the practice of giving purgatives, yet his method of treatment is "castor oil muzzled with opium;" diet—"chicken broth; then chicken; and, lastly, mutton "and milk." He also expresses the opinion "that the bowels should be more frequently moved than in health, and that the motion should be plentiful. He says, "I consider that the bowels may be moved with advantage to the patient four times in twenty-four hours," and "so long as any symptoms of distension or pain set in." If diarrhœa set in, boiled milk with or without lime water; if this does not succeed, acid sulph. Should this fail, opium is advised or lead and opium, and linseed poultices over abdomen, or turpentine and mustard stupes.

From the fact that the writer advises purgation "if any symptoms of distension or pain set in," it is only too apparent he has had no experience of the Sydenham or Todd method.

Distention and pain would indicate to me the necessity for a reverse mode of treatment; and as for the mustard and turpentine stupes, whatever they may effect if applied to other parts of the patient, their application to the abdomen is worse than useless.

This paper was the subject of discussion in the learned society, before the members of which it was read, yet of all those who joined in the debate that followed the reading, none dissented, the dread of purgation which they advised on the one hand, and an equal if not more fear of constipation, seemed the

prevailing expressed opinion. With small doses of opium, and a suitable diet, fit for intestinal casualities, the physician need have no anxiety if he should be so successful as to prolong the constipation for 14 days. Distension and pain, should it occur, simulates the progress to resolution, which is to be noticed in enteritis, i.e., the distension subsides gradually, and few days before the bowels are emptied by peristaltic action.

The reader will no doubt have noticed that some of the views set forth in this paper are speculative ; and though appearing to me as highly probable, yet further clinical observation may disprove some of them. But I hold that the method of treatment— a solely, undeviating, and prolonged course of opium—herein advocated, which reason and experience indicate as the correct course, will take its place as the standard in times to come. I do not claim any originality, as Dr. Sydenham has laid down the best method of treatment up to this date, and surmised the explanation of several symptoms occurring in others. These speculations were afterwards demonstrated by Dr. Brinton; indeed, the latter is short of nothing as regards the etiology, but his treatment is not consistent with his own discoveries He has, however, placed us in a position to rationalise and treat with confidence these

casualities so that they no longer

"Entail whole troops of remedies throughout all the stages of the ailment—remedies for the remedy rather than for the disease itself."

And though I have advocated a more persevering, undeviating, and prolonged a course of opium than Dr. Brinton did, yet I firmly believe that had he lived to this time, he would have counselled my apparently extreme advice, and he would have added to the facts he has given us.

There are comments in his volume (for instance the foot-note in page 120) which show that in the rationale of treatment he had not that complete confidence in his own method which it merited.* Again, the valuable addition to our armamentarium —Dr. Wood's subcutaneous syringe—had not come into general use in his time. Consequently, Dr. Brinton might not have always secured the intended effect of his remedies. We have no record that he ever used it.

* See also Summary, page 122, Intestinal Obstruction, by Dr. Brinton, where details inconsistant with his theoretical teachings are advised. Again, the cases given at the end of the volume as illustrations of the practice deduced from the demonstrations of Dr. Brinton; they represent an expectant method rather than an opium treatment, as the opium was given neither in dose sufficient, nor form that can be trustworthy.

I have appended but a few illustrative cases—they are those alone of which I have notes.

Case No. 1.—During the early part of this year I was called to assist in the treatment of a case of supposed intussusception. The gentleman in charge of the case told me that a fortnight previously the patient had, whilst at work, had a sudden action of the bowels followed soon after by a good deal of pain, to relieve which the medical attendant was called in; and he, attributing the cause to constipation, administered purgatives, enemas, &c., which, however, had given the patient no relief. When I examined him I found the abdomen very tender on pressure, especially in the right hypogastric region, with moderate distension and frequent vomiting, which had become slightly stercoraceous. I advised the discontinuance of all purgatives and all interference by the use of enemata, and ordered cold cloths to the bowels, elevation of the pelvis, and morphia administered subcutaneously night and morning. This treatment had the effect of diminishing the pain and partially arresting the vomiting, which now only occurred with a notable regularity about once in twelve hours. Yet the distension continuing much as before, the morphia was continued, sometimes twice, and at others three times a day, subcutaneously for the seven days succeeding my first consultation, with the effect of greatly relieving the patient from pain and the partial arrest of the vomiting; but there was no diminution of the distension, nor was the rapidity of the pulse much diminished. About the eleventh day after my introduction to the case the morphia dose had to be much increased, but did not completely ease the pain, and diminish the rapidity of pulse, whilst the distension was slightly increased. On the 12th day of my co-operation in the treatment the patient's condition appeared very precarious, and indicated to my mind that if in the course of a few hours the symptoms did not improve, it would be necessary to practice some operative interference, lest perchance this might not be a case of intussusception or enteritis, but rather, one of the various forms not usually judged amenable to therapeutical remedies. This opinion was based on the fact that the morphia appeared not to have sufficient control over the pain, or the pulse. However, to my delight, when we met in consultation the next day, I was informed that the patient had passed frequent and copious semi-liquid stools, with great relief to all the symptoms. But he was still continued under diminished doses of morphia, and treated for a time as though the obstruction still existed, and ultimately recovered.

To myself, the question at what period or what symptoms indicate that operative interference should had recourse to, has always been a very difficult one to decide. At the present time, I would not expect and do not think that it would be indicated (under opium treatment exclusively) earlier than about the seventh to the twelfth day ; when, should symptoms of urgency appear, Gastro-enterotomy should be performed. At my last consultation in this case, I thought that very probably this case was neither enteritis nor intussusception ; but twelve hours delay to await the symptoms, which I judge sufficient for to justify operating, corrected my diagnosis, and probably saved the patient's life.

Case No. 2.—On the 7th of June, 1874, I was called to attend Mr. H—— H——, 55 years of age. I found him suffering from slight tenderness of the bowels, with thirst, and an irritable pulse, distended abdomen, &c., and as he had been under my care for three previous attacks of enteritis, I concluded that in all probability this was a recurrence of the old complaint. I administered a ¼ of a grain of morphia subcutaneously night and morning during the first four days, but the distension increased, and he vomited from once to twice daily during the first fourteen days. When the distension became extreme, I then trocared the abdomen on the most prominent point in the right hyprogastric region. This operation was repeated every other day on six occasions, with the effect at the time of releasing a great quantity of gas, and totally collapsing the abdomen. I also raised the pelvis, and during the whole time of treatment restricted the patient's diet. A motion of the bowels took place on the 29th day. They continued acting for three days. Yet I continued the treatment for some time after. In the course of a fortnight after which the patient was so far recovered that he went to attend to his business, contrary to my advice; and he continued apparently well,

though very feeble, up to the 19th of September, when his previous symptoms returned. The morphia treatment was resumed and continued until the 2nd of November. During this period, the bowels rapidly became distended, and the distension, which was always caused by gas, was relieved by trocaring, which was performed on some occasions as often as four and five times a day, in all the trocar was inserted on 40 occasions. Relief to the bowels took place on the 22nd day of treatment, but with no subsequent action, and on the 2nd of November the patient succumbed.

This gentleman had been successfully treated for four previous attacks :—two in 1871, one in February, 1873, and one in 1874; in all five attacks, which includes the last fatal one. I was unable to decide the immediate cause of death, as I failed to gain consent for a post-mortem examination. The treatment was the same in all the attacks.

Case No. 3.—On the 10th of June, 1876, I was called to attend W—— H——, 49 years of age. I found him suffering from tenderness over the abdomen, with slight distension, accompanied by vomiting, a furred tongue, thirst, and an irritable pulse. His statement was that he had been taken ill the previous afternoon with intense pain in the abdomen, and as the pain increased and the vomiting continued I had been sent for. I at once administered a dose of morphia subcutaneously ; applied cold to the abdomen, and restricted the patient's diet, ordering him cold drink, limited in quantity. On visiting him the next day, 11th of June, the vomiting was not so frequent, but the other symptoms continued though slightly abated. I repeated the injections of morphia. On the 12th June, I found the general symptoms had much improved. I continued the injections. On the 13th, I found the symptoms continuing to improve and the distension and tenderness very perceptibly diminished. On the 14th, the vomiting had ceased, and the patient suffered but slight thirst. On the 13th, all the primary symptoms were absent, and I then prescribed a mixture of tincture of opium, a drachm in half a pint bottle of water, and ordered a table spoonful to be taken every

three hours. This he continued to take during the subsequent 8 days. On the 23rd June, the bowels acted copiously. After this the opium was continued for a week, his diet restricted, when his recovery was completed.

This I judged to be a case of enteritis; probably, total abstinence from food, and limiting the patient to cold water to drink, and the omission of medicine, would have been sufficient in this case, with strict confinement to the horizontal position while in bed.

Case No. 4.—On the 31st of May, 1872, I was called to attend W—— G——, aged 40 years. This man had fallen from the mast head of a ship. I visited him in the evening of the same day and found him suffering from a severe injury of the spine, which had paralysed the lower extremities, and causing also retention of urine, which had to be removed twice a day for several subsequent weeks. On the 3rd of June, the patient began to be disturbed by frequent attacks of vomiting, the bowels became tender and distended, and the tongue dry. I judged these symptoms to arise from traumatic enteritis, and I commenced at the outset to administer morphia subcutaneously night and morning. The distension in this case gradually increased up to the 27th day after the accident, when spontaneous action of the bowels took place; and was followed by a slight diarrhœa, lasting some days, though the opium was continued.

This patient recovered perfectly as regards the enteric complaint, but was two years before he began to regain power in the paralysed parts. The distension in this case was enormous, yet not at that time possessing sufficient confidence in the practice of trocaring the abdomen under such a condition I did not venture to practise it. This case reminds me of another one of traumatic enteritis, in which

here was enormous distension, which I saw about 14 years ago. I was called to attend a railway porter, a stout middle-aged man, who had been crushed between the buffers of two railway carriages, the force being applied to the abdomen, to the right, just above the umbilicus, smashing his watch, which was in his waistcoat pocket. The treatment I practised was opium, restricted diet, &c., and so averted the threatened symptoms of traumatic enteritis; and in the course of two weeks he was apparently well, and declined any further treatment. I cautioned him, but in vain, he commenced to feed himself with the usual routine articles of diet, and not being pleased with my previous warning, and thinking my restrictures an unnecessary curtailment of his liberty, he requested me not to visit him again; however, I was again sent for, but not until intestinal obstruction, with abdominal distension, had recurred, with sloughing of the abdominal wall corresponding to the position of the watch crushed, where I also noticed the intestine protruding and sloughed, and discharging its contents externally. This case was fatal through the want of ten or fourteen days further restriction from food, and in all probability the inflammation involved some portion of the colon, and the accumulation occurred in the cecum

with hyperdistension and gangrene of a portion of the colon. Had the surgeon in charge of the case during the second attack used the trocar, this mishap might probably have been avoided.

Case No. 5.—On the 11th of March, 1876, I was called to J——W——, 25 years of age, residing at Liverpool.—I found that the patient had been rather ill on the 7th of March, with an attack of what he and his friends thought was simply a bilious attack. For the three subsequent days they administered purgatives, which had only aggravated his symptoms. When I visited him I found slight distension and tenderness, and constant vomiting. I administered a dose of morphia subcutaneously, which had the effect of diminishing the vomiting, pain, and distension; and I ordered a mixture of tincture of opium, one drachm, in half a pint of water, a table spoonful to be taken every two hours. On visiting him the third day the symptoms were so far improved that the patient continued to take the mixture in diminished quantity, and rapidly recovered, having a spontaneous action of the bowels on the tenth day.—(This I thought was a mild case of enteritis.)

Case No. 6.—On the 15th December, 1874, I was called to attend a club patient of mine, Mr. P——M——, 32 years of age, residing at R——Street. I found him suffering from intense pain in the abdomen, attended with constant vomiting, which was stercoraceous in character. He had been sick some days, but judging that it arose from simple constipation he had used purgatives; consequently, I found the symptoms much aggravated when called to attend him. I immediately injected a $\frac{1}{4}$ of a grain of morphia beneath his skin, and continued to do so twice daily, for three days, with the effect of diminishing the pain and decreasing the vomiting; but the distension increased. On the 4th day, I commenced to inject under the skin a $\frac{1}{2}$ of a grain of morphia four times a day, and on the 6th day, finding the distension still increased, he was tapped with an ordinary bladder trocar with the effect of relieving him of a good deal of gas which collapsed the abdomen. On the ninth day the trocaring was repeated, the morphia being still continued. The use of the trocar was repeated at intervals of three days, and on four occasions in all. On the twenty-first day a spontaneous action of the bowels took place, the patient being much relieved; yet the opium treatment was continued for some days, and the symptoms gradually resolved, and the patient recovered.

During the treatment of this case, (the patient being an occupant of one of those filthy dens with which Liverpool abounds,) necessity compelled us to be satisfied with what nourishment was contained in a little cold water, in which a portion of Leibeig's extract of meat had been dissolved. This was the only nourishment the patient had during the whole time, and he consumed four one ounce jars of this commodity; and as an example of the knowledge of dietetics possessed by this man's partner, no sooner were the symptoms relieved than she prepared him a cabbage as a delicacy.

This is instructive as showing how well the patient progressed with all the disadvantages arising from primary purgation, filth, bad nurse attendance, vitiated atmosphere, and the absence of anything approaching comfort, beyond a hard bed, and a shed over head; but he had two great advantages, a very slight amount of nutriment was administered to complicate his case, and free administration of opium, which also assuaged his sense of hunger. These two latter assisted in bringing about resolution, which occurred at least one week prior to my expectation.

Case No. 7.—Mr. C—— of D——Street, consulted me on the 1st of August last, suffering from an attack of diarrhœa. I prescribed tincture of opium, muriate of ammonia, and chloric ether, and he got apparently better in the course of 7 or 8 days. On the 10th of August I was sent for, and found him suffering from severe pain in the abdomen, accompanied by vomiting, thirst, with tongue dry and furred, pulse 9 in 5 seconds. I injected a ¼ of a grain of morphia under the skin night and morning. Advised cold drinks, beef tea, arrowroot and sago, made with water and linseed tea; his diet to be confined to these in an ounce dose, given every one or two hours, and cold water as a drink given frequently, but in small quantities. On the second day I found less tenderness of the abdomen, but more distension, diminished thirst, vomited once of a bilious character, pulse 8 in 5 seconds, continued the morphia subcutaneous injections night and morning. On the third and fourth days, more distension and slight thirst, pulse seven in five seconds, vomited once in thirty-six hours, not much pain. On the fifth day, vomited twice, pulse eight in five seconds increase of thirst, tongue slightly furred, little more tenderness, distension not increased; the dose of morphia was increased to ½ a grain under the skin three times a day. Sixth day, vomited only once in twenty-four hours; pulse seven in five seconds; less thirst; tongue clean and moist; no pain; distension not any less. This condition remained unexchanged during the seventh, eighth, ninth and tenth days of treatment. On the seventh day, the lower legs of the bed were raised a foot to elevate the pelvis, ease distension, and facilitate vomiting. On the eleventh day, vomited twice; the vomit being stercoraceous in character. Half a grain of morphia was given under the skin four times during this day; the pulse on this occasion being eight in five seconds, and slight increase of thirst. On the twelfth day he had diminished thirst, and had only vomited once in forty hours, the vomit was stercoraceous in character. Morphia was given under the skin three times this day. The condition and treatment continued the same on three following days. On the sixteenth day, though the distension was not so extreme as to make the use of the trocar urgently necessary, he was trocared with a No. 3 size trocar; a small volume of flatus escaped; no perceptible effect upon the abdominal distension; continued the morphia as usual, the vomiting being absent at this time for thirty-six hours. On the eighteenth day, vomited once, moist tongue, pulse six in five seconds, temperature ninety-nine and a half. On the twentieth day, accompanied by my friend Mr. Rushton

Parker, the abdomen was trocared again ; about five ounces of fluid escaped and some gas. It had slight effect upon the distension, which was, however, not very extreme. On the twenty-first day, the vomit ceased to be stercoraceous, becoming rather serous in character, and occurring once in twenty hours. During the twenty-second, twenty-third and twenty-fourth days, the pulse varied during these days from six to seven in five seconds, temperature ninety-nine to ninety-nine-and-a-half. September 3rd, the 25th day, action of the bowels occurred, and a motion of about 1 lb. of pultaceous fœces was passed, distension of the abdomen perceptibly diminished ; pulse seven in five seconds, tongue moist, very slight thirst, slight pain. On the twenty-sixth day there was no change, the morphia treatment was intermitted for a day. On the twenty-seventh day only ½ a grain of morphia administered once during the day. On the twenty-eighth day increase of the distension, with a good deal of pain, pulse became small, and nine in five seconds ; administered ½ a grain of morphia three times a day. On the evening of this day, assisted by Mr. Rushton Parker, I trocared the abdomen, and removed a quart of stercoraceous fluid which diminished the distension, and after so doing administered a grain of morphia under the skin. About two hours after, the patient vomited fluid, not stercoraceous, and passed per rectum in one hour after the last vomit fully three quarts of pultaceous stool. In three hours after this evacuation, I was summoned to see him at two a.m. on the twenty-ninth day, and found him very prostrate, pulse ten in five seconds, abdomen perfectly flaccid and hollow, no appearance characteristic of collapse, but great pain. I administered ½ a grain of morphia per mouth, as he expressed himself in much pain. The pain, I was afterwards informed by his attendant continued up to 8 a.m., when he died.

My friend Mr. Rushton Parker did me the favour of making a post-mortem examination of the abdomen.

"Body spare, belly flat. Whole surface of peritoneum shining, and injected, except at contiguous margins of the intestines, which adhere by the medium of a little puruloid lymph. In the belly, about a pint of thin, turbid fluid, coils of small intestine occupy the entire front of the abdominal interior and lie chiefly transversely. A

double coil lies above and in front of the omentum, the tip of which occupies the internal inguinal aperture, whence it is easily withdrawn. The whole of the colon is collapsed ; the rectum is little distended. The small intestine is everywhere slightly distended with fluid, and its walls moderately thickened. At the ileo-cœcal portion is a hard nodule, consisting of an annular thickening of the bowel about ¾ inch long, and on being slit, invaginatiou of ileum. The layers of bowel are firmly united together by fibrous tissue, which completely seals over and smooths the peritoneal part of the fold, one half of the circumference. The thickened portion has a canal through it, about large enough to hold a cedar pencil, and here the mucous membrane is quite red, and covered with a little fœcal matter. No trace of the vermiform appendix remains, nor can the ileo-coecal valve, or anything representing it, be recognized. Left kidney was completely atrophied, right one much enlarged but healthy ; no examination was made of the thoracic viscera."

From which it may be noticed that the part intussuscepted was patent and involved the ileo-cœcal valve ; there was no trace of the punctures of the trocar. The prior history of this case throws some light on the real cause of death. He had been my patient for nearly twelve years ; first, fractured leg, then syphilis, rheumatic fever, erysipelas of leg, ulceration of leg, and frequent ailments of short duration; and had been at one period irregular in his habit of living. All these antecedent complaints had depreciated his store of vitality, so much that he had not in store sufficient stamina to outlive the test this serious lesion involved. Dr. Brinton, in "LANCET," vol. i, 1863, gives a case typical of this one, where the patient's cachexia solved the cause of death. My case also

was one in which the sufferer was much enervated from years of previous occasional ills. In the treatment of this case I have thought since that the omission of the morphia on the 26th day was not advisable. Again, when summoned to see him on the 29th day, at 2 a.m., it would have been better practice had I given the morphia subcutaneously, as from the evidence of the attendant I afterwards learned it had no effect by the mouth; but noticing the marked remission of all the symptoms of obstruction, this fact induced me to relax some of my vigilance, and to give the morphia by the mouth, a method I am certain, is frequently useless. Again, on the 25th day after the first action of the bowels, I placed the patient horizontally, which I fear induced greater mechanical pressure at too early a period; this I judged from the symptoms which followed at the time, and consequently restored him to the inclined position on the 26th day, with marked improvement, so that I was induced to omit the morphia that day. I prognosed that this was a case of intussusception;* and the post-mortem confirmed my diagnosis, which might be more strictly expressed as a surmise rather

* Though intussusception is usually followed by some degree of inflammation and adhesion at the primary portion of the invagination, yet intussusception has occurred without any adhesion at the primary portion of the invagination. This latter condition of invagination is extremely rare, and requires

than a diagnosis; and those only, in my opinion, who have had frequent opportunities of watching these cases, know the uncertainty, and are alone able to guess the nature of the obstruction. It appears to me that experience only can guide the practitioner to indicate which of the many causes of obstruction that may exist, the symptoms attached to the varieties of occlusions being so much alike, and differing but slightly, and palpable only to the accustomed observer.

Case No. 8.—On December 16th, last year, at midnight, I was requested to go on board a Swedish vessel, in the Salthouse dock to render professional assistance to one of the crew. On boarding her, I found the steward in great pain. His previous history was, that while "straining at stool," he felt a sudden pain in the right iliac region, no diarrhœa, thirst, slight acceleration of pulse. The captain, on the occurrence of the pain, had given him a dose of Epsom Salts. This he vomited immediately. My examination of the patient was made in about one hour after the accession of the pain. I at once injected under the skin a $\frac{1}{4}$ grain dose of morphia, advised abstinence from all food, and allowed a limited quantity of drink, frequently repeated when required by the patient. Next day, at 9 a.m. my assistant visited him, with instructions that if in pain, to inject $\frac{1}{8}$ of a grain of morphia. This dose was given, and at 4 p.m. visited him myself, and was informed that he had vomited twice (but slight in quantity) during the

no exceptional treatment, even if it were possible to diagnose it. Consequently, the practice of injections of water per rectum, or inflation with air or gas would probably be a "kill or cure" experiment. A recent number of the "STUDENT'S JOURNAL," vol. v., page 44, reports a case that forcibly illustrates the danger of interference per rectum after the first few hours. In that case, hydrostatic pressure was employed, the pressure used being that of a column of water four feet high—perforation of intestine resulted.

night. The iliac region was still tender, slight thirst, pulse accelerated. I now again injected a ¼ of a grain of morphia under the skin, previous details as regards diet and drink to be adhered to. Third day visited and found that he had vomited once only since my last visit, all the other symptoms being the same as those present on the second day. Now advised removal to my hospital, but before removal injected a ¼ grain of morphia, 2 p.m. In the evening visited him at the hospital, and found the tongue more furred, no increase of distension, tenderness still present, on pressure of the iliac region, temperature 100, pulse as before, had vomited once this evening repeated ½ a grain of morphia. On the fourth day, at 9 p.m. injected ½ a grain of morphia, symptoms present during this day, pulse no change, no vomit, tongue furred, slight tenderness and distension, less than had hitherto existed, temperature 102. In the afternoon he passed suddenly a very copious liquid stool. No food was allowed until the fourth day ; a little arrowroot and water and beef tea was allowed this day in response to the patient's request, and another ½ grain of morphia was administered under the skin at 10 p.m. Fifth day, 9 a.m., gave ½ a grain of morphia under the skin ; at 12 noon, passed a copious pultaceous motion, pulse 7 in 5 seconds, temperature 101, tongue furred, no vomit, slight thirst, ½ a grain of morphia given at 6 p.m., not the slightest tension of the abdomen, but slight pain in the right iliac region on pressure. Sixth day, had during night passed several small pultaceous motions, pulse 7 in 5 seconds, temperature 99, tongue less furred, no distension, pain in the region diminishing, no morphia given in the morning, patient wanted to return to Sweden, but with the assistance of two other medical friends he was persuaded to remain another week ; 10 p.m., ½ grain of morphia under the skin, as there was increase of pain. Seventh day, pulse and temperature normal, tongue correct, no thirst, pain only on firm pressure of iliac region, bowels acted three times during the day ; ½ grain morphia was given at 10 p.m., same diet continued. Eighth day, apparently well, but still slight pain on firm pressure, continued same diet, and ½ a grain of morphia under skin at bed. Ninth day, all abnormal symptoms absent, and the evacuations passed appeared of normal consistence, though small in bulk, indicating that all accumulated liquids had been passed, consequently the conditions permitting the spurious diarrhœa which often follows relief of obstruction existed no longer.

Never before had I been consulted so early after the accession of the symptoms of intestinal difficulty

as on this occasion. In this case I prescribed in one hour after the commencement of the obstruction, as indicated by pain. This case was well on the sixth day. How early relief of obstruction can occur it is difficult to say. Sales-Giron's experiments show that about the fifth* day in the dog, resolution takes place even in one of the most serious forms of intestinal obstructions.

Case No. 9.—Case of the young man at the Boys' Home.—The patient, a young man 20 years of age, on the 8th of January last, partook of a hearty meal of hashed flesh and vegetables, at 7 p.m., but two hours after going to bed he was awakened with a great pain in the left hypogastric region, which was soon followed by vomiting, which continued during the whole of the two following days, the 9th and 10th. On the evening of the latter day a message was sent to my house, which however was not delivered to me. On the morning of the 11th a second message was sent, on the receipt of which I at once visited the patient. I found him in bed, in a stooping position, which he had assumed in order to get some relief from the pain he was suffering.

* The "MEDICAL, PHYSICAL, AND SURGICAL JOURNAL," for the year 1823, contain a report of a case of invagination of the small intestine, reported by Mr. T. Bush, in which the obstruction ceased on the fourth day, and on the eighth day a piece of gut fifteen inches long was passed per rectum. Mild aperients were given in this case. Records and observation incline me to believe that while it is possible for invagination of a portion of either the small or large intestine to separate so early as the fourth day, yet intussusception involving the ilio-cœcal valve would take a longer period, as intussusception involving this part is more serious than when it occurs in any other locality. Annular stricture, though to make this artificial stricture the dogs had to be gastrotomized, had one advantage, mercifully, the benefit of an expectant treatment. Those who cannot be convinced of the value of the opium method will find their success increased by an expectant one compared with the "all sorts" treatment now in vogue.

On examination, I found the tongue furred and the patient suffering great thirst, with constant vomiting, accompanied by acute pain in the left hypogastric region. The abdomen was tense, with moderate distension, pulse 10 in 5 seconds. This was his condition at 10 o'clock in the morning of the third day of the attack. I immediately injected under the skin ¼ grain of morphia, which at once arrested the vomiting. I visited him again at 11 a.m., and found the same symptoms present with the exception of the vomiting, which had ceased; injected another ¼ grain of morphia. At 2 p.m. there was no relief of pain. At 11 p.m. the pain still continued, and the patient had had no sleep. I injected ½ a grain of morphia, the pulse being 9 in 5 seconds. There was no vomiting. January 12th, 10 a.m.—The patient had slept a little during the night, pulse 10 in 5 seconds, thirst and furred tongue, temperature 102, a slight diminution of pain, no vomiting. I injected ½ a grain of morphia and had the foot of the bed raised two feet. which latter was followed by a marked relief of pain, so much so that the patient began to sleep before the opiate could have had time to have any effect. At 5 p.m. the pulse was 8 in 5 seconds, and the pain was much diminished though the abdomen was still tense. The patient expressed his gratitude for the relief he derived from the inclination of the bed. At this visit injected a ¼ of a grain of morphia. At 10 p.m. I found the pulse 9 in 5 seconds, temperature 100. I tried the effect of lowering the couch, which was followed by an increase of the hypogastric pain; it was, therefore, restored to its previous height. ½ a grain of morphia was injected at this visit. January 13th, 10 a.m.—Pulse 9 in 5 seconds, temperature 100, tongue improved, abdominal distension as before. Had slept a little during the night; 12 noon, pulse 8 in 5 seconds, no pain but slight thirst. Had not vomited since the first day of my visiting him; 11 p.m., I was accompanied by Mr. R. Parker. We found the pulse 9 in 5 seconds, temperature 101½, distension moderate, pain only when disturbed. I injected 1 grain of morphia. January 14th.—Pulse 8 in 5 seconds, temperature 101, distension diminished, no pain, bed had been lowered; the patient had slept well during the night, no vomiting. 12 noon.—I injected ½ a grain of morphia. 10 p.m. continued the morphia. There was no pain, no vomiting, and no action of the bowels had yet taken place since the first day of the attack. Had slept a good deal during the day. Injected ½ a grain of morphia. January 15th.—Pulse 7 in 5 seconds, temperature 98½, distension much diminished, slight thirst. Had slept well during the night; no vomiting

and no pain. Injected ½ grain of morphia. 11 p.m., distention diminishing, no pain, pulse 7 in 5 seconds; no vomiting. January 16th, 10 a.m.—No distension, pulse 6 in 5 seconds, no pain, no vomiting, neither action of the bowels. At 2 a.m. however, of this day, the 8th day of the attack, the patient's bowels acted, the stool being of natural consistency. At 11 p.m. pulse 6 in 5 seconds, no pain or thirst; injected ½ grain of morphia. January 17th 10 a.m.—Pulse and temperature normal, no distention or pain; the bowels had acted. At 8 a.m., fœces pultaceous in character. January 18th.—On this day the patient was allowed to leave his bed, with instructions to restrict his diet, and having by this day secured, as I thought, perfect recovery. January 19th.—Was sent for in the evening, the patient being reported as not feeling well, and on arriving at the Home, was informed that the sufferer had disregarded my advice, and regaled himself at noon with a hearty meal of hot toasted bread and tea, with the effect of causing some return of the hypogastric pain. I interdicted all food, and gave him a course of subcutaneous morphia during the 20th and 21st of January, with the result of arresting the recurring symptoms, and by a more strict surveillance of the patient by the superintendent of the Home, he recovered perfectly.

Case No. 10.—J——C——, Ashwell Street, a ship scraper (paint scraper) was visited by me July 1st this year. I found him suffering from painter's colic. His previous history was that during the week preceding my first visit he had suffered from slight colic symptoms, but July 1st became much worse when he took castor oil to remove some evil that he supposed to be in the abdomen. This purgative was taken in the early morning, the castor oil he vomited, and then tried a dose of jalap ; this again returned immediately. Finding his own skill not of any benefit to him, he sent to request the aid of the medical officer of a neighbouring dispensary, who promptly attended and gave him every attention. and prescribing Mist Senna Co, to be taken at stated intervals, but with no better result, as the vomiting and pain continued up to midday, July 2nd, when I visited him and found him in great pain, vomiting occasionally, lead line on the gums, all the symptoms of lead colic ; and, on enquiry, I found that he had been employed all the previous week (and was often) in scraping lead paint from the bottom of iron ships. I commenced treatment by restricting his diet, and a subcutaneous dose of morphia, which dose was repeated July 3rd and 4th. The vomiting and pain ceased on the first day of my visit, and a very copious pultaceous discharge

per rectum occurred on the evening of July 4th, after which for a few days he took a mixture of tinct. opii one dr. to ½ pint of water, of which he took an ounce three times a day ; and, after the 7th day, required no further medical supervision.

This patient was most unwilling to omit purgatives whilst under my care, holding fast to the belief that the proper course to pursue, was to "storm" a "right of way," but I firmly insisted upon, and also predicted what would happen if he did not accept my advice ; consequently, on the fourth day he was most lavish in his expressions of confidence.

Case No. 11.—During the early quarter of this year I was requested to visit a case at D—— S——t, as a patient who had previously consulted me at my house for an injury to the arm was now taken ill ; but, being engaged as a witness in a public enquiry, I expressed my doubts of being able to go, and was not able to visit the sufferer that day. On receiving a second message on the following day, I visited the patient at once, and found the patient suffering from typhlitis symptoms, pain in the right hypogastric region, furred tongue, thirst and nausea. The treatment was commenced by morphia, subcutaneously administered, with an occasional dose by the mouth and restriction of diet. This treatment had the effect of aleviating the pain ; tongue became clean, thirst diminished. About the sixth day an enema of one pint of water was given, which produced a slight motion. About the tenth day another enema was administered, but no fœces came away. About the 14th day (though doing well) the patient became anxious, and suggested that a consultation should be held, the patient having selected the consultant, a council was held over the patient, and the consulted, not professing to understand the case, but as usual with some looking on the constipation with suspicion, pressed me to try what has been termed by one of our Hibernian brothers a "muzzled purgative,"—castor oil and opium. This was given with the effect of aggravating the previous symptoms, but produced a copious discharge per rectum. The aggravation of the symptoms naturally made a second consultation appear very necessary in the opinion of the patient's

friends. In the second consultation, the gentleman consulted was so forcibly impressed with the aggravation of the symptoms that he inclined to suspect malignant disease, as he could not otherwise account for the succeeding symptoms.

Here terminated my interest in the case; for when the consultation was over the relatives of the patient hinted to us their doubts of my ability, &c.; and as I was not supported by my colleague, I handed the case to him, who received it with "gladness."

This was to my mind undoubtedly a case of typhlitis, and had the opium method with restriction of diet been continued from four to six days longer the patient would have been convalescent. It will be noticed in the rough report of this case that two enemata were given on my own responsibility. My friend, Dr. Hardman, of Blackpool (who appears to have seen several cases of typhlitis), with whom, sometime ago, I had the pleasure and instruction consequent on an exchange of opinion as regards the subject matter of this paper, confidently maintained that the administration of enemata in this lesion was not injurious, and could be frequently repeated with no risk. Knowing Dr. Hardman to be a careful observer, I had confidence in deviating from my usual practice, and certainly with no harm or appreciable discomfort to

the sufferer, but after administering the purgative, though it was "muzzled with opium," its attendant and subsequent results were by no means of the muzzled type—so much irritation did the aperient give rise to, that the consulted suspected malignant disease on observing the result during his second visit. Typhlitis is no exception as regards the principles of treatment.

Case No. 12.—A ship carpenter, aged 64 years, residing at H—— S——t, was taken ill with the usual symptoms of enteric fever, and a few days after with pneumonia. The only therapeutical treatment practised was small doses of opium and digitalis, and restriction of the diet—no preliminary purgation. About the seventh day, there being some slight abdominal distension, his wife asked me if I would permit a purgative to be given, as he had been 7 or 8 days constipated, and also informed me that some years previous his bowels became constipated, and that it was only after the cojoined labour of three medical gentlemen, who laboured with remedies per mouth and rectum for many days that the bowels were induced to act. I explained my views, in which she concurred, and purgatives were omitted. The distension varied at times, but was never much ; and on the 16th day, spontaneous action of the gut occurred. The opium and restricted diet was continued for 4 weeks, the intestines acting every 4 or 5 days.

This man made an excellent recovery.

Case No. 13.—A man, following the occupation of plasterer, residing in N—— S——t, suffered from an attack of enteric fever. I was introduced to this case in time to hinder any preliminary purgation. During the fever condition he had an attack also of bronchitis. The enteric lesion was accompanied by a moderate amount of distension and tenderness of the abdomen on percussion. The constipation in this case could never be maintained longer than 4 to 5 days, when slight diarrhœa would occur, necessitating slight increase of the opium. The diet had to be restricted for 8 weeks, as any return to the ordinary articles of routine diet was followed by the recurrence of distension and tenderness, which had subsided during the 4th week.

Case No. 14—A boy, aged 10, Wellington Road, Wavertree. This boy had been brought to me occasionally for my advice as to the treatment of a hip-joint affection, of which he was well after 3 years treatment, during which abscesses had formed. This year he was taken ill with enteric fever. Being called in early to see him, no preliminary purgatives were permitted; he was treated by small doses of digitalis and opium, and I restricted his diet. Extreme distension of the abdomen occurred in this case, and the parents were at one time most anxious for the administration of an aperient, but on explaining to them my opinion, they submitted to my judgment. Spontaneous action of the bowels occurred about the 14th day, and afterwards occurred about every 4 days. I restricted the diet for four weeks, when the patient made a rapid recovery.

Case No. 15—A young lady, while returning from a central part of the town to her home near the suburbs, was knocked down by a ruffian, which caused some slight injury and general shock, to treat which I was called. After a few days attendance, symptoms appeared not explicable as arising from the slight injury she had received; and on making a careful enquiry as regards her health previous to the accident, it transpired that she had suffered from diarrhœa for 2 days previous to the injury. Next symptoms indicative of enteric fever developed themselves—no preliminary purgation was practised. The enteric lesion was treated by morphia, 1-16th of a grain under the skin night and morning. This patient did not tolerate any remedy by the mouth, but what she took in the way of food (restricted) was retained and enjoyed. Spontaneous action of the bowels occurred about the seventeenth day—diet was restricted for four weeks. The abdominal tenderness and distension was moderate in this case; she recovered rapidly.

In none of these four last reported cases, 12, 13, 14, 15, was any primary purgation practised. In the three first opium was given by the mouth with digitalis. In the last opium alone was given and that subcutaneously—the diet was carefully

restricted. Diarrhœa threatened in one case, but was easily controlled by a slight increase in the dose of opium. In these cases the omission for a few hours of the prescribed dose of opium caused the tongue to be dry and furred, with increase of thirst, and accelerated pulse. These four cases occurred during this year, and illustrate my usual treatment of the enteric lesion of typhoid fever.

It is probable that many practise what I here advocate as the course to pursue with the intestinal lesion of typhoid, but it is only too evident from our public journals that those who are admitted to be authorities in this special question do not. A perusal of the "PRACTITIONER," vol. xiv., for example, published so late as 1875, shows that some practise an opium method (with diet partially restricted) unknowingly; as for instance, at page 161, vol. xiv., of the "PRACTITIONER," simple diarrhœa and that of enteric fever are said to be treated by castor oil emulsion, but on reading the paper, it is very plain that it was an opium method, as to 2 drops of castor oil was added 1-16th of a grain of morphia, surely an effectual extinguisher to the 2 drops of

oil, being a proportion of about 1-240 of a dose of oil to a quarter of a dose of morphia—an extreme disproportion.

Many practitioners have of late advocated an expectant method in this fever. This policy may be good compared with what is the usual practice, but treating the enteric lesion by opium, and ignoring the blood-poisoning, will both please and astonish those who are strangers to this mode, which may be termed the Sydenham method.

Case No. 16—In August this year a boy was brought to have my assistance to correct a dislocated elbow. Patient was about 10 years of age, the son of a reverend gentleman residing in the south end of this town. After reduction of luxation the patient did well until October 4th, when I was requested to visit him, as he was very unwell. On visiting the patient and making an examination, I found tongue dry, slightly accelerated pulse; nausea, but no vomiting; right hypogastric region very tender on percussion; slight distension; right leg fixed at an angle to the trunk, which he was totally incapable even with assistance of extending. He could not curve the spine as in hip disease. I concluded that this was a case of loaded cæcum, causing typhylitis and perityphylitis. The history of this lesion, given by the boy's parents, was that some day previous the boy had been collecting blackberries, and while so engaged he had partaken freely of the fruit, and soon after began to feel unwell; and on October 3rd, appeared much worse, and sent for a very near practitioner, who ordered castor oil. This was given, but was not followed, so far as I could learn, by any noteworthy symptoms. On giving my opinion to his parents as to the nature of the case they appeared much alarmed, and said that several of their relations had died from intestinal obstructions. I answered that if they would rigorously

restrict the patient's diet, he would certainly recover, to which they consented and he was fed on beef-tea, mutton broth, chicken broth, arrowroot, and cold water. Again taking into consideration the early age of this boy and that typhylitis and its contiguous inflammation is not so serious as other forms of obstruction, I decided to give opium in the form of a mixture; water eight ounces, tinct. opii. gr xxx, half-ounce of this was given four times a day.

During the first 14 days the above was the diet and medicine given. Slight action of the bowels took place on the 12th day, but it was only the contents of the gut below the obstruction, as the dulness, and tenderness over the right hypogastric had not diminished, but the flexion at the hip was diminishing daily. Pulse and tongue after the 3rd day had become normal; no thirst; and on no occasion did vomiting occur. At the end of the third week he appeared well; no tenderness in any part of the abdomen; could extend thigh in line with trunk, but dulness on percussion over cæcum remained. At the end of the third week I allowed him to be dressed and to go about, and requested that he should visit me in the course of a few days; his diet to be rigorously restricted until I prescribed an alteration. Accompanied by his mother the patient visited me, and reported frequent repeated fluid evacuations, which did not cease for several days. Having satisfied myself that the difficulty had been genuinely resolved, I now permitted a very gradual return to the ordinary routine of diet. Patient continues well up to this day. November 1878.

In this case the patient got well of the cause of his difficulty, but had no action of the bowels for many days after he had been about.

This case reminded me that some years ago a relation of the same family accidentally informed me that her son Mr.—— was dying, and related to me his case. He had been many months ailing. I suspected from the narrative a chronic inflamma-

tion of some portion of his intestines. I suggested that he should set aside all medicine and diet himself according to certain rules; the result was that the patient, who was supposed to be dying from malignant disease, was in a few months well.

Case No 17.—E. N., painter by trade, residing at Tavistock Street, sent for me on October 4th, and I found him suffering from the usual symptoms of painter's colic. I at once restricted his diet, and his medical treatment consisted of the injection of one quarter grain of morphia under the skin daily, The latter he submitted to willingly, but the restricted diet and abstinence from purgatives he only acquiesced in after some argument. Action of the bowels took place on the 19th day. As soon as the morphia treatment was commenced the abdominal pain, &c., disappeared.

There was at no time much distension. On finding my prediction of the result of treatment correct he was much pleased, and remarked that a fellow tradesman and co-worker had been in the same difficulty, and that the treatment his partner underwent was "almost equal to being crucified." Although this remark was an exaggeration, I can recollect that in my apprentice days it was the fashion, and is now occasionally, to give enemas of salt and water, tobacco, turpentine, soap, gruel and purgatives ad libitum by the mouth, and to annoy the sufferer until action of the bowels took place. Indeed my experience is that it does not usually

affect the result, whether the patient receives correct treatment or not. I cannot remember myself a fatal case of painter's colic.

Case No. 18.—A. M., Beaufort Street, February 1st, 1878, at 6 p.m., was taken with great pain in the abdomen, he having just finished his evening meal; and although it continued until next morning, yet he took no remedy and went to his work, and consulted a fellow-workman as to what remedy he should use to get relief, who advised a black draught, which he sent for and took. This aggravated the pain, and he went home and sent his wife to consult a chemist, who sent him a dose of Gregory's Powder, and informed his wife that had he commenced with a Gregory's Powder, and then taken a black draught, his pain would not have been aggravated, and probably he would have been well. The chemist's remedy having made the patient still worse, I was sent for on this the second day; but not being at home, my assistant visited the sufferer at 6 p.m., and prescribed a chalk and opium mixture, and gave orders to restrict his diet. On the third day, at 6 p.m., being informed that he was still very bad, I visited the patient, and found the abdomen moderately distended, pain on percussion, and pain even when the abdomen was not manipulated. The dulness was confined to the region of the bladder, consequently I explored this viscus and found no accumulation; tongue furred; pulse 8 in 5 seconds; very thirsty. I advised strict restriction of diet; ¼ grain of morphia under skin.

Visited again at 10 p.m., and found him free from pain, but no other change; repeated the morphia.

4th day—Visited at 12 a.m., no pain, but the other symptoms unchanged. No remedy at this visit, but visited again at 5 p.m.; gave ¼ grain morphia; no other change.

5th day—Visited at 4 p.m., slight pain; moderate distension; pain on percussing the abdomen; tongue dry and brown; pulse 7 in 5 seconds; much thirst; had vomited about 4 ounces of bilious-coloured fluid. At mid-day, gave him ¼ grain morphia under skin. Visited again at 10

p.m. ; tongue moist, less thirst ; no pain on percussion ; pulse 6 in 5 seconds ; has not slept much since the commencement of the ailment ; now gave ¾ of a grain of morphia under skin.

6th day—At 10 a.m. moderate distension ; pain on percussion ; pulse 6 in 5 secs ; tongue moist but fresh ; no vomit ; injected ¼ grain morphia under skin. 10 p.m. distension moderate ; tongue moist, but not clean ; pulse 7 in 5 seconds ; very little pain if not manipulated ; has passed flatus per rectum several times ; gave ⅜ grain of morphia under skin.

7th day, 10 a.m. Pulse 8 in 5 seconds ; temperature 97.5. Tongue dry, and found distension increased ; passed flatus during night ; no vomit but feels inclined; pain tolerable; ¼ grain morphia under skin. Visited at 4 p.m. ; pulse 8 in 5 seconds ; tongue furred but moist ; abdomen distended ; slight pain on percussion ; had passed flatus since morning. Visited again at 10 p.m., accompanied by my friend Mr. R. Parker, and found that the patient had parted with two copious motions, the fæces being pultaceous in consistance ; pulse 6 in 5 seconds ; abdomen still tense, but less tender ; gave ¼ grain morphia under skin.

8th day—Slight distension ; pulse 6 in 5 seconds ; tongue moist, slightly furred ; action of bowels twice.

9th day—No action of bowels to-day ; tongue improved ; slight abdominal distension ; pain only on firm pressure of the abdomen.

10th day—No special symptoms.

11th day, 4 p.m.—Had passed small quantity of semi-fluid fæces during the day ; pulse 7 in 5 secs. ; tongue dry brown fur ; much thirst ; slight pain ; abdomen distended slightly ; gave ¼ grain morphia under skin. Visited again at 10 p.m. to see the effect of the morphia ; no pain ; tongue very moist and nearly clean ; less thirst.

12th day—Pulse 6 in 5 seconds ; tongue moist ; no pain ; no morphia given.

13th day—Pulse 6 in 5 seconds ; tongue slightly dry, and found no pain ; slight distension, also thirst ; ¼ grain morphia under skin ; no action of bowels since the 11th day.

14th day—Bowels acted ; nearly all the symptoms have abated.

15th day—The patient progressed to recovery, with no special symptoms, and remains well to this day.

What form of obstruction this was neither Mr. Rushton Parker nor myself could decide, but we did agree as to the treatment and results. It certainly was a mild form of intestinal lesion, which would have been readily converted into the grosser form by a further continuation of the purging he commenced with.

Case No 19—Monday, November 19th, I was requested to visit C. T., aged 24 years, living in 20, V— Street, in this town, and on visiting him, and making an examination, I found present in his case all the symptoms of intestinal obstruction. His anterior history, related to me by his wife, was that on Sunday, 18th, he took a hearty meal of flesh meat, potatoes and carrots, and that in one hour after this meal, he was seized with colic like pains in the stomach, accompanied by a desire to defecate, and passed a moderate amount of fæcal matter, but this was followed by no relief; and towards evening he sent for aid to a medical gentleman close at hand, who ordered a Bismuth mixture and opiate pills (the composition, I surmise), however with no relief. Pain increasing during night. As he was a member of one of my clubs, he demanded my assistance on the morning of the 19th; but being very unwell myself, I could not get to him until noon the same day, when I found the symptoms of obstruction, viz., hard distended but not very prominent abdomen; pain acute in the left hypogastric region; pulse 9 in 5 seconds; temperature 101°; tongue dry; moderate thirst and continuous vomit, with very slight intermission. I could come to no conclusion as to the cause of the difficulty, a matter (in the absence of hernia through the abdominal boundaries) of no consequence at the commencement of treatment. Treatment—His diet was restricted; I injected under skin ¼ of a grain of morphia, and elevated the lower bed-stock 18 in. Visited him again at 5 p.m.; no effect from

the treatment ; now gave $\frac{3}{4}$ of a grain of morphia under skin. Visited at 9 p.m. ; no change ; now gave $\frac{1}{2}$ grain under skin.

2nd. day, 10 a.m.—Less pain ; had vomited only three times since the last visit ; feeling of distension ; the abdomen more prominent ; pulse 8 in 5 seconds ; tongue better, but not correct ; gave $\frac{1}{2}$ grain morphia under skin. Second visit, 3 p.m.—Vomited once since 10 a.m. ; no other change ; gave $\frac{1}{2}$ grain of morphia under skin. Third visit, 10 a.m.—Vomited once since 3 p.m. ; no other change of symptoms ; now inserted $\frac{3}{4}$ grain morphia.

3rd day, 10 a.m.—Pulse 7 in 5 seconds ; temperature 99·5 ; tongue clean and moist ; had vomited once since last visit ; inserted $\frac{3}{4}$ grain of morphia. Second visit, 3 p.m.—No change of symptoms ; gave $\frac{3}{4}$ grain morphia under skin. Third visit, 10 p.m.—Had vomited at 9 p.m. ; no other change ; gave $\frac{3}{4}$ grain of morphia under skin ; has as yet very little sleep, and only slight pain except when the effect of opium wore off.

4th day, 10 a.m.—Vomited once since last visit ; pulse 7 in 5 secs. ; temperature 99·5 ; tongue moist ; moderate thirst. Second visit, 3 p.m.—Since 10 a.m. had vomited copiously, stercoraceous in character ; no other change ; gave $\frac{3}{4}$ grain morphia under skin. Third visit, 10 p.m.—Had again vomited stercoraceous fluid ; repeated $\frac{3}{4}$ grain under skin.

5th day, 10 a.m.—Pulse 7 in 5 seconds ; temperature 99·5 ; abdomen more prominent ; pain tolerable ; dulness on percussion over whole of left hypogastric region, much as it had been from the commencement ; inserted $\frac{3}{4}$ grain morphia. Second visit, 3 p.m.—Vomited since 10 a.m. stercoraceous matter ; $\frac{3}{4}$ grain of morphia under skin. Third visit, 10 a.m. —Complaining of insufficient sleep ; now injected 1 grain morphia.

6th day, 10 a.m.—Pulse 6 in 5 seconds ; tongue clean and moist ; abdomen tense ; tender and moderately prominent, pain now diffused over the whole abdomen, rather than localized as previously. Second visit, 3 p.m.—No change ; injected $\frac{3}{4}$ grain morphia. Third visit, 10 p.m.—Vomited once at 7 p.m., not stercoraceous ; much troubled with hiccough this day.

7th day, 10 a.m.—Pulse 6 in 5 seconds ; temperature 97·5. ; tongue

clean and moist ; injected ¾ grain morphia under skin. Second visit, 3 p.m.—Vomited once since 10 a.m., stercoraceous ; injected ¾ grain of morphia. Third visit, 10 p.m.—No change of symptoms ; injected ¾ grain of morphia under skin.

8th day, 10 a.m.—Pulse 6 in 5 seconds ; temperature 97·5 ; tongue clean ; moderate thirst ; much less pain, but abdominal distension increased ; no medicine. Second visit, 3 p.m.—No change ; ¾ grain morphia inserted. Third visit, 10 p.m.—No change ; ½ grain morphia given ; there had been no vomiting for 24 hours.

9th day, 10 a.m.—Much worse ; pulse 9 in 5 seconds ; temperature 101·5 ; tongue dry ; much pain ; vomited 1 a.m., stercoraceous ; gave now 1 grain morphia under skin. Second visit, at 3 p.m.—Much better ; pulse 6 in 5 seconds ; temperature 97·5 ; tongue better ; abdomen not so tense ; moderately prominent ; gave ½ grain morphia under skin. Third visit, 10 p.m.—Accompanied by my friend Dr. Steele ; rather more uneasy ; no vomit during this day ; slept a little ; pulse 7 in 5 seconds ; temperature 98·5 ; tongue correct ; gave 1 grain morphia under skin.

10th day, 10 a.m,—Passed painless night but did not sleep much ; vomited stercoraceous matter once since last visit ; pulse 7 in 5 seconds ; temperature 98 ; tongue clean and moist ; injected 1 grain of morphia. Second visit, 3 p.m.—Has vomited once since 10 a.m. yellow transparent stercoraceous fluid ; pulse 8 in 5 seconds ; tongue clean ; no change in form of abdomen, but no dulness on percussion at any part of it. Patient expressed himself as having felt perfectly well this day, but I assured him he was far from well yet ; injected ⅔ of a grain of morphia. Third visit, 10 p.m.—Pulse 6 in 5 seconds ; temperature 98 ; tongue clean ; vomited at 6 p.m. stercoraceous yellow transparent fluid. Hiccough has again troubled him.

11th day, 10 a.m.—Vomited three times since last visit, and still stercoraceous ; Pulse 6 in 5 seconds ; temperature 97·5 ; tongue clean and moist ; injected 1 grain of morphia under skin. Second visit, 3 p.m.—Felt very uneasy until now ; no further change ; injected ⅔ grain of morphia. Third visit, 10 p.m.—Pulse 7 in 5 seconds ; temperature 98 ; tongue clean and excellent, and felt (so he said) perfectly well.

12th day, 10 a.m.—Had passed excellent night ; no change of symptoms ; injected under skin 1 grain of morphia. Second visit, 3 p.m.—Vomited a quantity of stercoraceous fluid ; injected 1 grain of morphia. Third visit, 10 p.m.—Vomited again since last visit, same in character as previous visit ; pulse 6 in 5 seconds ; temperature 98 ; tongue clean ; no change in the physical condition of the abdomen.

13th day, 10 a.m.—Pulse 7 in 5 seconds ; tongue moist ; vomited once since last visit ; injected 1 grain of morphia. Second visit, 3 p.m.—Pulse 6 in 5 seconds ; temperature 97·5 ; tongue moist ; injected 1 grain of morphia. Third visit, 6 p.m.—Pulse 6 in 5 seconds ; temperature 98·5 ; tongue moist ; no medicine as he was much easier.

14th day, 10 a.m.—Vomited once since last visit—stercoraceous ; pulse 6 in 5 seconds ; temperature 97·5 ; tongue moist ; has but very little pain ; injected 1 grain morphia. Second visit, 3 p.m.—No change ; injected 1 grain morphia. Third visit, 10 p.m.—No change ; injected another grain of morphia.

15th day.—Pulse 7 in 5 seconds ; temperature 100° ; abdomen more distended ; tongue, no change ; did not feel so easy as the previous day ; injected 1¼ grain morphia. Second visit, 8-30 p.m.—Pulse 6 in 5 seconds ; temperature 98·5 ; feels easier ; injected 1 grain of morphia ; vomited during the day a clear, yellow fluid, not stercoraceous

16th day.—Pulse 7 in 5 seconds ; tongue clean and moist ; temperature 99° ; abdomen less tense ; injected 1¼ grain of morphia. Second visit 3 p.m.—No change ; gave 1 grain under skin of the opiate ; vomited once since morning, stercoraceous. Third visit.—Not had much sleep ; injected 1½ grains of morphia.

17th day, 10 a.m.—Pulse 6 in 5 seconds ; temperature 97·5 ; tongue clean and moist ; injected 1½ grains of morphia. Second visit, 3 p.m.—No change ; injected 1 grain of morphia. Third visit, 10 p.m.—No change, except vomiting once, stercoraceous in character ; gave 1½ grains of morphia under skin ; expressed himself as feeling rather well this day ; and has passed flatus per rectum twice ; slight hiccough, the passage of flatus indicated that the liquid accumulated above the obstruction had now drained to the lower portion of bowel and affected its contents (reducing them).

18th day, 10 a.m.—Pulse 7 in 5 seconds; temperature 97·5; tongue slightly furred but moist; not much pain; vomited twice since last visit stercoraceous matter; injected 1½ grain of morphia. Second visit—Pulse 6 in 5 seconds; tongue furred; abdomen less tense. Third visit, 10 p.m. —Pulse 7 in 5 seconds; temperature 98; tongue furred, but moist; gave 1 grain of morphia.

19th day, 10 a.m.—Pulse 6 in 5 seconds; temperature 96·2; tongue clean and moist; vomited once during night, stercoraceous in character; injected 1½ grains of morphia. Second visit, 3 p.m.—Pulse, tongue, &c., no alteration since last visit; injected 1 grain of morphia. Third visit, 10 p.m.—I was accompanied by my friend Mr. Rushton Parker, and we found pulse 6 in 5 seconds; tongue clean and moist; abdomen more distended than on any previous day; he had indulged his appetite by an extra quantity of "pea flour," so this aliment was restricted in quantity; we injected 1¾ grains of morphia under skin at this visit.

20th day, 10 a.m.—Pulse 6 in 5 seconds; temperature 97·5; tongue moist; slight increase of thirst; vomited early in the morning stercoraceous; injected 1½ grains of morphia. Second visit, 3 p.m.—Pulse 7 in 5 secs.; tongue clean and moist; still thirsty; abdomen not quite so tense; has passed since morning two volumes of flatus, rather more than the quantity passed on the 17th day; 1 grain of morphia was given. Third visit, 10 p.m.—Pulse 6 in 5 seconds; temperature 97·0; tongue moist and clean; rather thirsty; complaining of much pain; gave two grains under skin of morphia; abdomen very tense, though not very prominent.

21st day.—Received a message at 8 a.m. to say that the patient was dying after having passed a sleepless and painful night; had vomited five times during the period that elapsed between the last visit and 6 a.m., a period of eight hours. As it was impossible for me to go, I asked Mr. R. Jones to visit the patient, and I fully instructed him what to do under certain eventualities. Mr. R. Jones found the patient in a state of collapse, pulse scarcely perceptible at wrist; Liq atropiæ minims iij. injected under skin, and he was surrounded by warm bottles. At 10 a.m., accompanied by Mr. Rushton Parker, I visited the patient, prepared to operate, but we noticed at once that there

was no indication for manual interference of any sort; pulse 8 in 5 secs.; symptoms of collapse wearing off; abdominal walls relaxed. Patient now partook of warm beef-tea. At 4 p.m. repeated my visit, still some prostration, and stercoraceous vomiting, but quantity brought up being very little; pulse 7 in 5 seconds; temperature 98·5; gave him Liq atropiæ minims vii. by mouth. Again visited at 10 p.m., much improved; pulse 7 in 5 seconds; temperature 98·5; vomits very small quantities of stercoraceous fluid every hour.

22nd day, 9 a.m.—Pulse 7 in 5 seconds; temperature 98·0; tongue dry, but easily moistened by a drink of water; no vomiting; no medicine. Second visit, 3 p.m.—Pulse 6 in 5 secs.; tongue dry; abdomen much distended, but feels easy; has passed volumes of flatus at mid-day; no medicine. Third visit, 9 p.m.—Pulse 6 in 5 seconds; temperature 98; tongue dry; slight pain, but such that he did not, as was his wont, demand an opiate; no vomit; abdomen becoming more prominent, though at no time in this case was it equal to what is usually observed; no medicine. Fourth visit, 12 midnight.—No pain; pulse good; no vomit; prostrate; spirits excellent.

23rd day, 9 a.m.—Pulse 7 in 5 seconds; temperature 98·0; tongue dry; very prostrate this morning; HAD TWICE PASSED, EARLY IN THE MORNING, COPIOUS PULTACEOUS FÆCAL MASSES; no medicine. Second visit, 12 noon. Abdominal wall more relaxed; no change since 9 a.m. Third visit, 4 p.m.—Has since morning passed two more pultaceous quantities of fæces. Fourth visit, 10 p.m.—Pulse 7 in 5 seconds; temperature 98; abdomen flaccid; had passed at 5 p.m. another pultaceous "stool," in all four this day, all of which were searched, but gave no information; gave ½ grain of morphia under skin, as he had intolerable pain, and had not slept for 24 hours.

24th day, 10 a.m.—Pulse 7 in 5 seconds; temperature 98; tongue moist and clean; vomited a small quantity of bilious fluid; no medicine. Second visit, 4 p.m.—Pulse 7 in 5 seconds; tongue dry; abdomen relaxed, but very tender; no medicine. Third visit, 10 p.m.—Pulse 7 in 5 seconds; tongue dry; abdomen painful without pressure; no action of the bowels this day; gave ½ grain morphia under skin.

25th day, 12 noon.—Pulse 7 in 5 seconds; temperature 98·5; vomited small quantities of bilious fluid; tongue dry; no pain; no medicine. Second visit, 9 p.m.—Pulse 7 in 5 seconds; tongue moist and clean; temperature 98·5; feels very easy; no medicine.

26th day, 1 p.m.—Pulse 7 in 5 seconds; tongue furred; vomited much bilious matter during the morning; to-day allowed small quantities of biscuits as an addition to his dietary. Second visit, 9 p.m.—Pulse 5 in 5 seconds; temperature 97·0; tongue moist and clean; this day passed immense quantities of fæces, and frequently of flatus; no medicine.

27th day, 10 a.m.—Passed at 5 a.m. three copious pultaceous stools; pulse 5 in 5 seconds, full and firm; tongue clean and moist; abdomen concave. Second visit, 3 p.m.—No change. Third visit, 10 p.m.—Feels no pain; slept well during the night; no medicine; abdomen this evening decidedly distended again, but no pain even on manipulation.

28th day, 10 a.m.—Pulse 6 in 5 seconds; tongue moist; abdomen not distended; had passed three pultaceous "stools" in the early morning. Second visit, 10 p.m.—Pulse 7 in 5 seconds; tongue moist; no pain; felt "strong and well;" was allowed raw eggs as a further addition to his diet; passed another "stool" at noon this day, rather firm in consistence.

29th day.—Visited at 10 p.m.; no symptoms to report; diet still restricted.

30th day.—Not visited, but one stool was passed.

31st day.—Progressing well; action of bowels this day.

32nd day.—Ordered the patient out of bed; warned him to restrict his diet for 14 days longer, and report himself to me occasionally.

During the attack the urine was scanty, not more than 3 to 4 ounces daily being passed.

He remained perfectly well for one month. When returning home after a morning's stroll, and feeling very hungry, he partook freely of boiled beef and potatoes. This was about 1 p.m.; at 5 p.m. he sent a message informing me that his complaint had returned. Mr. R. Jones visited him and injected ½ grain morphia under skin, and brought him to my hospital,

when, during the first three days, his medical treatment consisted of the injection of ¼ grain of morphia night and morning; no other food than cold water being allowed him. Restricted diet was allowed on the fourth day, and opium continued. On the fifth day action of the bowels took place, and on the sixth day he went home well.

Two months after this he committed a second indiscretion in diet; but ten days abstinence from all food with one dose of opium corrected the ailment, and he remains well up to this date (December, 1878), showing no trace of his previous lesion. He (at my advice) selected his food, avoiding many of the course and indigestible articles of diet in common use by persons of healthy intestines.

In the treatment of this case forty-five grains of morphia were consumed, and the treatment extended over thirty-two days; altogether about one hundred visits were made. Of these I made daily, the second, and often the evening, visit. Being in ill health, I found even the latter very difficult. Most of the morning and evening visits were made by my nephew Mr. R. Jones, who very efficiently assisted me.

When first called to this case I was satisfied that it was one of intussusception; and as no preliminary ill-treatment had been practised, I thought that the patient must certainly get well if no deviation from my mode of treatment occurred. I therefore laid down a plan in my own mind, prepared to meet any of those accidents which

sometimes happen in these cases. To the mother and wife of the sufferer was also explained the nature and seriousness of his malady, and the importance of strict adhesions to the advice Mr. R. Jones and myself should give ; and much credit is due to his relatives for the faithful way in which our instructions were carried out, despite the meddling of spiritual advisers and nurses connected with a charity.

There were other disadvantages—conspicuously a miserable bed-room and no fire-place. A lamp, however, was maintained burning night and day to keep the room warm ; hot bottles also were called into requisition ; indeed every care was taken to render the miserable habitation more comfortable.

At no time was a dose of morphia given until the effect of the previous dose had worn off, and the patient complained of pain. This case had many points in common with case No. 1 ; in fact, I think they were parallel cases, only that No. 2 was more critical.

The patient in case No. 1 was a strong, healthy man, with a comfortable home, and means to

secure him comforts ; the patient in the last case was thin and delicate ; moreover, previous to this casualty, he had begun over work (over time), and was in that condition termed " below par."

Several notable and usual clinical symptoms were observed during the treatment of this case. For instance, morphia reduced the frequency and increased the volume of his pulse, lowered the temperature, and alleviated the pain, also making him vomit less frequently ; hiccough troubled him occasionally—a symptom in itself of no moment.

On the eighth day the opium was diminished in quantity instead of being increased, when his symptoms became much worse. On two occasions early in the treatment, the patient expressed himself as being " perfectly well," an expression, under the opium treatment, frequently made. Fluid not stercoraceous, was sometimes vomited, although preceded and followed by stercoraceous matter. On the seventeenth day he passed flatus, which denoted slight drainage of the liquid contents from above the obstruction to the lower portion of bowels.

On the twenty-first day the patient became collapsed, but guided by experience gained

in case No. 7 (when relief of obstruction deceived me, so that he died from the collapse that followed) I was prepared to administer a genuine and infallible stimulant, and was further prepared to perform gastro-enterotomy if this did not very soon improve the patient. Liq. Atropiæ minims iii was given under skin,* and in less than twenty minutes

* Had this not succeeded, six more minims would have been given at the expiration of twenty-five minutes, but another dose could not have been repeated a third time with safety. In my own practice I have found Belladonna a very trustworthy stimulant, and have verified all that Dr. Harley has demonstrated, as its action whether given by mouth or skin. Of course its action is developed very rapidly when given subcutaneously. It may not be out of place for me to refer here to a few notable examples of its stimulant effects in my own practice. On one occasion after performing the operation of ovariotomy, the patient being very much enfeebled by previous suffering, she was removed from the operating table pulseless, in fact, in a state of collapse. Several gentlemen assisted me with their advice, one counselled ammonia; another, a half pint of whisky in enema; but I decided to give a subcutaneous dose of atropia. Five drops were given with the effect of making the pulse just perceptible After the expiration of 20 minutes 7 drops were given under skin again, which made the pulse easily perceptible, but this patient succumbed same day. On another occasion having a case of Laryngitis which I thought required operation, I invited an elderly and more experienced surgeon than myself to assist me in deciding whether an operation was required, and we concluded not. This was about 9 p.m. At midnight I received a message informing me that the patient was dead. I partially dressed, and armed with tube and knife only, ran off as fast as I could go, a distance of 300 yards, and found the patient pulseless and breathless. I at once threw him across the bed with his head dependent, opened the trachea, inserted tube, and, while one of the females sponged the orifice of tube and neck, I practised artificial respiration, and continued to do so for half an hour, when respiration began to return, and only required occasional assistance, and at the termination of 2 hours respiration was fully restored, but the patient was unconscious. At 4 a.m. his respiration beeame worse; his pulse, previously excellent, became almost imperceptible. Previous to this change, my friend Dr. Grindrod had arrived, and now we both thought he was rapidly sinking, and decided to give him 5 drops of Liq. Atropiæ under skin. After waiting 20 minutes, and no effect being apparent, we gave 10 drops, and in 15 minutes after pulse began to improve, and in 3 hours the patient was conscious, and is alive and well at this date. An-

the pulse could be felt at the wrist, and he continued to improve up to mid-day, when a further dose was given by the mouth. After this day the use of the opium was continued as before, *i.e.*, whenever pain was present. His diet was rigorously restricted up to the thirty-first day, and partially so up to the fifty-first day.

What the exact mechanism of this particular case of occlusion was I am unable to say. I was (and am still) of the opinion, formed by observations during its progress, that it was an intussusception somewhere in the colon. It was to me, and ought to be to all practitioners, a source of satisfaction that a differential diagnosis is not essential to successful treatment. Hernias through the abdominal walls, however I except, which are so easily differentiated.

Case No. 20.—July 23rd, 1878, I was requested to visit a Captain of one of the steam boats, residing at Twiss Street, and on making an examination of the patient, I found him suffering from some form of intestinal obstruction, the nature of which I could not satisfy myself of. His pulse was 8 in 5 seconds; temperature 100; severe colic pain; slight abdominal distension, but abdomen very hard and resisting when pressed upon; tongue slightly furred; most intense thirst; vomiting, so often as every five

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other case, a Medico-legal case, where the patient was very evidently dying, a consultation was held, and a stimulant was judged to be desirable, and as a concession to the prevalent predjudice, stimulation was attempted by means of brandy (really a narcotic). When this had failed atropia was tried, and improved the pulse in half an hour after injection, in fact, successfully stimulated the patient, who died however.

minutes. These observations were made at 7 p.m. of the second day of his difficulty. His previous history was that about 4 p.m. of the previous day he rose suddenly from bed to assist a sick child who was complaining, and that the sudden effort caused the descent of a slight hernia, which had existed 2 or 3 years. It protruded rather more than usual, and gave intense pain; he was able to reduce it immediately, but some little pain remained for several hours, yet he arose at his usual hour, about 7 a.m., to go to duty, but feeling faint, he decided not to go. His wife now gave him a dose of castor oil, which was not retained; she then procured a dose of Chlorodyne; this dose also was not retained, and the vomit continued about every 2 hours until evening, when a medical friend visited him for me, as I was engaged when I received the message. The medical visitor injected under the skin ¼ grain morphia, which relieved the pain, and for a short time arrested the vomiting. This is the history of the patient during the first day. Next morning a message was received by my friend informing him that the patient was very bad, and that his symptoms had returned since 6 a.m. An aperient powder was now ordered, which was retained for a short time; and he was visited again about 11 a.m. on the same day and a Black Draught given, but not retained; then two Seidlitz Powders, neither of which remained over a minute, and the vomiting became continuous; again, an enema of castor oil was injected, followed by another of gruel, but the symptoms only became aggravated; and at 7 p.m. of second day an urgent message was sent to his medical visitor to repeat his visit. He being engaged, I was obliged to go, and found the symptoms before reported. I at once injected ¼ of a grain of morphia under skin, and during my stay of 5 minutes he vomited 3 or 4 times slightly bilious-coloured fluid, but not much in bulk, as the repeated vomit during the day had made any accumulation nearly impossible. I revisited him at 9-30, found pulse 8 in 5 seconds; temperature 99; abdomen as before; vomiting constant; hiccough without intermission; intense thirst; less pain. I had already limited his aliments; gave ⅛ of a grain of morphia under skin. Visited again at 12-30 midnight—Pulse and temperature as before; vomiting slightly diminished, but so frequently as every 10 to 15 minutes; pain nearly gone; hiccough continuous.

3rd day, 8-30.—Had vomited six times since my midnight visit; abdomen unchanged; no pain; pulse 7 in 5 seconds; temperature 98·5;

hiccough constant ; had slept none ; gave now ½ grain of morphia under skin. Visited 12 noon.—Vomited once since last visit, the matter ejected being of light green, not the bilious green colour ; and on my remarking to the patient that it was a strange colour, he said that it looked like the green peas he had taken the day previous to his being taken ill ; pulse and temperature as before ; hiccough gone ; abdomen less tense ; diminished thirst. 5 p.m.—Pulse, temperature and tongue as before ; no pain ; has vomited three times ; gave no remedy. 11 p.m.—Pulse and temperature unchanged ; had vomited since 5 p.m. ; no pain ; gave only ¼ grain of morphia, as he felt sleepy.

4th day, 8-30.—Pulse 7 in 5 seconds ; temperature 98·5 ; tongue correct ; thirst much diminished ; vomited 6 times during night ; no hiccough ; no pain ; gave ½ grain of morphia under skin ; has yet taken only cold water, but ordered cold arrowroot with a taste of brandy to make it palatable. 4 p.m.—Pulse and temperature as before ; no change of symptoms since 8-30 a.m., except that he had passed a quart and a half of fæces, reduced to the consistence of thin gruel. Visited again at 10-30 p.m.—Pulse 5 in 5 seconds ; temperature 97·0 ; tongue perfect ; no thirst ; pain gone ; has not vomited since morning visit 8-30, as the symptoms had abated and temperature specially low ; gave only ¼ grain of morphia under skin on this occasion.

5th day, 4 p.m.—Pulse, temperature tongue and abdomen correct ; no symptoms remaining to indicate the previous difficulty. He asked to be allowed to get up. I permitted him if he felt able. No action of bowels this day, but warned him of the serious result that might follow if he deviated from a suitable dietary ; gave ¼ grain of morphia under skin.

6th day.—Was up, and had come downstairs into his parlour ; felt weak. I drew his attention to the importance of his diet, and gave no medicine.

7th day.—Copious action of bowels ; no medicine is given ; diet still restricted ; was perfectly well in another week, but his diet was regulated for three weeks more.

Case No. 21.—July 15 operated for stone on a boy aged 5 years, and removed one, not quite so large as an Egyptian bean. The

operation was performed at my hospital on the day of his admission, but previous to operating I gave him an enema of half a pint of warm water. Though given to him 2 hours before the operation, it only returned just as I was sounding his bladder previous to operation, and the little patient passed a quantity of partially digested food. Nothing of special clinical interest occurred on the first day, but on the morning of the second day his temperature suddenly rose to 103·5; very rapid pulse, with intense thirst and abdominal distension; furred tongue and vomiting, which continued at intervals of from 3 to 4 hours. I had him now placed in a warm bath which was gradually cooled down, and as soon as the bath had an appreciable effect in lowering his temperature, he was removed wet and placed in a dry blanket, where he perspired freely for one hour. He was afterwards wiped dry, and left without any clothing or covering, and frequently sponged with cold water; by the evening his temperature had diminished to 102·5, but his pulse was very rapid; respirations also 36 to 40 per minute, and furred tongue. I now took precaution to make certain that there was no retention at the wound. During this day 5 drops Liq. Morphiæ Sulph. were given on two occasions. On the morning of the third day the abdominal distension had subsided, but the temperature, was still as high as 102·5; tongue furred; pulse and respiration though better very rapid; vomiting but not so frequent every 5 to 6 hours; intense thirst; his diet since the operation had been limited to beef-tea, arrowroot and water and linseed tea; ordered another warm bath, which was cooled gradually, and the patient appeared to enjoy it, and when removed from the bath he was frequently sponged with cold water and left exposed; had two doses this day of Liq. Morphiæ Sulph. 5 drops each; vomited three times during evening; temperature 103·5; pulse 130 per minute; diminished thirst; vomited once during night; abdominal distension returning, and nearly equal to the condition present on the second day; 5 drops of Liq. Morphiæ Sulph. was given on this occasion; vomited in the evening; no bath but cold sponging frequently, and exposure to cold was practised. Fifth day, Morning.—Temperature 102·5; diminished thirst; improved pulse, 150 per minute; respiration much less frequent; tongue slightly improved this morning. Thinking that the patient suffered from fæcal accumulation, a gentleman who accompanied me on my visit strongly urged me to administer calomel and jalap by mouth, and an injection of warm water per rectum. I could only accede in the matter of enema, to the in-

jection of an ounce of warm water, and even this quantity was much against my convictions, but I would not give the calomel and jalap. When the injection was returned, I perceived by the action of the Sphincter Ani that the rectum was empty, and I then ventured more boldly with my opium treatment. I may mention that small as this enema was the little fellow at once complained, and for the first time, of abdominal pain, enough for him to class it as "belly ache." I have no doubt 6 ounces of water would have caused collapse. The boy now had 4 doses of morphia, in varying doses of 5 to 10 drops, with the effect of cleaning the tongue, arresting the thirst, so much that the child had to be asked to drink, the temperature invariably going down 1 degree in an hour after the 10 drops of morphia with corresponding improvement of pulse, which improvement lasted until the therapeutical effect of the morphia began to wear off. Sixth day.—Abdominal distension not diminished; temperature 101·5; no thirst; tongue clean; respiration normal; morphia 4 and 5 times during day in 5 to 10 drops doses; sponging with cold water and exposure. Seventh day.—No thirst; temperature 102; pulse 140; respiration correct; abdominal distension not diminished; action of bowels during the early morning passed in bulk about 2 tablespoonfuls of pultaceous fæces. Eighth day.—Temperature 101·5; no thirst; tongue clean; abdominal distension still undiminished; complained during the day on several occasions of "belly ache;" and 10 drops of morphia was given on four occasions; the increased doses made him rather sleepy, but did not perceptibly affect the pupils; all this time his diet was limited to beef-tea, arrowroot and linseed tea, the latter he preferred. Ninth day, morning.—Temperature 101; pulse 144; tongue moist but furred; abdominal distension slightly less during day; gave 15 drops Liq. Morphiæ on 4 occasions with decided improvement, so that by evening he had absolutely no desire for drink; temperature 100·5; pulse firm and 122 per minute; tongue moist, clean, and indicating no sympathy with his condition; his abdomen still large, but the skin over it was flaccid. Tenth day, morning.—Temperature 100·5; pulse 144; tongue furred; no thirst; no change in the appearance of abdomen; gave 15 drops of Liq. Morphiæ and in an hour after temperature 99·5; pulse 120. Eleventh day.—Pulse 120; temperature 100; abdominal distension steadily subsiding; tongue clean, moist, and correct in every particular; no thirst; 15 drops of Tinct. Opii were given in the morning and evening. Twelfth day.—Pulse 120; temperature 100;

no thirst ; tongue clean ; abdomen still slightly distended ; action of the bowels occurred early in the morning of this day, the fæces passed being of normal consistence and appearance. Thirteenth day.—Pulse and temperature as usual ; no thirst ; no pain ; abdomen much less distended. Four teenth day.—No change. Fifteenth day.—Abdomen much improved in appearance ; no other change ; has passed pultaceous motions in moderate quantity. Sixteenth day.—Passed large quantity of fæces ; pulse 100 ; temperature 99·0 ; no thirst ; no pain, or any special symptoms. Seventeenth day.—No symptom of the peritoneal difficulty remains ; dietary gradually varied. The child recovered perfectly, but his diet had to be selected for nearly 6 weeks after his recovery from the Acute Peritonitis.

Case No. 22.—About the middle of Aug. this year I was requested by an old patient of mine to visit his mother, who resided with him in Park Lane in this town. He informed me that she did not appear seriously ill, suffering from constipation only, and as she was of an extreme age, 87 years, he feared she might become suddenly ill, and consequently thought it would be wise to call in medical assistance. Her previous medical history was that " the bowels had not acted for over a week," and that during the two days anterior to my visit, she had taken castor oil, salts, enemata and several purgatives, but they had produced no effect. I found the patient in bed, and on making an examination I found the tongue moist, slightly furred ; no thirst ; pulse and temperature normal ; no retention of urine, but the abdomen slightly distended ; no tenderness, but presented the characteristic contour indicative of an accumulation in the small intestine, a central globular form, not unlike an enlargement of the uterus. This was a case of simple accumulation usually termed " obstinate constipation," caused in all probability by the patient, an aged and debilitated subject, indulging in an inordinate amount of coarse food, to the propelling of which to the rectum, the muscular tissue of the intestines were not equal. After examining the patient, I called the gentleman who sent for me to the case aside, and counselled that patient should have the strongest and safest purgative that could be had. He answered certainly, and requested to know what was the strongest purgative that could be procured. I now explained the rationale of the treatment of the difficulty by diluents with abstinence from all solids, and we agreed that she should have half a pint of hot tea (this was the "strongest purgative ")

every 4 hours for 2 days. This was rigorously carried out for 2 days, when I revisited her and found no change. I now ordered her to have a warm water injection every morning for 3 days, and to take half a pint of warm beef-tea every 4 or 5 hours until my return. And on my revisiting her on the sixth day, I found no change of symptoms, two enemas had been given, but they brought away only a few scybala. I again advised a continuation of the beef-tea, with arrowroot and water, also an enema of hot water every day. The patient during this visit expressed to me her firm conviction that she would not recover from this difficulty, mentioning also that this form of occlusion had troubled her some some years before. I called again on the tenth day, and found the patient walking about the house; she had, since my last visit, several copious evacuations per rectum, one enema only being given, this producing no effect. I examined the form of the abdomen; it appeared rather concave than convex in contour, so thoroughly had it been emptied. My attendance on the case now terminated, and I told her a more sparing use of solids would be more suited to her age; no medicine was given in this case, and I would not in all probability have been permitted to make this omission had I not taken one of her relatives into my confidence, to whom I fully explained the rationale of treatment. He also appeared to see the reasonableness of it, and undertook to see that it was rigorously attended to. This case brought to my recollection a similar one. It occurred some 6 years ago. I was called to Birkenhead to visit a case of Myelitis, in which there was paralysis of the rectum and bladder. His friends, when relating his symptoms, informed me that all means to empty the bowels had failed. I examined the abdomen, and there was nothing giving evidence of acute obstruction, not the slightest distension even, but it was possible (as the patient was much emaciated) to count the scybala in the transverse colon. On enquiry I found that the administration of an enema had been attempted, and only enough water would enter as to fill the rectum. Not crediting this I undertook to give an enema, feeling certain of succeeding, but, much to my astonishment, failed. I afterwards explored the rectum with the hand, but could not find the cause of the obstruction to the passage of water into the gut. I now advised small doses of opium by the mouth (5 drops of laudanum), and told them to confine the patient to the diluent form of aliments, with the result that in a very short time diarrhœa occurred, thus removing this difficulty.

During this year I assisted my friend Dr. Steele in a case of traumatic enteritis. The patient had received a severe injury to the spine, which had caused paralysis of the lower portion of intestines and bladder; yet as soon as the intestinal obstruction occurred, which was about 10 days after the accident, this difficulty was cured by suitable diet and small doses of opium under the skin, the bowels acting copiously, discharging their contents, much reduced in consistence on the 23rd day after the commencement of the obstruction. In these two last cases we have a stiff test of the correctness of my practice. The result was the same although the patient suffered from palsy of a portion of the gut.

Case No. 23.—On Tuesday morning, October 24, 1878, my coachman informed me that a powerful and previously healthy black mare, my property, was not well. I visited the stable and found her presenting the usual symptoms of colic—scraping the floor, laying down suddenly, then rising again, refusing food and drink, with pulse slightly accelerated. I ordered a draught of Tinct. Opii 1 ounce, which appeared to give slight relief. Repeated the dose in the evening, and gave orders that her food should be stopped, and only allowed a drink of water. In the evening the symptoms appeared unchanged, simply those of mild colic. Morning of second day decidedly worse; gave 2 ounce dose of Laudanum in half a pint of whiskey and water. I found that although I prohibited any fodder to her, yet this order had been set aside, but on my reprimanding the stablemen, they promised not to ignore my injunction. I now left home at 2 p.m. At that time the mare was suffering, but not so much as in the morning. On my return next day at 2-30 a.m. I found her much worse, and she had been so for many hours. I now gave a draught of 4 ounces of Tinct. Opii, and introduced nto Pharynx a gallon of hot water, by means of the "horn." At 9-30 a.m. no better; had been very restless during night, up and down, pawing the ground, rolling about, exhibiting signs of extreme pain. At 9-30 on the third day of the difficulty, I administered 5 grains of Morphia in solution under the skin. In 30 minutes she was easy, demanded food, which she did not get, but was offered drinks of water which she refused; in fact she presented no symptoms of the difficulty. At 11 p.m. the symptoms returned, and I repeated the dose with a like result, so that the mare appeared perfectly well; pulse nearly normal. I now gave her another gallon of hot water. Fourth day, 9-30.—Became

very restless; no indication of pain; 6 grains of Morphia under skin; in 30 minutes relief was obtained, so that she demanded food. At 1 p.m., as she was reported to be in pain, I repeated the dose; I did so again at 12 p.m. on the recurrence of the alarming symptoms. This evening I filled the manger with water in which was deposited two handsful of bran. During the night she drank half of this, in bulk equal to 2 gallons. Fifth day, 9-30 a.m.—In pain; return of symptoms; gave 7 grains under skin, and repeated the dose at 2 p.m, also about 12 midnight. Left a drink in the manger of which she used, fully 2 gallons; the injection under the skin always relieving her in 30 minutes. This day passed a small, hard motion, and also a small pultaceous one. I also satisfied myself that the rectum was not plugged; the abdomen, which up to this day was tense, but not to an extreme degree, now became perceptibly relaxed. Sixth day.—Return of symptoms, but in a milder degree. I now gave 8 grains of Morphia under the skin, which perfectly relieved her; no food has yet been allowed; began to mix a little bran with the water in manger, the bran used up to this day could not have weighed 4 pounds. I did not see her again until 5-40 p.m., and I found her in pain, laying down. The stablemen urged her to get up, as I preferred to give the injection of Morphia under the skin while she was in the upright position. However, it was not possible to get her to move, so I gave her 8 grains while she was in the recumbent position. On my return in 45 minutes I found her up, loudly demanding food. She continued easy and apparently well and in good spirits until 11 p.m., when she showed slight symptoms, indicating a return of the distress. I now gave 8 grains of Morphia in solution under skin. Seventh day.—Return of symptoms, but not nearly so urgent; gave 10 grains of Morphia under skin; abdomen much reduced; no distension; had taken a gallon of thin oatmeal and peameal gruel during the night; remained well and in good spirits up to 8 p.m., when, on slight return of symptoms, I gave 12 grains of Morphia under skin, and left a gallon of thin oatmeal gruel in manger to be ready if she was disposed to take it during the night. Eighth day, 10 a.m.—Not in pain, as far as objective symptoms show; will not get up; had been laying some hours; got up at 10-30, but laid down again; now gave 10 grains of Morphia under skin, and a gallon of oatmeal gruel; she also drank at 12 noon a bucket of water, and rose up making signs for her usual food, and appeared all right. When lying

down the skin of the abdomen was in folds, showing that there was no distension ; pain returned. At 6 p.m. gave 12 grains Morphia. At 12 midnight gave 14 grains of Morphia—gave this extra dose as the former doses appeared to lose their effect too soon. Ninth day, 10 a.m.—Evidence of some distress; gave 14 grains of Morphia under skin. In one hour afterwards my stableman passed his hand into the rectum and withdrew a small quantity of ordinary fæces, covered with the excretion peculiar to horses fed on oatmeal and peameal. The usual diet of oatmeal and peameal, made very thin with hot water, was given this day ; and in the evening at 11 p.m. 11 grains of Morphia. Tenth day, 10 a.m.—Appears much better ; had laid down in the early part of the night, but as she had become jammed diagonally across the corner of her "loose box," she was racked up with the rack chain, attached to the head collar by a piece of calico bandage, so that if any undue strain occurred, the bandage would break and release her. This arrangement kept her standing all night ; and 11th day, 10 a.m. she appeared free from pain ; I gave only 10 grains of Morphia under skin ; allowed bran mash with oatmeal well reduced by hot water. At 6 p.m. I was sent for, as she was supposed to be dying. I found her lying on her back in the "box," hind leg tucked up to the abdomen ; fore legs spasmodically flexed and fixed ; eyes closed, and breathing hardly perceptible. I could not detect the slightest motion or tremor, viewing her from a distance of 6 yards. This condition lasted about 5 minutes, when she partly arose, and looked towards her flanks. I now injected 15 grains of Morphia, and in half-an-hour she was all right. Got up neighing and playing with the horse in the next stall, and making signs for food. She was given 2 gallons of oatmeal gruel. This freedom from pain lasted until 11 p.m., when she gave evidence of some slight pain, and 15 grains of Morphia were again given under the skin ; and in an hour after (12 midnight) she was lively; indeed appeared as though she never had been a sufferer. Twelfth day, 10 a.m.—Symptoms of pain ; 16 grains of Morphia were given under skin ; this dose was repeated at 11 p.m. on recurrence of signs of the distress. Thirteenth day.—Repetition of treatment as pursued on the twelfth day. Fourteenth day.—Appeared in much pain at 11 a.m. ; no abdominal distension ; gave 20 grains of Morphia under the skin, which was followed by usual relief, and the mare appeared in excellent spirits ; took a bucketful of bread soaked in hot water. At 6 p.m. appeared again

in much distress, laying down and declining to rise when urged, and looking as if dying; gave 20 grains of Morphia under skin, and in 30 minutes exactly appeared perfectly well, in good spirits, playing in the stall, and demanding food. The hand, to-day, was passed into the rectum, and it was found still empty; a slight amount of excrementitious matter, evidently from oat and pea meals, was withdrawn, amounting to about a handful. Fifteenth day, 10 a.m.—Found her on her back with very evident signs of pain. Some friends that were with me assured me she was dying; my previous experience informed me otherwise; and I gave 20 grains of Morphia under skin; and in 40 minutes she was up and apparently well. Her diet this day was limited to strong Linseed tea and cold water, of which she took about a gallon. Twenty grains repeated at 2 p.m., and again at 12 midnight; relieved all pain, so that during this day she gave no further signs of distress. Sixteenth day.—After the strong doses of the previous day she had not her usual signs of distress present in the morning, consequent on the effect of the remedy being spent. Another 20 grains of Morphia under skin at 10 a.m., also at 2 p.m. and 12 midnight; and thin, fine flour gruel only were allowed. Common salt and water were given this day, as I thought she did not drink sufficiently. It had the effect of making the mare drink more this day (about 2 gallons). She passed an excellent day; and at midnight lay down in apparent ease and good spirits. Seventeenth day, 10 a.m.—No evidence of pain; pulse only slightly accelerated; no Morphia this morning. Continues well all day, but gave 15 grains of Morphia at night (11 p.m.); has drunk more liquid, in the form of thin gruel, this day, and also about a gallon of water. Eighteenth day, 10 a.m.—Pulse nearly normal; no evidence of pain; refuses drink or any form of nourishment, not even the ordinary food, a small quantity being offered to her for the purpose of gaining information. At 11 p.m. was very quiet; laid down; pulse normal; no opiate given. Nineteenth day.--Refuses food and drink; no evidence of pain; no remedy given; lays down and has no symptoms indicative of malaise; gave enema of 2 quarts warm water, which brought away slight motion. Twentieth day.—Was called at 3 a.m. by the stableman reporting that the mare was in pain. Got up and found her with symptoms of distress; gave 15 grains of Morphia under skin, which gave ease in 30 minutes. 10 a.m.

—Pulse accelerated; she is not perfectly easy; has taken 1 gallon of water, but refused more up to 10 p.m., when she took a little drink; I gave her 15 grains of Morphia under skin, as she appeared restless. Twenty-first day, 10 a.m.—Restless; slight acceleration of pulse; refuses food and drink; gave 10 grains of Morphia under skin, and some salt was placed in her manger, after which she took half a bucket of water; has taken raw oatmeal and water frequently during day; 15 grains of Morphia were given at 7 p.m., as she appeared uneasy; again, at 11-30 p.m., 10 grains, as she now gave evidence of some distress; took now nearly a bucketful of water. Twenty-second day, 10 a.m.—Pulse accelerated; drank freely of oatmeal and water; shows signs of pain; gave 15 grains of Morphia under skin; and, again, at 8 p.m., 22 grains under skin. Twenty-third day.—Symptoms of pain; gave 20 grains 10 a.m., 11 a.m. and 11 p.m., and she partook of raw oatmeal and cold water mixed. Twenty-fourth day.—Symptoms of pain; gave 25 grains of Morphia under skin; repeated the dose at 11 p.m.; took during day nearly 2 gallons of cold water, with raw oatmeal in it. Twenty-fifth day.—Pulse normal; appears free from pain; no evidence of the difficulty; looks emaciated; refuses food and and drink all day; no medicine given. Twenty-sixth day, 10 a.m.—Pulse normal; refuses food and drink. This condition continued up to 6 p.m., when she had symptoms indicative of pain; laying down; looked at her flanks, and rolling on her back, with legs intensely cramped; gave 25 grains of Morphia under skin; and in about three-quarters of an hour she was up, and took one fourpenny loaf and a bucket and a half of water. At 12 midnight gave 20 grains more of Morphia. Twenty-seventh day, 10 a.m.—Appeared much better; pulse only slightly accelerated; has taken a little bread and half a bucket of water during day; lays down also, and appears cheerful. 9 p.m.—Slight symptom of uneasiness; gave 25 grains of Morphia under skin; no abdominal distension for many days; passes about 8 oz. of water every other day. Twenty-eighth day.—Pulse normal; no special symptoms; refuses any food or drink; no medicine given; lays down for an hour or two; then stands for the same period. Twenty-ninth day.—Pulse rather below normal, but full and regular; no signs of the past difficulty; has taken a little water and half a dozen potatoes, 2 small turnips, and 2 moderate sized carrots with half a bucket of water; no medicine given. Thirtieth day.—Pulse normal; sleeps and rests well, and

moves about as though she were convalescent. During this day took 6 potatoes, 2 moderate sized turnips, and 3 moderate sized carrots ; drank also a bucketful of water, and passed, spontaneously, fæces of normal consistence in masses 5 inches square; no medicine given. Thirty-first day.—Doing well ; no medicine ; has taken a few beans, potatoes, and 2 buckets of water ; has been washed all over, and appears well but very weak, and lays down occasionally ; passed small quantity of fæces, less than previous day. Thirty-second day.—Appears well ; has taken a few beans, 6 potatoes, and drunk a bucketful of water. Thirty-third day.—No special symptoms ; appears well but emaciated and feeble. Thirty-fourth day.—Nothing special ; takes daily about a half a dozen potatoes, 3 or 4 turnips mixed in a handful of beans with bran in half a bucket of water. In the evening of this day (about 12 midnight) I visited the stable and found pulse much accelerated, 5 in 5 seconds ; respiration much accelerated ; refused drinks and solids ; abdomen tense ; no indication of pain, but covered with saw dust. This made me suspect that, anterior to my visit, she may have been down struggling and in pain. I now gave 10 grains of Morphia under skin ; and visited again at 1 a.m., but found her worse ; nose, ears, and feet cold ; pulse nearly double the normal rate, 7 in 5 secs. ; shivering. I now felt certain that she must die. I made the stable extra warm, turned the lights "full on," and left her. She was found dead in the morning at 6 a.m.

In the treatment of this case I observed that the opium had the same effect as when given for the treatment of this lesion in the human subject, viz., large doses did not produce any toxic effect, it diminished the thirst, moistened the tongue and mouth, diminished the frequency of pulse, and gave perfect relief from pain. Suspecting that possibly some error of commission or omission had been practised in the treatment, inasmuch as a mare that had been apparently well for many days died suddenly, induced me, accompanied by my nephew Mr. R. Jones, to visit the Knacker Yard and witness a post-mortem. The lung, heart, &c., were sound ; there was much abdominal distension. The cause of death was the impaction in the colon of a large scybalous mass, enclosed in a thick layer of lymph, which, at an inflamed part, had been arrested in its progress down to the rectum, and had ulcerated its way through the intestinal wall. It was found in the peritoneum, with, of course, a certain amount of fæcal

matter, much reduced in consistence and equal to the density of gruel. This scybalous mass was exactly the shape, and slightly larger in its measurement than the heart of the same animal.

During the treatment of this case I had many difficulties. In the first place my stablemen were much averse to the opium and restricted diet, and wished to be permitted to use copious enemata, turpentine draughts, and several other very unsuitable remedies. Again, many of my friends who visited her urged me to hand over the case to a Veterinary Surgeon ; others asserted that it was not a case of intestinal difficulty ; and from the first to the last day of treatment I was pestered by all around me to call in the aid of a Veterinary Practitioner. I unfortunately gave way in some degree, and allowed her a too free indulgence in solid forms of food, such as beans, potatoes, and turnips. Noticing that the urine was very scanty—sometimes none for 3 or 4 days—means were taken to induce thirst, as I feared she was not taking sufficient to reduce the consistency of any accumulation that probably existed. The post-mortem showed that there was more than sufficient liquid in the bowel. Again, I did not take into consideration that the horse does not vomit, and by this means part with the liquid taken, and that, consequently, a moderate amount of fluid will suffice to overcome the mechanical condition on which the obstruction depends. Again, on the twenty-ninth day, there were present all the signs of returning health, which, unfortunately, induced me to use more food. The scybalous mass was an exact model of the cul-de-sac end of the "Blind Gut," and had evidently been formed at a period long anterior to the date of the difficulty, and was covered with a thick layer of lymph. However the mass had begun to soften, and, when touched with a cane, split into two parts. It appeared to consist of chopped hay only, and was of a dark green colour. I had a conversation with the "Knacker Man," and he informed me that he "cut up" about two thousand annually, and that a large percentage of horses die from this malady, and that their life is seldom prolonged beyond the seventh day. Several of my veterinary friends inform me that from 8 hours to 5 or 6 days is the usual average in fatal cases. This case has convinced me that intestinal obstruction, when it occurs in the horse should be treated in the same way exactly as when met with in the human

subject. This is the second case of intestinal obstruction I have treated in the horse. The first case recovered after 3 weeks illness. It was one of enteritis, brought on by excessive exercise after a drastic purgative. The treatment followed in the first case was opium by the mouth in varying doses, commencing with Tinct. Opii ℥ i three times a day up to ℥ x twice a day. A further illustration diagramatically is given in plate 3 of the lesion in this case.

Case No. 24.—In June this year I was requested to attend the wife of a Liverpool dock-gateman. Her medical history was that some 3 months previously she had consulted me for some pain and swelling in the right hypogastric region, when, suspecting slight typhlitis, I ordered her a restricted diet with an opiate mixture, and in about 10 days she fully recovered. In 3 months afterwards the tenderness and swelling returned, when the advice of a midwife was asked, who advised a sharp purgative. This so aggravated the symptoms that she sent for me, and I found evidence of typhlitis. I treated her with small doses of Opium, and when this failed to alleviate suffering, I supplemented it with an occasional dose of Morphia under the skin. Her diet was, of course, also restricted. I did not keep daily records; but the bowels acted on the twenty-third day; she suffered diarrhœa about every alternate day for a week, when she commenced to pass scybala, the size, shape and colour of chestnuts. These were passed daily for 3 days, and numbered in all 38. The patient recovered.

Case No. 25.—June, 1878, I met a medical friend, who enquired if I had heard that a mutual friend, and professional brother, was seriously ill with some form of intestinal obstruction. In the evening of the same day, I had a message from the gentleman in charge of the case, informing me that the patient wished me to call upon him, also that the patient, who had been very bad, was much better. This caused me to delay visiting, as I hoped that in a few days my visit would be more acceptable, when he regained some strength, &c. On June 29th, 1878, I visited him, and found him on the couch in his drawing-room, and, after a few preliminary remarks, we soon found ourselves discussing what he judged his past difficulty to be. His history was, that during the 3 previous months he had been in very indifferent health, and had

suspected some threatening Liver complication, and that late in the previous month he commenced to vomit, which became for a short time stercoraceous in character; he suffered at the same time from constipation. He invited, to assist him in his illness, a medical friend; and for some days opium, in doses inadequate to produce any apparent benefit, was given. The result was, that when certain symptoms arose they were misinterpreted. The medical gentleman, supposing them serious, proposed a consultation, when a change of treatment was advised, the opium discontinued, and the medicated enema branch of the "main force" treatment adopted, together with the exhibition of tobacco, belladonna, &c., which appeared satisfactory, inasmuch as partial relief of constipation occurred just at this time. This occurred 2 days before my visit. At his request, and with the consent of his medical attendant, I examined the patient, and found the pulse 9 in 5 secs.; temperature 100; tongue furred; moderate thirst; abdomen moderately distended, the swelling being principally confined to the umbilical region. I found also that his diet, judging by the rule which I adhere to, was very unsuitable. During my visit he commenced to have pain, and I suggested that ¼ of a grain of Morphia should be injected under the skin, but he objected, as the last dose he had taken, some 5 or 6 days ago, had made him delirious, and he also added that he did not think opium suitable to his case. From this I emphatically dissented, adding that the last dose of Morphia given, was not sufficient to have a beneficial effect, and that he was delirious from pain. I also tried to demonstrate that the obstruction he judged as cured was still present, and that he was in a critical condition; I pressed him also to further restrict his diet; and inasmuch as he would not permit the administration of opium, he was urged to take another form of narcotic, viz., a glass and a half of brandy and water. The medical gentleman, in charge of the case, agreed with myself as to the necessity of further caution and treatment. In 10 days the patient sent for me to hold a consultation with his medical adviser, and I made a second visit; found the patient much better; tongue moist; less thirst; pulse and temperature improved; abdomen much less distended. The report given to me, was that in 3 hours after the termination of my first visit, he began to suffer from extreme pain, when his medical attendant injected under the skin ¼ of a grain of Morphia and repeated the opiate in gradually increasing doses every 6 hours until the pain had disappeared, and the bowels commenced to discharge

their contents daily, the opium being after a few days only resorted to on special occasions. He continued to improve steadily up to July 26th, when he drove out to the country and partook of about 4 ounces of cream. This was followed, in about 12 hours, by vomiting, which continued every 2 to 3 hours for 24 hours. The Morphia was given, and he was soon better; but unfortunately he committed another error in diet, and it was followed by symptoms so serious, that on July 29th a message was sent to me that the patient was dying. On visiting him I found present all the symptoms indicative of obstruction in some portion of the small intestine. During my stay at this visit he frequently vomited matter, stercoraceous in appearance, but there was not the faintest trace of the characteristic odour usual in obstruction; but feeling certain that it was a case of obstruction, I judged that, probably, the peculiar odour was absent because the obstruction was very high up. Vomited matter was examined at the moment it was discharged by the patient, also some hours after it had been ejected, but in neither sample was the slightest stercoraceous odour perceptible, nor was there any such odour in any of the vomit parted with during my attendance. The pulse on this day was 9 in 5 seconds; temperature 101; abdomen moderately distended; thirst intense; pain moderate; tongue furred. Morphia was now given in ½ grain doses about every 8 hours, just when necessity for the remedy arose. The patient now had such confidence in his opiate; that he had the syringe constantly charged in case it was required during the absence of the medical attendant, and on several occasions a member of his family gave the dose, and thus his pain was promptly relieved. I now visited him daily; the constipation lasted on this occasion 8 days. This avoidable relapse we thought was the most serious of all he had yet had. At the expiration of the 8th day his bowels acted freely, but only slightly reduced the distension. After an interval of 40 hours the bowels again discharged their contents, and continued to act for 4 days, collapsing the abdominal wall, so that it presented a concavity when the patient was in a reclining position. He continued to improve, and went to the country for change of air. This was in a week after my last visit. He appeared excellently well, and he was most urgently advised by myself and others to stringently adhere to a certain diet, &c., until his return.

On his return home I visited him again, and he expressed himself as feeling much better after the change from town. He had been away about a month. I now carefully examined him, and found the abdomen not extremely distended, the swelling showing the highest elevation at the umbilical region, indicating, in my opinion, that the small intestine was partially occluded low down, or at its end, as he had a small tumour-like swelling in the right hypogastric region; tongue furred; pulse slightly accelerated; temperature 100. I informed him that he was much worse than I had yet seen him, as the accumulation was certainly greater than it had been yet, and that possibly all these relapses would cause the gut to be permanently œdematous, and, consequently, paralysed; and that during the next week he should have to go through a repetition of his previous distress. However he did not himself think there was any ground for alarm. During a long conversation I elicited from him enough to satisfy me, that this relapse had an avoidable cause. As I predicted, he had to be treated again for genuine obstruction, from which he was relieved, but only for a time, as the difficulty recurred when even the slightest deviation from a suitable diet was allowed. Milk seemed to be the article of diet that specially caused him distress. This patient had from six to seven relapses, four of which could have been avoided, and most certainly had we been able to have demonstrated to him that his case was one of genuine obstruction, his co-operation, even after the third relapse, would have saved him. He died in the sixth month without any symptoms of obstruction, save vomiting during the last week of his illness, his bowels acting two to three times daily; not the slightest distension for days previous to his decease, but slight pain, for which an occasional small dose of Morphia was given. It was noted in this case that as soon as his distension was relieved there was, occasionally, decided, though not extreme, collapse, such as I have seen in some; yet some hours would elapse before the lower segment of intestine parted with its contents. It was also remarkable that this gentleman. though the subject of this serious lesion, was confined to bed but a short period, not over six weeks in all. My friend, who was much respected, and took great interest in his profession, had requested that a post-mortem examination should be performed, to place beyond doubt the nature of his complaint. The post-mortem was performed by Mr. Rushton Parker,

who found intussusception involving the ileo-cæcal valve, not a trace of which was present, and the opening from the small intestine to the larger intestine admitted the passage of the finger easily; but there was also a portion of the small intestine which had been adherent to the cæcum, and communicated with the cæcal cavity by two openings, caused by ulceration, so that nearly all the contents of the small intestine passed into the large intestine without traversing almost sixteen inches of the extreme end of the small gut. (See Plate 4). It astonished me to find the existence of this double form of obstruction, intussusception, and partial isolation, yet had their diagnosis been possible, it could not in any way have affected the treatment. Again, his suffering and the physical symptoms were not so intense as those frequently observed, in cases where the occlusion is not so complicated. The original attack, and each relapse, were accompanied by identically the same symptoms, commencing with pain, distension, vomiting, accelerated pulse, rise of temperature, together with more or less collapse, when relief of distention occurred, then passages of flatus, the discharge of the contents of the lower segment of the bowels, a series of discharges lasting for several days, an occasional day intervening, opium, however, together with elevation of part of couch; restricted diet always triumphed over the obstruction. This case showed me the possibility of genuine obstruction existing with most obstinate and frequent vomiting for days, the matter ejected having not the faintest odour, supposed to indicate stercoraceous matter. I have often noticed the stercoraceous fœtor in the vomit for days, and its absence for a few hours, then, a repetition of the characteristic odour, but its total absence from first to last, as happened in this case, I never before observed. The question naturally arises, could this case have recovered? I think there was a high probability of his recovery, had certain details been followed from the commencement. Several errors occurred during the treatment, the most notable being my own, in permitting his visit to the country, and so losing control of him for four weeks.

Case 19 was identical with this, and of the two, certainly accompanied by symptoms of greater intensity; but in his case I know for certain, that with the exception of two occasions, (when errors in diet caused two relapses which happened some twelve weeks after his recovery from the primary attack,) not an iota of variation from my instructions was permitted, and to this only I attribute his recovery. Certainly one mistake in

deviation would have killed him ; that Case 19 was the most difficult to treat is only too apparent from the fact that he required Morphia in doses, varying from ¼ grain to 2 grains under the skin, which had to be repeated every 6 to 8 hours, while in this case ¼ to ½ a grain of the remedy sufficed, and had only to be repeated every 8 to 12 hours. The medical gentleman, with whom I co-operated in the treatment of this case, agreed with me as to the line of treatment, and a differential diagnosis was not attempted. We judged the case one of mild enteritis at first, aggravated by frequent and avoidable relapses. Had the exact state of matters been made known to us, no alteration would have been made in the treatment.

Some of my readers may think that I have a special antipathy to purgation, but, I assure them, this is not my bias. There are a multitude of ailments in which a free purgation is of vast assistance, giving relief promptly, and long ere such relief could be obtained by the unaided method of Nature ; as, for example, when a patient, suffering from simple constipation, consults his medical adviser concerning symptoms of headache, giddiness, thirst, with loathing of solid food. If this loathing of solids is treated by abstinence, while the thirst is quenched by liberal draughts of water, this treatment will, in the course of a few days, be followed by a discharge from the bowels of their fœcal contents ; but, when no obstruction beyond simple accumulation exists, this can be effected, in a few hours, by an aperient, or, in a few minutes, by enema, and thus early relief of attendant symp-

toms will be obtained. It would be folly to wait for action by the method of Nature; the mode of action of which method, is TO MAINTAIN A DISPROPORTION BETWEEN THE SOLIDS AND LIQUIDS CONSUMED, THE LIQUIDS BEING DEMANDED BY THIRST, AND THE SOLID ALIMENTS REJECTED FROM LOSS OF APPETITE. This is also the explanation of what has been observed, that a free evacuation of the gut contents above the obstruction may occur, though an obstruction to the passage of fœces of ordinary consistence remains, and disposes of the reported efficacy in some cases of enemata in obstruction, and, again, shows why opium after a certain time cannot prolong the constipation; viz., at the period when the intestinal contents have been much reduced in consistence. Case No., 7, in the preceeding paper, is an example of complete evacuation of the gut, above and below the obstruction, previous to removal of the lesion. In that case the abdomen was much distended for many days, yet in a period of two hours, it was so relieved of its contents that it became extremely concave in form. Again, in the case referred to at page 8, enemata were used on the first, second, third, and fourth days, and the bowels were unloaded on the fifth day, the medicated

enemata of the fourth day being credited with the result, though it arose from nature's method, which, in this instance, demanded at least five days; and as the unreasonable practitioner would allow no longer time, nature did the duty, at a serious risk to the patient, in a shorter period than she would have preferred, so as to ensure safety. This case was not a serious one, as may be inferred from the patient's tolerance of the treatment, in which the main force method was zealously practised, but despite all this, recovery occurred.

The case discussed at page 7, is another example of a difficulty, where all interference was in vain, until nature had done her share; and though the gut contents were brought away on the 14th day, it was at a great risk to the patient's life; for had an expectant method been practised, the bowels would have acted, perhaps, 10 days later, but with less suffering to the patient, and less risk to his life. It is my opinion that relief of the loaded bowels, early or late, depends upon the size of the diminished calibre of the gut, and the condition of the intestinal contents.

In intussuception the calibre of the gut being much more reduced than in peritonitis and enter-

itis, a longer process of solution and accumulation must occur, and it may be observed that there is, in most of these cases, less thirst, arising from more accumulation, consequent on more complete obstruction.

The opium method of treating obstructions of the gut, is a means of supplementing the efforts of nature, by favouring a longer retention of fluids; thus the thirst is abated and the solids contained are subjected to longer periods of uninterupted disintegration, and the vomiting, when it does occur, may bring with it more ingesta.

As illustrating the natural method of relieving constipation, I submit the following —

July this year I was called to visit a patient at Beaufort Street, and found him suffering from a shock, after copious and repeated hemorrhage from the bowels, which had occurred during the two days previous to my visit. Prescribed morphia and ergot; prohibited all solids, confined his diet to beef tea, arrowroot or sago and water. This treatment was continued four weeks: bowels acted on 22nd day, and continued to act two to three times a day for a week. At no time was there any abdominal distension.

Some time about the middle of last year I was requested to visit a lady in Erskine Street, who, on the day of my visit, had hemorrhage from the stomach. I prescribed morphia and astringents, with restricted diet, but as the stomach did not tolerate the remedies, treatment was changed, and gallic acid prescribed; this was continued for some weeks, diet limited, at first being allowed tea, arrowroot, and sago water, subsequently, mutton and chicken broth with and without pea flour, was added to her diet. Spontaneous action of the bowels took place in the fourth week.

Some three years ago I was invited to visit a sick man in a street out of North Hill Street, in this town, and found him suffering from general debility and among other symptoms to which he drew my attention to was that of constipation. His previous attendant was a herbalist, and had prescribed a decoction of mountain flax to relieve the constipation. The patient showed fœces passed that day after a dose of the flax decoction. They were hard, smaller in diameter than the normal size, and about seven inches long. On examination of the abdomen it was slightly distended; no tenderness on manipulation. Morphia and Muriatic Acids were prescribed, and his diet restricted, and after a few days constipation the stools became pultaceous in consistence, and acted about every third day.

My practice has been in cases where I desire the utmost possible rest of parts, or nondisturbance of the patient, such as Hœmatemesis, of severe compound fracture of the lower extremity, and Typhoid Fever, to diet the patient as in intestinal obstruction. And rarely have I found it possible even with the addition of an opiate to delay action of the bowels beyond three weeks. I could narrate many, such, but as my readers can with safety practically verify my views, it is unnecessary to give further examples.

A correct view of the mode of spontanous correction of constipation, leads to valuable bases for the treatment of so called "Habitual Constipation."

SUMMARY AND ANALAYSIS OF SYMPTOMS.

The conclusions I have arrived at since I began to interest myself in the history, causes, and treatment of Intestinal Occlusions, are—

1.—That we have retrograded during the period that has elapsed since Dr. Sydenham published his opinions, and practice, of an opiate treatment.

2.—That the causes which give rise to gut obstructions may be, traumatic, irregular peristaltic action, straining, lead poisoning, ingesta, inflammation, prolonged drastic purgation, and mechanical derangement, as volvulus, rent in mesentery, hernia, &c.

3.—From the category of obstructions I exclude a merely loaded rectum, which usually arises from neglect on the part of the patient to respond to the call of nature, and which can be at once detected

by digital examination per rectum, and by the parturient character of the symptomatic pain. This condition is an extremely rare complication following obstructions treated by opium and restricted diet.

4.—Treatment may be briefly stated as a method which involves a restriction of the quality and quantity of food, with limited libations, and restraint of peristaltic action in the normal portion of the gut.

5.—That early relief of constipation, and gradual diminution of distension, indicate enteritis, or, peritonitis, and the longer the constipation is prolonged, the more fluid will be the evacuation when it does occur. Again the relief of constipation is not a trustworthy sign that the patient is no longer in danger.

6.—That distension and pain are if possible to be averted, and when present, diminished, if practicable. The symptoms of constipation are to be ignored in treatment, as the more prolonged the constipation the more fluid the evacuation when it does take place.

7.—When vomiting has been absent for from 2 to 3 days, it is highly probable that the gut is patent, though there be no evacuation of the gut contents

per rectum; as the contents below the obstruction (should there be any not already of pultaceous consistence,) have to be subjected to the same process as occurred to the contents above. As soon as this is effected the opium will no longer constipate.

8.—That semi-fluid fœces do pass through the abnormal part before peristaltic action has returned to it; diminution of vomiting is to be aimed at, yet its total cessation, while the obstruction exists, often precedes fatal collapse. The character of the vomit is not a serious symptom, but its frequency should be regarded as such.

9.—That a stercoraceous vomit is not per se serious, though of value as a diagnostic symptoms, indicating undoubted obstruction, and also that the solid contents of the gut are undergoing the process of reduction of consistence, and expulsion upwards, thus relieving the point of occlusion from pressure.

10.—Those who practise enemata and inflation in occlusions ignore the fact that it is not possible to fill or distend more than a part of the intestines, as the too limited area of the abdominal cavity does not permit of a simultaneous distension of the whole gut.

11.—There should be no interference per rectum, after the first few hours. The indications that should guide us in the use of opium are, the pulse, vomit, and pain. Opium, when given in sufficient doses, decreases the frequency, and increases the volume, of the pulse, and makes the act of vomiting more copious and less frequent, while pain is sometimes totally relieved without producing stupor. The treatment of typhlitis is no exception to the rules laid down.

12. The diet should be carefully regulated for a period after, as well as previous to, the resolution of the difficulty.

13.—Those therapeutical remedies which are injurious, as well as those which have a beneficial action, can act only through their effect on the healthy portion of the intestines. We possess no remedy that will directly affect the obstructed part, except interference by operation.

14.—That trocaring a distended colon is necessary if an accumulation is straining the ilio-cœcal valve, i.e., in obstruction of the large intestines. This may be suspected by a change in the locality of the pain, viz., from the left hypogastric

region to the right hypogastric region. Elevation of the foot of couch is also a valuable item of treatment in severe cases.

15.—The indispensible remedies required for the treatment of these difficulties, are,—restricted diet, opium, and gastro-enterotomy. The former is indicated in every case, while the latter is required only when symptoms show that the former must fail.

16.—When operative interference is indicated that advised and practised by *Nelaton is the most advisable, viz., to incise the abdominal wall an inch above, and parallel to, Poupart's ligament, and attach to the incision the first distended coil of intestine that presents itself; then puncture the gut and ignore the primary difficulty. This operation is easily performed, and adds but little, if any, to the danger. Should it be performed on patients in progress of recovery I cannot believe that it would add much to the patient's difficulty, although an unnecessary operation.

*Nelaton was not the first to perform this operation, though he appears to have generally practised it for the relief of obstruction, as it is recorded that Mr. G. Freer, of Birmingham, and Mr. Daniel Pring, of Bath, both performed the operation of gastro-eterotomy for the relief of obstruction of a non-malignant cause. This was in the years 1817-1820.

General Symptoms.

A consciousness of unusual weight and distension of the abdomen, with, or without, pain, this feeling being aggravated by even mild aperients or enemas.

Vomiting, the matter ejected being either stercoraceous, or, not.

Accelerated pulse.

Rise of temperature.

Brown furred tongue.

Thirst.

Scanty urine.

Constipation.

Passage of gas per rectum.

Collapse.

Reaction.

Discharge of intestinal contents per rectum.

Mild form of recurrence of accumulation.

Relief and gradual recovery.

These are the general symptoms in successfully and correctly treated cases of serious obstruction, but, in unsuccessful cases, the stage of collapse may not be followed by reaction, or only partially so, from therapeutic stimulation.

A feeling of unusual weight and distension of the abdomen.

This symptom though present in very many cases, is invariably to be found in the chronic form of enteritis, and the patients assign as a cause for this feeling, that the intestines are sluggish in their action, and

generally desire to be relieved from what they term "costive habit." But on the practitioner making a careful cross-examination, he finds that after even mild aperients the patient feels no relief, and when a drastic purgative is taken, the abnormal sensation is much increased, although the intestines are emptied by the aperients taken. In these cases again, enemata induce slight colic, and bring away in the fæces, casts of the bowels. When casts are discharged, it is of importance, so as to avoid permanent mechanical defect of the gut, to treat such cases early by strict attention to diet, with small doses of Muriatic Acid and Opium, giving doses an hour before and after meals, ignoring the constipation produced, which very rarely lasts beyond 7 to 10 days, when the bowels will begin to act every 1 or 2 days despite the Opium, (the restricted diet being also continued). I had under my care a remarkable example of this form of lesion. A lady from Barmouth, informed me that she had for years suffered from this sense of weight and distension of the abdomen, and had passed (her medical adviser at home confirming this) casts of the bowel from 1 foot, to 4 feet in length, and that now they had ceased to appear. Action of the bowels occurred at times spontaneously, but if an aperient was taken, she was obliged to confine herself to the reclining position, or the bowels would not part with their contents, and much colic would be produced.

Pain.

This is often a cause of fatal termination, before Nature has had sufficient time to effect the necessary steps to resolution. Where relief of obstruction is beyond our art, pain often kills before the lesion has had time to do so. To relieve pain, then is a very essential aim of treatment ; and this is effected by opium, which, whatever the ultimate result may be, is always successful in prolonging life. Again, the mode of the accession of pain, may aid in a differential diagnosis. If felt suddenly in a previously healthy subject, intussusception is suggested, but, to this there are exceptions ; in my own practice, and that of others, intussusception has occurred during an attack of diarrhœa, or after a drastic purgative. The sudden cessation of pain, prior to collapse, is of all others, the most serious symptom.

Vomiting.

This may be non-stercoraceous in mild and well treated cases, whilst in well managed severe cases, it may alternately be stercoraceous and not so, and even in very severe cases the vomiting is sometimes non-stercoraceous, if in the term stercoraceous we include the peculiar fœcal odour. This vomit is likely to create a panic amongst the patient's medical attendants, who generally try a change of treatment. They do not understand that this is but one of the steps which precede resolution, and aids in relieving the gut from pressure, and thus among other things time is gained. It should be borne in mind that as soon as the opening is patent, the vomiting ceases, and the fluid in the gut assists in producing a cure.

Accelerated pulse and rise of Temperature.

If, after 2 or 3 repititions of a safe sub-cutaneous dose of Morphia, the pulse and temperature do not subside, the practitioner should be prepared to discuss the propriety of operative interference.

Brown furred tongue, thirst, diminished secrection of urine.

If the tongue is not improved, nor thirst alleviated, by the opiate, the prognosis should be regarded as doubtful. The secretion of urine is slightly increased by opium ; the diminished quantity passed in obstruction, so constantly observed, is explained when we consider that a large portion of intestine is shut off from the absorption of liquids, and even that part above the lesion, to which liquids are admissible, has become so distended, that its absorbent functions are all but vitiated. This is, I maintain, the true explanation of the diminished secretion of urine, and it should always be remembered that abnormal and long confined distension, being a form of constant pressure, is inimical to vitality, and should be as zealously guarded against, in Medical, as in Surgical practice.

Constipation, passage of gas and fluids.

These, are of all symptoms, those which ought not to be interfered with. Under no consideration should direct remedies for relief be attempted. For speedy relief of constipation in intestinal lesions is by no means consistent

with utmost attainable safety. By the " main force" and expectant methods, constipation is relieved more rapidly, than by that practised by myself, yet the fatality is incomparably greater. It should be recollected, that the gut below the obstruction, is in most cases empty, and that the signs indicative that some portion, if not all, of the accumulation above the obstruction is passing, or has passed, into the lower section of the gut, are diminution of distension, discharge of gas per rectum, or collapse. All these may be noticed from 6 to 48 hours before the matters are discharged per rectum.

Collapse and reaction.

This may indicate sudden relief of distension and pressure, and, passage of reduced fœces to the lower segment of gut, and may only require the administration of a trustworthy stimulant, when the patient rapidly progresses to a cure. This relief of distension and pressure with its attendant collapse may happen hours before the accumulation is discharged per rectum. Again, collapse may indicate rupture of the gut, or insurmountable occlusion, viz., volvulus, hernia &c., or it may be induced by ill judged interference, as for instance, when enemas are given either for differential diagnosis, or with the design of relieving constipation, for, should the case be one of enteritis, and peritonitis, the giving of an enema may be followed by fatal collapse; in other forms of obstruction this form of meddling is not so disastrous.*

*In the early period of my practice, I myself had several cases that most emphatically convinced me of the danger of enemas in intestinal lesions, In one instance where the patient was suffering from slight enteritis, which followed strangulated hernia, and was doing well up to the twelvth day, I gave a small enema which caused collapse followed by death in 24 hours. In another case of enteritis, in a young girl of 14 years, a small enema (half-pint), was introduced, when collapse followed in 4 hours, from which she partially recovered, but died 6 days after; she had done very well up to this unwise interference. Such a mishap occurred in the practice of my friend Dr. W. Carter, (who strictly practises the opium method; with restricted diet). His patient was suffering from inflammation of the gut close to the sigmoid flexure, and, without his authority, one of the attendants gave an enema, when the patient became collapsed at once, and died in from 3 to 4 hours. In another case to which I was called in consultation, the medical gentleman at the earnest solicitation of the patient's friends, but much against his own judgement, permitted the administration of an enema; collapse followed, and, under the use of belladonna, partial

Discharge of intestinal contents, followed by slight reccurrence.

The first may, in peritonitis and enteritis, be preceded by gradual diminution of the distension of the abdomen, in from 12 hours to 3 days prior to the emptying of the gut per rectum. Again, a copious discharge from the gut is very frequently followed by some hours of constipation (slight reaccumulation), and this may somtimes be repeated every 2 or 3 days during a period seldom extending beyond three weeks; each recurrence, in well guided cases, becoming more and more benign and also easier to control; finally ceasing if the diet is carefully attended to. These slight recurrences require to be carefully prescribed for, and the practitioner should insist upon strict attention to his advice for a period long after the removal of urgent symptoms, or otherwise, the recurrence will be acute enough to leave a permanent œdema and paralysis of the gut, and when this has occurred, the patient has only a few months to live. I can recollect one such case in which the autopsy showed that the gut for 18 inches, was reduced to a passive tube. This patient's life was prolonged many months by advice, which, had it been given to him at an early period, would have probably made a permanent cure. He died from the want of correct treatment in the begining, but it often happens that the patient will not permit the prolonged treatment neccessary to effect a cure.

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reaction, but the patient died in 10 hours. To those who use enemas for differential diagnostic purposes, here is one to be depended upon in enteritis, and peritonitis; if the enema can get to the inflamed part, the collapse of the patient will convince all that it is not intussusception at least, but at what cost? Aggravated spmptoms, followed by death.

A RETROSPECT OF THE TREATMENT OF INTESTINAL OBSTRUCTION DURING 1877-8-9.

During these years, the profession seem to have specially interested themselves in intestinal lesions, if we are to judge from their reports and discussions carried on, week after week, in those journals, devoted to Medical and Surgical questions. I am forced to admit, however, that, if these principles so lately advocated, are acceeded to by the profession generally, instead of progressing, we are sadly retrogressing, from that treatment recommended by Hippocrates, and so much improved by Sydenham. Nearly all the contributions I allude to, are furnished by gentlemen of repute in the practice of Medicine and Surgery.

In a very interesting paper, read before the Medical Association at Bath, in 1878, Mr. Jonathan Huchinson gives an abstract of the

practice and principles usual to practitioners of to-day. He commences his address by introducing the subject of diagnosis thus :—

"Mr. President and Gentlemen,—The first suggestion which it seems necessary to make in reference to the subject which we are assembled to discuss concerns a source of fallacy in diagnosis. Not only is it difficult in many cases of "bonâ fide" mechanical obstruction to form a correct opinion as to the cause, but there are, I believe, very numerous cases supposed to be obstuction which are not really such at all."

I admit, that often enough the form of obstruction is very difficult to discover, but, it is consoling to know, that this diagnostic defect is of no importance whatever, as far as treatment is concerned. It is however a rarity for anybody to diagnose an obstruction which does not really exist, and if this mistake should occur, nobody is much the worse for it. But the converse does not hold. When obstruction is overlooked, and treated as another malady, it is indeed a most serious error, and one, unfortunately, not uncommon.* Mr. Jonathan Huchinson himself falls into it, and, in the following extract, classifies as nonobstruction, a cause of genuine obstruction.

"I refer to cases in which constipation, pain, and vomiting—the three cardinal symptoms of occluded intestine—are met with in connection with petitonitis, perityphlitis, the passage of a gall-stone, or the impaction

* See page 308 British Medical Journal. I have myself witnessed the demise of many, in whom obstruction had been overlooked.

of a calculus in the ureter. In each of these, the simulation of acute obstruction is often most deceptively close. The sickness is often urgent, the constipation appears to be insuperable, and the whole aspect of the case seems to indicate "a stoppage." Yet the symptoms are not due to any mechanical cause, but for the most part to reflex disturbance. I have no doubt that many cases of this kind have passed as recoveries from obstruction, and have gone to exalt the reputation of this or that special method of treatment."

The author seems to ignore the fact, that peritontis is an obstruction which requires much more care in its treatment, than do the usually admitted mechanical forms, and that perityphlitis whatever its technical boundaries, is almost always accompanied by another form of obstruction—typhlitis. Observation has convinced me, that typhlitis is as unquestionably obstructive, as are volvulus, intussusception, and herniæ. Sufferers from peritonitis and enteritis, are easier killed by enemas and purgatives, than those suffering from other forms of obstruction. Maltreatment during the first two or three days of the latter, may not place the patient beyond hope; but, in the former one or two enemas may result in the patient's death in from six to twelve hours. I have observed this in my own practice, and in that of others, The gut not being occluded in either peritonitis or enteritis, may lead some to argue, that obstruction cannot therefore exist. This is a fallacy. If when either form commenced,

the bowels contained nothing but liquid, and if, futhermore the diet was regulated, I grant no obstruction would exist. But, as this never occurs, solid fœces being always found in situ at the onset of inflammation, and solid food being also administered by the mouth, we are forced as practitioners to admit these lesions into our classified category of intestinal obstructions. For we should ever bear in mind, that, at the points of inflamamtion, the intestine is rendered passive, by reason of collateral œdema. Again, in peritonitis and enteritis, adhesions may be contracted, and volvulus thus simulated. This condition I have good reasons for believing is by no means rare. In some instances even, where the bend of intestine is attached to another segment of bowel, the pressure of fœcal contents causes ulceration, thus producing complete isolation of an intermediate segment of gut. Let it always be remembered, that the lesion in enteritis is partly mechanical, and partly functional, and that the appropriate diet, whilst overcoming the mechanical defect, removes a source of irritation from the functional, disorder and thus completes a cure. To illustrate my meaning still further, we will suppose two railway tunnels; in the one the rails are taken up, in the other the arch has fallen in; no sensible engine

driver could be persuaded to drive, without the aid of rails, through the tunnel on the grounds that the opening is patent. Inasmuch as rails are essential to railway carrage traffic, their absence would as effectually debar the safe conduction of passengers, as would the fall of the tunnel walls. In peritonitis and enteritis the peristaltic action having been stopped by collateral œdema, the passage of intestinal fœces is as effectually prevented as the passengers would be from progressing without rails through the tunnel.

The author next gives some interesting cases illustrating the difficulties which the diagnosis presents. This diagnosis is much more complex than Hutchinson, Brinton, or any previous writers have admitted. But, as I have before remarked, to vary the treatment on the supposition that the patient is subject to this or that form of obstruction, (hernia excepted) is nothing less than seriously to jeopardize his life.

"Many years ago, I obtained a post-mortem examination in the case of a gentleman, aged thirty, for whom, during life, we had used enemata and anæsthetics, suspecting obstruction. It proved to be one of general peritonitis from perforation of the apendix. More recently, in the case of a little boy, whom I saw at Bournemouth, in whom urgent symptoms of obstruction had developed suddenly, Mr. Gregory White, who made the necropsy, found a precisely similar condition of things. In each of these

cases, the propriety of opening the abdomen had been discussed; and although I had declined it in both, yet, so difficult had the symptoms been of interpretation, that in both I thought it right to administer anæsthetics and make trial of abdominal taxis. I have seen several other fatal cases in which I have heen consulted for obstruction and diagnosed peritonitis; but, as no post-mortem examination was obtained, they are of little value as evidence. In a case seen during the last year, with Mr. Corner of Poplar, which appeared very urgent, we examined under chloroform and diagnosed peritonitis, commencing about the cæcum; and the child, under treatment by opium and entire absence of stomach-feeding, recovered. I might relate numerous cases in which what was supposed at first to be obstruction passed away with conditions—jaundice, etc.—which confirmed the suspicions of gall-stones, some of them even of extreme severity. In one of these, in which repeated consultations had taken place and strongly divergent opinions had been expressed, we agreed, when the bowels began to act, to have the stools carefully strained. This was done, and a gall-stone of the size of a horse-bean was found. I am, of course, not now speaking of cases in which gall-stones are large enough to block the bowel: these are obviously cases of obstruction; but of those in which the symptoms are due to a small stone impacted in the gall-duct."

Mr. Hutchinson was perfectly right when he diagnosed Case No. 1, as obstruction. But when the post-mortem pointed to general peritonitis, with perforation of appendix, the author forsook his diagnosis. The post-mortem examination does not in any way clearly convey to my mind the nature of the primary evil, as some parts of the pathology may reasonably be attributed to the defective treatment. Again, in the second case, what rational indication would taxis fulfil, when the patient suffered from peritonitis?

Or, supposing it to have been intussusception, what boon would taxis confer upon it? Moreover, in the third case, if Mr. Hutchinson did not consider peritonitis a mode of obstruction, why stop all stomach feeding? If the case be one of calculus of kidney, passage of gall-stones &c., any one of reasonable skill, would be able to diagnose it by the second or third visit. In the meantime if my treatment is practised, the patient feels much relieved, and will probably require its continuation until every symptom has passed.

In the next paragraph hints on diagnosis are given.

"There is no class of cases which illustrates more strongly than these the necessity, in all instances of supposed obstruction of the bowels, of taking down the facts with careful accuracy. If the earliest symptoms be studied, there will usually be found some facts more or less inconsistent with the idea of obstruction. There may have been diarrhœa at first; or the symptoms may have set in with sudden and unwonted severity; or the pain may have been disproportionately severe; or it may be that the part in which the pain began is percisely that suggestive of gall-stones or of typhlitis. If the case be one of peritonitis or perityphlitis, the history of a rigor at the onset and the use of the thermometer may help the diagnosis. Temperatures in abdominal cases are, however, often misleading. In other cases, the diagnosis may be helped by measures of treatment. Thus, the sickness may have been in part due to the persistence in attempts to give food or medicine by the stomach, and the constipation to the fact that everything in the shape of purgative medicine has been promptly rejected by vomiting. In such, if the stomach be allowed absolute rest and purgative enemata be tried, all suspicion of obstruction may be quickly removed

In many of these cases, however, it is to be admitted that, with every precaution, the diagnosis remains very obscure, until it is set at rest by the recovery or death of the patient. It is to be noted that they are almost all short cases, and that, if mistaken for obstruction, they are precisely such as might suggest the presence of internal hernia, volvulus, strangulation by a band, or some other condition susceptible of relief by operation. It is, therefore, most desirable that those surgeons who think favourably of abdominal operations for exploratory purposes, should be strongly impressed with the fact that many cases look like obstruction which are not so."

From many of these data I must needs dissent. The assertion that "diarrhœa at first" excludes obstruction, Case No. 1, page 24, and Case No. 7, page 81, of this volume effectually disprove, and my cases are not isolated records. In intussusception the primary symptoms are often accompanied by sharp alvine evacuations. In another paragraph he omits all mention of slight flexion in perityphlitis, which is more important than the rigor. The remainder of the extract is dangerous. If the diagnosis is to be brought about, by seriously aggravating the patient's symptoms, we should pause, and consider the cost of the experiment. Better the diagnosis should ever remain in doubt, and that the very simplest maladies should undergo the treatment intended for the most serious, than that our curiosity should be satisfied by transforming the mildest cases to those of extreme danger.

Mr. Hutchinson next enumerates those conditions he regards as genuine obstruction.

"Leaving here the subject of simulation of obstruction, it may be convenient for the purposes of the discussion which is to follow, if we briefly enumerate the principle causes of real mechanical stoppage of the bowels. I must be content with the bare enumeration:

"Intussusception;"

"Impaction of fæces or of foreign bodies;"

"Strictures—malignant, cicatricial, or simple;"

"Volvulus or twisting;"

"Internal herniæ;"

"Strangulaton by bands or congenital diverticula;"

"Pouching of intestine, and intestinal paralysis;"

"Pressure of tumours or dragging of the bowel out of place."

His classification is erroneous, inasmuch as he omits from his list, two forms of intestinal obstruction, which, above all others, require cautious treatment, and which yield admirable results if the treatment is but rational.

"Memoranda for Diagnosis."

"1. When a child becomes suddenly the subject of symptoms of bowel obstruction, it is probably either intussusception or peritonitis."

"2. When an elderly person is the patient, the diagnosis will generally rest between impaction of intestinal contents and malignant disease (stricture or tumour)."

"3. In middle age, the causes of obstruction may be various; but intussusception and malignant disease, both of them common at the extremes, are now very unusual."

"4. Intussusception cases may be known by the frequent straining, the passage of blood and mucous the incompleteness of the constipation, and the discovery of sausage-like tumour, either by examination per anum of through the abdominal walls."

"5. In intussusception, the parieties usually remain lax, and, there being but little tympanites, it is almost always possible, without much difficulty, to discover the lump (or sausage-like tumour) by manipulation under ether."

"6. Malignant stricture may be suspected when, in an old person, continued abdominal uneasiness and repeated attacks of temporary constipation have preceeded the illness. It is to be noted also that the constipation is often not complete."

"7. If a tumour be present and pressing on the bowel, it ought to be discovereable by palpation, under ether, through the abdominal walls or by examination by the anus or vagina, great care being taken not to be misled by scybalous masses."

"8. If repeated attacks of dangerous obstruction have occurred with long intervals of perfect health, it may be suspected that the patient is the subject of a congenital diverticulum, or has bands of adhesion, or that some part of the intestine is pouched and liable to twist."

"9. If, in the early part of a case, the abdomen become distended and hard, it is almost certain that there is peritonitis."

"10. If the intestines continue to roll about visibly, it is almost certain that there is no peritonitis. This symptom occurs chiefly in emaciated subjects, with obstruction in the colon of long duration."

"11. The tendency to vomit will usually be relative with three conditions and proportionate to them. These are (1) the nearness of the impediment to the stomach, (2) the tightness of the constriction, and (3) the persistence or otherwise with which food and medicine have been given by the mouth."

"12. In cases of obstruction in the colon or rectum, sickness is often wholly absent."

"13. Voilent retching and bile-vomiting are often more troublesome in cases of gall-stones or renal calculus simulating obstruction than in true conditions of the latter."

"14. Fæcal vomiting can occur only when the obstruction is moderately low down. If it happen early in the case, it is a most serious symptom, as implying tightness of constriction."

"15. The introduction of the hand into the rectum, as recommended by Simon of Heidelberg, may often furnish useful information."

Let us briefly run over some of these maxims.

2. With this I fully agree, but even when the obstruction is due to malignant disease, it admits of palliative measures.*

4. "Frequent straining, the passage of blood and mucous." All writers on intussusception allude to these symptoms and yet, in the practice of my friends, and in my own, they seldom occur. What symptoms may be induced by the "main force" treatment it is difficult to say,

5. I have never observed "the parieties remain lax," the abdomen has been either extremely or moderately distended.

8. I might with advantage add to this a sugges-

*During this year, accompanied by my friend Dr. Girdlestone of Rhyl, I visited a patient who suffered from intestinal obstruction. We relieved the obstruction, but any deviation from the opium method was followed by relapse. The lady who was middle aged died. The post-mortem revealed extensive malignant disease within the pelvis. In another case; an old lady of 78, suffered from obstruction, ihe was relievedof pain by opium, but finally succumbed. The post-mortem revealed malignant disease. I have reported another case at page 64.

tion, that possibly paralysis of part of the intestine might remain after repeated attacks of acute or latent inflammation.

10. Instead of at the colon, my experience satisfies me, that this is a symptom of difficulty at the ileocœcal valve.

11. I believed this explanation formerly, but now entirely dissent from it. Vomiting is much affected by the treatment, but even in the absence of any treatment, I cannot endorse Mr Hutchinson's conclusions.

15. May furnish information sometimes, but it often does direct harm.

On the subject of treatment Mr. Hutchinson gives us the following classification.

"MEMORANDA FOR TRATMENT."

"1. In all early stages, and in all acute cases, abstain entirely from giving either food or medicine by the mouth."

"2. Use anæsthetics promptly. Put the patient under the full influence of ether; examine the abdomen and rectum carefully before typanites has consealed the conditions; administer large enemata in the inverted position of body; and, if advisable, practice abdominal taxis. If you do not succeed at first, do it repeatedly."

"3. Copious enemata, aided perhaps by the long tube, are advisable in almost all cases, and in most should be frequently repeated."

"4. Fluid injections may be sometimes replaced by insufflation of air in cases of invagination, since air finds its way upwards better, and is more easily retained. It is, however, somewhat dangerous, and has perhaps, no advantages over injections with the trunk inverted."

"5. Insufflation is to be avoided in all cases of suspected stricture, since the air may be forced above the stricture, and there retained."

"6. Saline laxatives are admissable in certain cases where impaction of fæces is suspected, and in cases of stricture where fluidity of fæces is advisable."

"7. Opium (or morphia) must be used in proportion to the pain which the patient suffers. It should be administered by the rectum or hypodermically, and should be combined with belladonna. If there be not much pain or shock, it is better avoided, since it increases constipation and may mask the symptoms."

"8. A full dose of opium administered hypodermically will put a patient in a favourable condition for bearing a prolonged examination under ether, and attempts at abdominal taxis."

"9. In cases of uncertain diagnosis, it is better to trust to the chance of spontaneous cure or relief by repeated abdominal taxis, than to resort to exploratory operation; or, in desperate cases, iliac enterotomy should be done. Operations for the formation of an artificial anus in the right or left loin may be performed whenever the diagnosis of incurable obstructive disease in the lower bowel is made."

"10. The operation for the formation of an artificial anus through the anterior part of the abdominal wall and into the small intestine should be resorted to only in certain cases of insuperable obstruction, in which the seat of disease believed to be above the cæcum."

"11. In all cases in which the precise seat of disease is doubtful, but the large intestine is suspected, the right lion should be preferred. If the colon here is found to be empty, the peritoneum may be cautiously opened and and a coil of distended small intestine brought into the wound."

"12. My last suggestion as to treatment in one which, speaking as I do in a Medical Section, I feel some delicacy in making. It is, however, I believe, a very important one, and it is this, that cases of mechanical obstruc-

tion are really surgical and not medical cases. They require manipulative measures both for diagnosis and for treatment, and they require them early. It is difficult to explain why it has come about that, as a rule, a physician is called in first, and nothing but drug treatment usually adopted in the early periods; and it is, I am convinced, much to be regretted. The surgeon is but too often asked to see the case only in the last stage, when it is thought that perhaps an operation may be desirable. At this period, the abdomen is distended, and an accurate diagnosis impracticable; but, what is worse, the stage at which abdominal taxis is most hopeful has passed. My remarks do not, of course, apply when the medical attendant possesses the knowledge and exercises the functions of both branches."

1. This is excelent advice, and I fail to see why peritonitis and enteritis should not be treated likewise.

2. If this treatment failed to kill the patient, it would at anyrate, should the case be doubtful, so increase the severity of the symptoms as to place the diagnosis beyond doubt. If practised in peritonitis or enteritis, a fatal issue might be expected. This memorandum is a terse example of that line of action I have characterized as the main force treatment. Mr. Hutchinson adds "if you do not succeed at first, do it repeatedly." How often, I should like to know, could this be done with impunity?

3. 4. and 5. advise a continuance of the main force practice.

6. If saline laxatives are administered where

fluidity of fœces is required, would not simple water and restricted solids do as well.

*7. Giving Laudanum and Belladonna in combination is equivalent to abstracting from the opium part of its sedative effect, and that portion is what would most probably indirectly benefit the intestinal lesion. I admit that opium constipates, but, provided the patient does not already add to the solids contained in the bowel, the constipation cannot last long. Opium should however be avoided in collapse, but, if reaction sets in, it may again be resorted to.

8. After a careful study of records, I agree with Mr. Hutchinson to trust to nature rather than to exploratory operations,

11. Mr. Freer of Birmingham, and Mr. Pring of Bath (?) performed an operation subsequently revived by Nelaton. This is the safest operation in cases where other means have failed.

12. From this it is evident that the author has not been very successful in the use of therapeutical remedies, for he proclaims that intestinal obstruc-

*A lady under my care suffered from intestinal and stomachic pain, the cause of which nobody could discover. Hypodermic doses of opium invairably relieved her, but, if, no matter how slyly, belladonna was combined with the opium, she soon discovered that the effect was not the same, and loudly demanded a fresh supply.

tion is not amendable to their action. I totally differ with him however. I think that no class of diseases is more admirably adapted to a physician's skill than this. Did the profession but blindly follow the great Sydenham the mortality during this century would be much decreased and the main-force treatment, instead of the patients, would ignominiously perish.

Mr. E. Markham Skerrit, read a very interesting paper before the Bath meeting of the British Medcal Association, a report of which, may be found on page 308 of the Journal. The paper is entitled, "On Latency of Symptoms in acute abdominal affections," and the cases Mr. Skerrit gives, confirm my own observation. Had these patients been cured many would have denied that they ever suffered from intestinal obstruction. The treatment adopted by the author is not reported.

At page 307 of the British Medical Journal, five cases of obstruction are reported in which the belladonna treatment was adopted. Case 1, was treated by strong purgatives, enemata, colocynth and hyoscyamus, then by two grain doses of belladonna every hour. We are further told that enemata were given "before the alvine evacuations set

in, and were continued for eighteen hours afterwards." The reduction of gut contents occurred in about eight hours after the first dose of belladonna was given; on the eleventh day of treatment. But this is in the usual period for spontaneous resolution to take place; hence the treatment should not be honoured with the result. Case 2, first treated by purgatives; then extract of belladonna, two grains every two hours, then opium fomentations. Resolution took place on the fifth day, six hours from the time the first dose of belladonna was given. Case 3, purgatives administered first, then enemata, opium fomentations, and afterwards two grain doses of belladonna. Action of bowels occurred on the thirteenth day, seven hours from the time the first dose of belladonna was given. Case 4, the primary treatment is not reported, but, in three hours after the belladonna was given resolution occurred. A misnamed "second attack" was cured in eight days after seven grains of the extract was administered. The patient was a victim to a so called "third attack," which lasted seven days. He consumed five grains of belladonna extract. Case 5, this patient suffered from "four attacks of obstruction," (not obstruction according to Mr. Hutchinson's definition of the

term). The first attack lasted eight days. The primary treatment consisted of fomentations, purgatives and enemas. Later on nine doses of belladonna were given, a grain every hour, when "alvine evacuations ensued." During the subsequent accumulations eight and nine grains were consumed. This paper is painful evidence of what we may term random treatment—the "kill or cure" of our forefathers. It contains, in spite of all this, some valuable information. The writer appears to have been called to each case at a time only slightly antecedent to that of spontaneous relief of distension. This sudden relief, coupled with the primary injudicious meddling, sufficed to produce collapse * and, though before, the belladonna proved injurious, yet during the collapse, it produced re-action and perchance saved life, but had no relation to the evacuation.

Neither belladonna nor any other drug has any effect upon the abnormal portion of the intestine. Indeed remedies in many complaints act beneficially by varying the functions of healthy parts, thus acting, indirectly only, upon the abnormal parts.

* The collapse may indicate perforation, or it may follow from relief of obstruction from passage of contents above, to the part below the lesion. This may occur some hours before the passage per rectum.

In the cases last given, evacuation occurred just about that time we are lead to expect spontaneous resolution, and I am convinced, that in no instance was this an effect of the drug. Belladonna certainly, may have assisted some of the patients from the collapse they were in. Had they however undergone the treatment which the mechanism of the lesion dictated, they would have suffered no pain, and, judging from their history, would never have been in any danger; the only disadvantage, incurred, and that not a great one, being, a longer confinement to bed.

In drawing conclusions, it is well to enquire whether certain effects occur post hoc, or propter hoc. The paper I have just reviewed might aptly be entitled "large doses of belladonna in collapse, administered in cases of spontaneous resolution."

The St. Thomas Hospital reports for this year, contains an article on intestinal obstruction, in which the operation of tapping to relieve distension is discussed. The treatment adopted was of the usual indefinite character, plus tapping, a practice, to which in suitable cases I see no objection. The writer adopts my precaution in operating, although he has not noticed any leakage into the peritoneum,

as others appear to have done; I strongly suspect however that this draining does take place oftener than is generally believed.

The Lancet for September 21st reports a case, which proved fatal in six days. The treatment consisted of small doses of opium and enemata. The opium had no effect, the enemata had a fatal one.

In the same journal for September 7th, another case is given in which the practitioner commenced treatment by chlorodyne and repeated enemata followed by morphia. After this the enemata were "avoided on principle" it is said, and on the sixteenth day the bowels acted. In four days re-accumulation took place, and the gentleman in charge not correctly interpreting this occurrence and throwing overboard his "principle" unfortunately resumed his enemata when "the patient gradually sank." Enemata should never be resorted to in cases even of secondary accumulation.

In the journal for August 17th, another case is given. During the first day the following treatment was resorted to. First a draught, then a subcutaneous injection of morphia, which, by giving ease, indicated the necessity for its further use. But no, morphia was deserted, and its place usurped

by castor oil, soda mixture and turpentine stupes to abdomen, and following this ¼ of grain of morphia injected beneath the patient's skin. To complete the day's work enemata, composed of water, soap suds, and castor oil were energetically administered every four hours. On the second day a draught, and belladonna enemata, were indulged in. The third day passed after eight grains of colomel, and enemata, were administered. Four enemata were given on the fourth day. On the fifth day two motions followed the enemata; the patient was now supplied with milk, beef-tea, quinine, fish, eggs, &c. His abdomen was covered with iodine on the sixth day. A linseed meal poultice mixed with laudanum was applied, over the swelling in the right iliac region on the seventh day. On the eighth day this swelling increased. On the ninth day the abscess discharged its contents, which consisted of fœtid pus, to the amount of fifteen ounces. The writer thinks the case one of perityphlitis; with his conclusion I quite agree, for any other form of obstruction would have culminated in death long before the above mentioned zealous treatment could have been carried out in its entirety.

The Lancet of August 10th supplies us with another case. The treatment on the first day con-

sisted, of ½ grain doses of opium every three hours and one enema. On the second day opium was given every two hours, but no change took place in the patient's condition. The opium was discontinued on the third day, and an enema resorted to, which brought away a few lumps the "size of marbles." On the fourth day, the patient felt much better, his bowels acted, and from this time he was soon well. The writer "considered that the condition was one of a spasmodic nature producing colicky pains and that the spasm was counteracted and pain relieved by the persistent use of opium.'' Spasm is never a cause of obstruction although it is often an effect; and when present it is found to affect the healthy portions of intestine only as the muscular coat of the inflamed part is powerless.

In the Lancet of August 3rd, another illustration of modern treatment may be found. The symptoms in the case, were, from the first, alarming. The treatment was opened with opium and an enema. On the three following days enemata were repeated bringing away "motions partially solid"; turpentine stupes were also applied. On the fifth day cold water applications were placed on abdomen. The stomach tube was passed up rectum on sixth day, followed by digital examin-

ation and enemata. It is stated that up to this day no flatus was parted with, which proves that the motions referred to, dwelt in that part of the bowel below the obstruction. I need hardly add that emptying the bowel below the lesion, is not only an useless, but a very injurious proceedure. Gastrotomy was now performed. Brandy, milk, eggs and opium, were prescribed, and the patient died. The post-mortem revealed lesions, which rendered a recovery doubtful under any form of assistance; but as the treatment is answerable for much of the pathology I cannot speak authoritatively on the point. One thing is evident, that, had the treatment been rational, the patient's life would certainly have been prolonged.

The clinical society of London was lately engaged in discussing a case of obstruction. The treatment first adopted consisted of "injection, inversion &c." the et cetera I presume combining all branches of the main-force principle. Twenty-five drops of laudanum and a hot bath were now tried, and the patient felt much relieved. The effect of the opiate was of course but transitory, lasting twenty-four hours; it was not repeated, and gastrotomy was performed. The patient ultimately died. If the report in the Lancet is

correct, the operation did not in any way assist treatment. The author of the paper is reported to have said "It is a matter of regret that opium had been given, and this probably had much to do with the fatal issue" * * * "The symptoms at the time were completely smothered by the narcotic." Most assuredly it did smother the symptoms, and seems to have been the only remedy capable of doing so; and what a victory there is in holding symptoms in subjection. The practice of medicine mainly consists in smothering them. From our journals we glean, that in intestinal lesions, many attempt to cure their patients by ignoring their symptoms, but they cannot be too often impressed with the fact, that when the symptoms are in abeyance, an important step has been made towards recovery. Two cases of obstruction are to be found in the Lancet of June 8th. With regard to the first case, that of an old man, who died of his ailment; the details however are so insufficiently supplied, as not to justify one in commenting on the treatment. In the second case, that of a child, which also proved fatal, the little patient was subjected to such rough handling, that I feel convinced much of the revelations post-mortem were due to the,

anything but suitable treatment. Even a healthy alimentary canal could not stand with impunity the ravages induced by such treatment. Indeed, if Haller's experiments are reliable, this treatment may be the parent of intussusception. I do not wish readers to suppose that I am at enmity with any treatment simply because it is painful or rough. On the contrary if rough usage will benefit the patient, by all means let us be rough. But when the distinguishing qualifications of severe treatment, is the harm it does the patient, it becomes our duty to condemn it for the mischief it creates.

If beating the patient within an inch of his life would be salutary, no energy on my part would be lacking in making the castigation as complete as possible. When treatment adds to the morbid condition already present, nothing short of the terms barbarous and brutal will illustrate its value.

In the Lancet of April 6th, we have another case of interest. Patient was first treated in private practice by enemata and fomentations, and we are told that, "in spite of this, pain and sickness continued, and there was complete constipation." On his admittance into a Public

Hospital, it was suspected he had some form of obstruction, but, because certain symptoms seldom present, or peculiar only to a later stage, were not discoverable, intussusception was excluded from the diagnosis. On admission into hospital, opium was given him, fomentations applied, diet restricted in quantity only and of course the inevitable enema, which brought away what never did the patient any harm, namely, the contents below the lesion. No doubt this trivial event pleased the gentleman in charge vastly, who perhaps exalted it to a sign of resolution. On the third day sickness ensued after milk, and, for the first time, the patient vomited. Turpentine enemata given, but with no benefit; opium and fomentations still administered when the patient felt easier, of course the result was ascribed to the turpentine injection. Fourth day, patient passed a good night, was sick once, suffered but little pain; an enema was again tried, and a subcutaneous dose of morphia—the quantity is not noted. Anything short of half a grain would only be trifling with the patient at this stage. Fifth day, patient passed a good night, very little pain, little sickness, but the vomiting was still stercoraceous. Soda water was now introduced per rectum by means of a syphon bottle; but there

was no result as the gut below was empty. On the sixth day abdominal section was resorted to, and a strangulated portion found.

"This was situated at the internal ring on the right side, a small portion of small intestine, about the size of a cheshnut, and involving only about one-third of the circumference of the bowel, having passed into and being firmly constricted by the internal ring. This was readily withdrawn by a little gentle traction, and the intestines having been replaced, the abdominal incision was closed with sutures."

We are aware, that under very questionable treatment, volvulus has well nigh been rectified by isolation, i.e., by ulcerative communication between portions of the intestine above and below the lesion. Post-mortem results have placed this beyond question. Indeed Brinton believed actual recovery to have taken place, but fortunately he never had the opportunity to verify this, by sectio cadaveris. Again, the next most serious form of obstruction is often overcome by the patient's stamina, despite very irrational treatment. These facts make me wonder that, in the case under consideration, life was not prolonged over the sixth day. However reluctantly, it must be admitted, that the treatment adopted was not conducive to longevity.

The Dublin Journal of Medical Science issued in November this year, at page 431, contains the

report of another badly treated case. The practitioner first ordered turpentine stupes, enemas, and tinct opii, in half-drachm doses, every four hours. On the second day the patient vomited for the first time; opium was administered, poultices applied, and enemata injected through the medium of a long tube, which was passed up the bowel as far as practicable. Hœmorrhage followed its use, yet this did not alarm the attendant, who, persevered in its use daily. The contents of the enemata were partly made up of turpentine and epsom salts; tinct opii was also continued with, in half-drachm doses. All this was practised for upwards of ten days "no fœcal matter having been passed, blood in small quantities from time to time coming away." On the twelfth day the patient expired. If the post-mortem appearances were not to a great extent due to bad treatment, the patient had little chance of recovery, but the author's concluding paragraph is admission enough, that the treatment cannot be justly acquitted of blame. It was severe enough to afflict healthy intestines with an infinity of invaginations.

Mr. Thomas Bryant in the Lancet of May 11th enters most exhaustively into the subject of intes-

tinal obstructions. In his opening paragraph he advocates early operation; advice, which if followed, would add much to the mortality The statistics supplied by the author do not merit reliance, as we have yet to learn, that irritative treatment ought not to bear the responsibility of much that is discoverable after death. Mr. Bryant lays much stress upon the value of differential diagnosis; he says:—

"The question of diagnosis is consequently all important, and will first claim our attention,"

Beyond discriminating between the various forms of external hernia, I think diagnosis is by no means so important.

"The possibility of the symptoms being due to a strangulated or obstructed hernia should always be carefully investigated."

This is really all we require to know, and all that we can hope to know, until some diagnostic processes not known to this generation are discovered. Mr. Bryant admits

"It may be difficult, if not impossible to diagnose the exact cause of strangulation."

and of prognosis he adds

"At the same time it will be recognized that a hope of a cure by a natural process is very meagre."

To this, I would add, that modern treatment renders the hope still more forlorn.

The writer adds:—

"And I believe that no prudent surgeon ought to leave a case of internal hernia or strangulation unrelieved with the same almost forlorn hope, because, granting that the diagnosis of the case can be made, by no medicine, no manipulation, no expectant treatment, can the mechanical obstruction be overcome, and under such circumstances a fatal termination must be anticipated. Opium may relieve pain, mask symptoms, and give rise to the pleasing delusion that all is doing well in cases of intestinal strangulation, as it is well known it does in others of external hernia; but, in the one case, as in the other, it does no more; it does not do the one thing needful—relieve the mechanical obstruction and give to the strangulated intestine, and with it the patient, a chance of life.

This procedure would interfere sadly with the chances of success; as in many cases where it was resorted to, it was found useless, and consequently most injurious. It is more than unjustifiable to make this serious operation an exploratory one, in the hope of discovering here, an internal hernia, there, a vovulus, and consigning to premature death those who suffer from the less serious, and more common, forms of obstruction. If, in two out of ten cases, the diagnosis was confirmed, and the patients' lives saved, what can be said in defence of that treatment which culminated in eight corpses? Are we justified in killing eight patients in the hope of saving two? Death is

of necesstiy the climax in some cases, but surely this is no reason for forsaking the most rational method of treatment. If volvulus has, under treatment calculated to frustrate its progress, nearly resulted in cure, how much more likely when treatment is rational are we to obtain an absolute recovery! Post-mortem examination has taught us not to expect a return of the intestine to its former condition, and this should sufficiently prove to us, that that treatment should be adopted, best calculated to assist in nature's perceptible efforts.

The continuation of this paper in the Lancet of May 18th deals firstly, with chronic intestinal obstruction. The symptoms given by Mr. Bryant though characteristic of the complaint, are only characteristic of its more severe form. If a patient, suffering from the less severe chronic form, is asked the effect of a mild purgative, he states that its imbibition always gives him pain. Furthermore he complains of an uneasy feeling, accompanied by a sense of weight in abdomen; there may, or may not be a passage of mucous and intestinal casts.

The author again refers to diagnosis.

"To diagnose the true cause of the obstruction is, therefore, the surgeon's next aim, and it would be well if I were able to add that the task is an easy one, but such is not the case. It is true, when the obstruction is in the rectum, that a digital examination of the part may find it out ; when in the sigmoid flexure, that the cautious introduction of the whole hand into the rectum (after the method of Simon of Heidelberg) may detect it, and that when a tumour is to be felt by palpation to the left of the umbilicus, through the abdominal walls, the probability is suggested of the disease being in the colon ; but without these guides little definite knowledge is to be obtained by either palpation or percussion, by the passage of the long tube or by the amount of fluid that may be injected into the rectum."

Here, the author and myself are in unison, but he adds that differental diagnosis is made easy by the light of pathological knowledge. That form of obstruction, of the hernia and volvulus type, is rare, compared with that arising from mere functional arrest, and I emphatically repeat we are not justified in sacrificing the lives of the many for the salvation of the few. Mr. Bryant's remarks on the treatment of fœcal accumulation in the rectum are indentical to those universally believed in. The author has drawn up an elaborate table of supposed symptoms in the hope of simplifying the differential diagnosis of the various forms of obstruction. If this was trustworthy it might prove a valuable chart to the inexperienced, but unfortunately it is by no means exemplary. If taken by practitioners to justify

some variation from the treatment by selected food and sedatives, its practical results will be most injurious. Mr. Bryant's epitome of treatment is the following:—

"With these hard, indisputable facts before us, the conclusion seems inevitable that in all cases of obstinate constipation due to mechanical obstruction in the large intestine, when mechanical treatment has failed, and the removal by any operative measures is out of the question, instead of wasting valuable time by the persistent administration of aperients which must do harm, of enemata which can do no good, or of opium and allied remedies, which may mask symptoms and mislead the practitioner, colotomy should be performed—in the left lion when the diagnosis has been made of disease of the rectum of sigmoid flexure, and in the right when the exact position of the stricture cannot be determined."

"In intussusception, however, good success has followed at times the practice of inflation, a plan of treatment that was originally recommended by Gorham years ago, and which may be effectually carried out by connecting a syphon bottle of soda or other aerated water with a tube passed well into the bowel, the elastic gas forcing its way far better than water; when inflation cannot be used, injections may be substituted. The operation has, however, its dangers, for bowels have been ruptured by its use. Inversion of the body has likewise been advised, with the chance that the weight of the contents of the bowel above the involuted or obstructed segment may suffice to disengage it. Mechanical kneading of the abdomen, and the administration of an anæsthetic, have also been employed with a similar object. Opium should always be given in all cases of mechanical obstruction, the drug not only relieving pain, but checking the peristaltic action of the bowel which is so injurious. These remedies are, however, uncertain at the best. They are to be tried in early cases, when the diagnosis is uncertain, and operative interference is rejected; but they are not to be used when more active treatment is called for, unless such treatment is absolutely forbidden."

"With these remarks I must bring my paper to a close, but I trust I have adduced sufficent evidence to prove that laparotomy is an operation which

should be performed in all cases of acute intestinal obstruction due of bands, internal hernia and intussusception, that do not speedily yield to other treatment.. Colotomy is applicable to cases of obstruction to the large intestine, from stricture or the mechanical pressure of tumours; while enterotomy affords a means of relief for all other cases of intestinal obstruction to which the two former operations are inapplicable."

The papers by Messrs. Hutchinson and Bryant are chiefly valuable inasmuch as they present in small compass the typical treatment of to day; they further admit the alarming mortality, which follows modern treatment, and to the clinical observer they must suggest that the treatment cannot always be exonerated from many of the evil results.

Mr. Bryant is, in favour of early operative interference, and when in doubt as to the diagnosis, he adopts Nelaton's method. As the diagnosis is never certain, it would always be wise to practise Nelaton's operation, inasmuch as its comparative safety renders it a very useful one. Mr. Bryant adds the "administration of aperients must do harm" yet the paragraph is not concluded before he advises laxatives, adding,

"Those of an oily kind being the best. A time will however come when these means will fail, and others must be looked to unless the patient is left to his fate ; and of these enterotomy is the most appliable."

With this sentence I agree, for laxatives lead directly to enterotomy in very many cases. Far

better liquify the bowel contents, than endeavour by exciting peristalsis, to push them forward at, the risk of transforming mere fœcal arrest into complete occlusion. In the Lancet of May 25th, Mr. Bryant continues his paper giving instances of relief afforded by operation. Prior to operation his first case was treated by enema, opium, belladonna, and nux-vomica, then Nelaton's operation of enterotomy was performed. That this measure was essential on the day of performance I am convinced, but, had the patient been properly dieted from the first, he would have recovered without opium, slowly, and with opium, even rapidly. The after treatment was also defective. What can one reasonably expect of ten drops of liq. morph: administered by the mouth, every six hours, to a patient in a "deal of pain" after enterotomy? Case No. 2, previous to consulting Mr. Bryant, was subjected to ginger and turpentine enemata. Nothing else was done previous to Nelaton's operation. After the operation the treatment consisted of milk diet, opium suppositories and enemata the latter being administered as early as the fifth day. These enemata of soap, gruel, oil &c., caused a recurrence of obstructive symptoms despite the existence of an artificial opening. The

enemata were still persisted in, and the enigma which proved beyond my powers was, of what use was enterotomy if the treatment was the same as before its adoption? Would it not be more philosophic, to avoid meddling with the rectum until the sufferer is safe from those accidents inevitable to so important an operation? If this patient's vitality was sufficient to withstand the defective treatment after operation, it is not unreasonable to suppose that suitable and practicable measures, short of operation, would likewise have met with success. He may not have recovered under the main force regimen, had not the operation denuded it of much of its danger. Mr. Bryant concludes his paper in the Lancet of June 1st, where he discusses the symptoms and treatment of invagination, its differential diagnosis being I hold most hypothetical. He unconsciously confirms me in my assertion that modern treatment is radically unsound, when he states "the symptoms may be so acute as to destroy life in three days." Referring to the cure of invagination and sloughing of the free portion of the intussusception, Mr. Bryant seconds Dr. Fagge's remarks that when

"The cure by expulsions occurs, it frequently only postpones the fatal termination instead of entirely preventing it. The patient dies some months

afterwards from the contraction of the cicatrix which had formed at the seat of disease."

That this sometimes occurs I think all will agree, but that it is not inevitable the experience of others amply proves. This paper concludes by a resume of the Medical and Surgical means now in vogue.

The British Medical Journal of November 11th this year, contains a case of intestinal obstruction stated to be treated by belladonna, but, as usual, the title of the paper is not borne out by the treatment of the cases. In each case a medley of remedies was tried, first, a little opium, then a little belladonna, and lest any therapeutic jealously should arise, an impartial raid upon the pharmacopea is thought advisable, and the patient neither dies nor recovers without having undergone torments worthy the palmy days of the inquisition. The treatment was started by croton oil, castor oil and a warm water enema; this gave rise to vomiting—a complication which would have been avoided. More warm water for the rectum, turpentine stupes; and enough opium to relieve the pain induced by the treatment. When the author perceived the ease which followed the narcotic—probably having read the discussions of the

clinical society reported in the Lancet—he thought this a bad omen, fled from the opium, increased the vigour of his treatment, resorting to "injections the simple and medicated" * * * "but with the effect of increasing the pain." On the evening of the second day it was decided that belladonna should next be tried. The patient accordingly was intoxicated by belladonna, and despite all this—lived. His leison was Typhlitis, which accounts for his recovery; for had it been a more serious form, and subjected to the same treatment, a fatal issue ought not to be unexpected. Had this man been properly treated, instead of lying in agony rampart and raging, he would have enjoyed comparative immunity from pain, and have thought himself almost well; the apparent, but not a real disadvantage being, an extended constipation, lasting from ten to fourteen days.

In the same number we find the report of a so called case of isolation of bowel. On reading it however it is evident that the isolation was but partial. To have been complete no food should have passed through it; and the channel from mouth to rectum should admit the passage of fœces without troubling the isolated part. This condition

and this alone, deserves the term isolation, and is the mode of resolution in volvulus. Dr. McCall Anderson reports such a case; and my esteemed fellow townsman Mr. James Long told me of one where nearly the whole intestine was isolated, the jejunum being in communication with the sigmoid flexure, at a part just anterior to a cancerous mass which totally obstructed the bowel. In this case, food introduced by the mouth, reached the anus in from seven to ten minutes. Of course these facts were obtained by post-mortem examination, and we look upon this case as one of an immense volvulus, and upon the pathology, as natures' successful attempt to overcome it. This reminds me of a passage in the Novum Organum.

"But these Nature supplies sparingly when left to herself, what she will do when her lap has been shaken out, and after the discovery of Forms, and Processes, and Structures, will appear in time to come."

Case 23, reported by myself, is another sample of partial isolation.

The British Medical, issued November 23rd, contains a report of an interesting case. The patient on her enterance into a Public Hospital, presented all the symptoms of serious intestinal obstruction, On the first day ice, calomel, and opium were administered; on the second, bella-

donna and opium. Enemata of oil and warm water were tried on the third day, whilst on the fourth belladonna, brandy and soda-water tested ~~their~~ her power. On the fifth and sixth day, opium and belladonna were continued, and on the ninth day abdominal kneading was perserved in. A fœcal evacuation followed an enema of warm water and oil on the tenth day. This case is chiefly instructive inasmuch as it indicates what ignorance prevails in regard to the signs of resolution ; so much so indeed, that often when such signs are predominant, the prognosis is thought to be most grave. A perusal of this case confirms our conclusion that the labours of Bennett and Harley are either not appreciated or unknown; inasmuch as when neurotics are given effects are described to them, which from their nature cannot be due to the drug. The writer says speaking of the combined results of opium and belladonna, "it shows that opium given with belladonna may not prevent the latter from causing symptoms of poisoning." This is not a logical method of drawing conclusions, and to be more scientific he should add to his assertion "if the proportion of opium to belladonna; is as one to two." But we know very well that such a proportion of opium is quite in-

sufficient to neutralize the stimulating effect of belladonna; hence the fallacy of the deduction. He approves of Mr. Hutchinson's remark.

"It illustrates the wisdom of Mr. Hutchinson's warning against "exploratory" operations for the relief of distension the cause of which cannot be diagnosed."

I agree that the advice is excellent, and quite appropriate to the case in question, which appears to have been one of accumulation. To have performed gastro-enterotomy would have been a gross mistake, but not such a serious one as to have resorted to gastrotomy and to have made a forlorn expedition against an imaginary evil. The patient showed signs of improvement of the fifth day, and despite the efforts of the belladonna the pulse and temperature had improved by the seventh day, which improvement steadily progressed, when on the ninth day the practitioner misinterpreting the signs of resolution commenced to knead the bowels. The writer concludes by remarking that—

"The bowels had at last acted naturally and spontaneously."

With much pleasure I second his assertion, and admire the judgement which does not ascribe to a medley of drugs, an effect, clearly spontaneous.

The next case appears in the Lancet of

December 7th. The patient's powers of endurance had previously carried him through several serious illnesses. In this, his last ailment, he was attended by a practitioner of renown, further assisted by two of the highest authorities in Surgery and Medicine. The following extract betrays the treatment

"most patient perseverance in attempts to overcome the obstruction by injecting emmollients and solvent enemas,"

Patient died. Post-mortem examination revealed,—

"At the termination of the sigmoid flexure of the colon, the large intestine was bent at a sharp angle—suddenly stretched, as it were, over the brim of the pelvis. At this point, the bowel appeared slightly constricted. Above this bend, there was a conical plug of dense tenacious material, like inspissated dark green paint. It was at this spot that the injecting-tube was arrested. The kidneys and the other viscera were healthy. There was no trace of tubercle in the lungs, in the intestines, or in the peritoneum; nor was there any noticeable enlargement of the bronchial glands.

The intestinal obstruction, favoured by the inflammatory paralysis of the intestinal walls, was rendered complete by the arrest or the accumulation of the tenacious plug I have described at the termination of the sigmoid flexure of the colon."

In this case the medical gentleman laid implicit reliance upon enemata, which obviously failed in removing the mass of fœces from the colon. Harm inevitably ensued from their "most patient perseverance in attempts" to remove that which could do but little harm for many days—harm, not

nearly so extensive, as that due to the "attempts." Had rational means been employed, and had attention been paid to the parts above, and not to below the lesion, so-called "tenacious plug,"

"Would melt,
Thaw and resolve itself into a dew."

During this year my views have been noticed, but not discussed, by some of the Medical Journals. The Student's Journal, January 5th, 1878 informs its readers.—

"The book is nicely got up. Mr. Thomas with the assistance of his printer, publisher and bookbinder, has produced a very attractive book. The paper is good, the type is better, and the binding is best of all. It is therefore unfortunate that the title of the work is one, which renders it scarcely available as a drawing room table ornament. Mr. Thomas's treatment, though doubtless based on sound principles is not novel and might have been indicated in a far less number of pages."

Any medical man perusing this notice will at once perceive the vile personal insinuation it conveys. Adverse criticism is often more useful than praise, but, inuendo and personality, should never usurp the wholesome influence of unbiassed discussion. The Edinburgh Medical Journal of September 1878 also notices my views but carefully dodges the question by refering to my contribution as an "ambitous treatise" a "vamped up article"—phrases one might overlook were these lesions treated even decently. After a prolonged and

weary search through the medical perodicals published beyond the Tweed I find intestinal obstruction very seldom refered to. Perchance the diet of oatmeal gruel, which, travellers who have safely returned from that distant country inform us is so much consumed, acts both as a preventative and a cure.

The Clinical Society of London has this year discussed the utility of abdominal section in intestinal obstruction. The debate opened with a most remarkable case of obstruction due to lead impregnation (lead colic) which was treated in an unique way. To condense the history; it appears that for many weeks the patient was somewhat costive, and on admission into hospital was subject to syphon enema, digital examination per rectum and doses of opium by mouth. On the third day—

"The symptoms were still unrelieved notwithstanding repeated doses of opium and enemata," "he continued to vomit &c."

The Lancet does not give the date, but probably on the fourth or fifth day, an operation was decided upon. The ancient procedure of rummaging the abdominal cavity was adopted, with the result of finding nothing to rectify but would have yielded to tapping, or at most, Nelaton's operation. The

patient, mirabile dictu, lived. Judging from the Lancet report, no doubt an imperfect one, a cure was attainable by means solely therapeutic. Indeed on reading further I find that the operation did not receive the sanction of all. As my experience accumulates my faith in operative interference diminishes; and of all methods, that practised by Freer and Pring, and improved by Nelaton, has the greatest claim to our allegiance. At the risk of being prolix, I will add that Nelaton's method consists in incising the abdominal wall and seizing the most prominent coil of intestine, stitching it to the wound, and ignoring the lower segment of bowel, leaving it in fact to the vis medicatrix naturæ. Meddling with the rectum after even this operation, according to present fashion is bad; the complaint is prolonged by it, and the patient may die from its effects. Many object to opium because it "masks" the symptoms; and they think that by this means the proper indication for operation may be overlooked. Small as my operative experience luckily is, I have evidence enough to justify me in saying that if a case is rationally treated, the patient will be no worse for operation by postponing its date; I only refer of course to cases of difficulty in prognosis and diagnosis, and not to

palpable cases such as external strangulated herniæ. I recollect a case where I could not make up my mind whether the patient suffered from an inguinal hernia, or from internal strangulation. The patient's right inguinal canal contained an undescended testicle. On the sixteenth day after careful treatment by opium and diet he became collapsed, and gave no signs of reaction. Consequently I made an exploratory incision and found a small knuckle of bowel, which I inadvertently opened, lodged in the inguinal canal. The puncture was seized with artery forceps, and tied, and the bowel returned into the abdomen. The patient is alive to this date i.e. four years after operation.

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PLATE 1

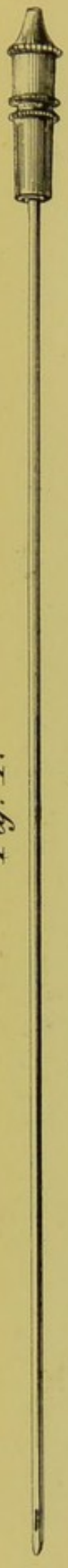

Fig. 1.

Fig. 2.

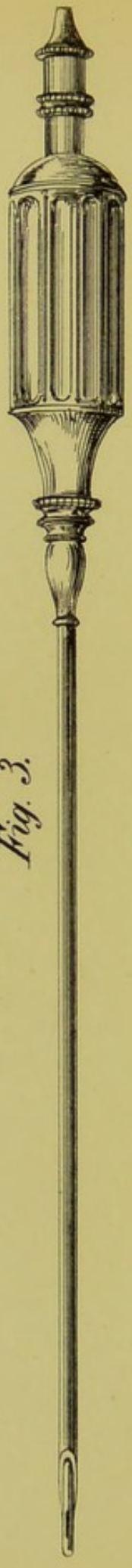

Fig. 3.

Fig. 4.

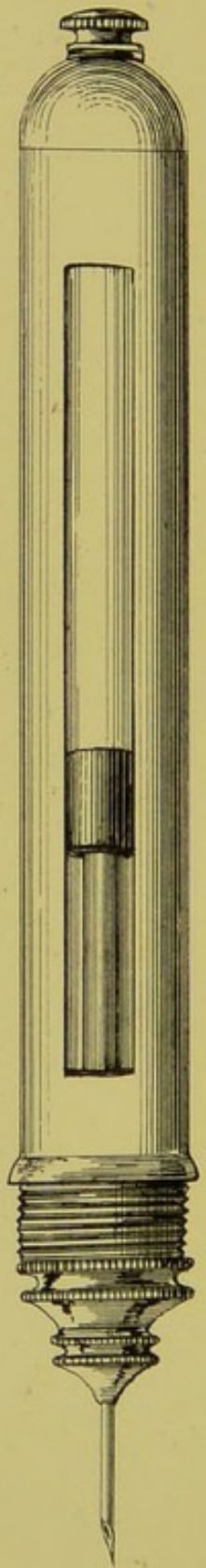

Fig. 5.

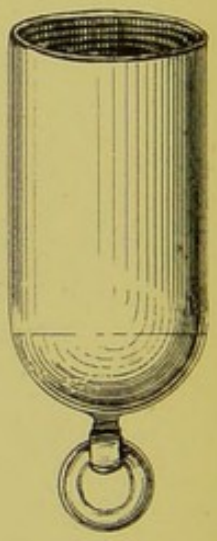

Plate I.

Fig. 1 shows male canula to fit trocar (fig. 2.)

Fig. 3 represents canula and trocar combined.

Fig. 4 is a full-size drawing of subcutaneous syringe, which is so constructed that it can be charged with several doses of the drug, the dose is regulated by the withdrawal of the piston, thus combining a cutaneous syringe and reservoir for the medicine.

Fig. 5 represents cap to protect the needle, with ring to attach to watch chain, or as may be most convenient.

Plate II.

Represents an aspirating pump, which I designed, and which was made for me by Mr. Reed, of Harrowby Street, Liverpool, and can, if needed, be attached with rubber tubing to canula and trocar, shown in plate 1. E indicates the cap of oiler; D the exhausting force or rubber ball; the centre opening always discharges the aspirated liquid, the suction force can be applied to either end (right or left arm). I have used this for a long time, and can recommend it as simple, will last many years, even if in use many times daily, or if laid aside for a time, is always in order and ready for use, cannot possibly get out of order, it can also be used as an enema or stomach pump.

Plate 2

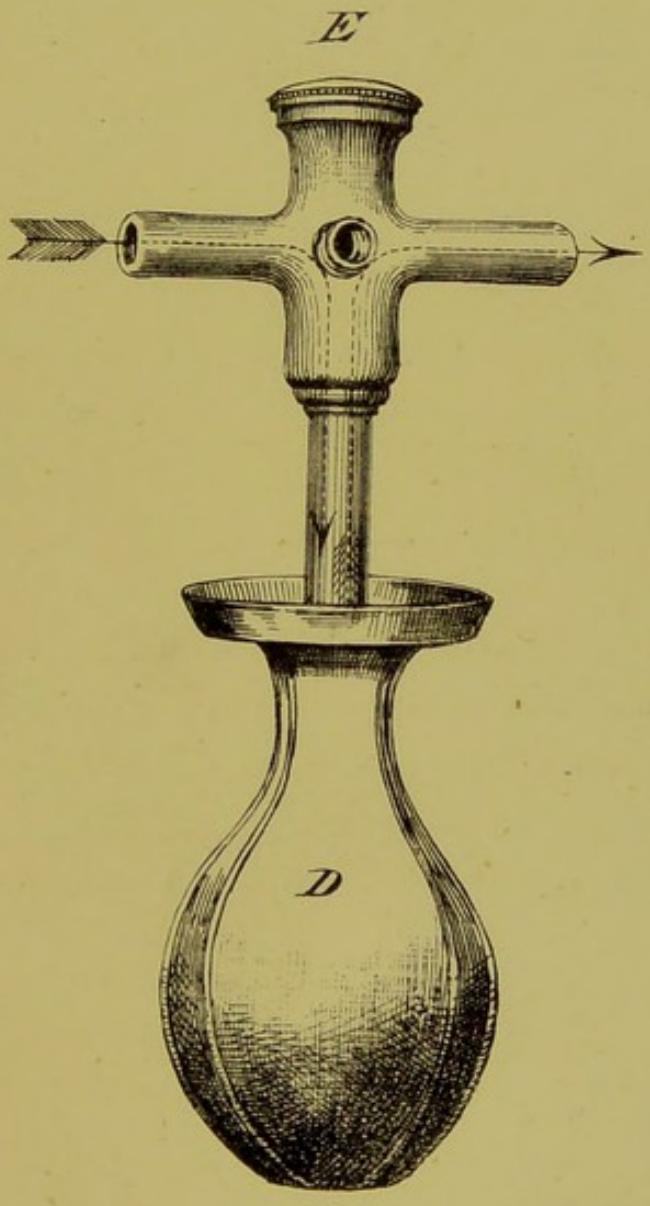

Plate III.

A. "Blind gut."

O. Cœcum, showing also termination of small intestine.

B. Termination of first dilatation in colon.

B. to C. Narrow portion leading to the second dilatation in colon.

D. Second dilatation of colon terminating in rectum F. F. F.

G. Rectum.

The scybalous mass originated in that portion of the "blind gut" marked A. where it was for some time retained but eventually safely traversed the narrow portion of the colon. B. to C.—It was within six inches of the second dilatation. D.—The gut however ruptured at C. in great measure due to the hydrostatic pressure resulting from a too copious allowance of liquid in the latter part of treatment.

Plate 3

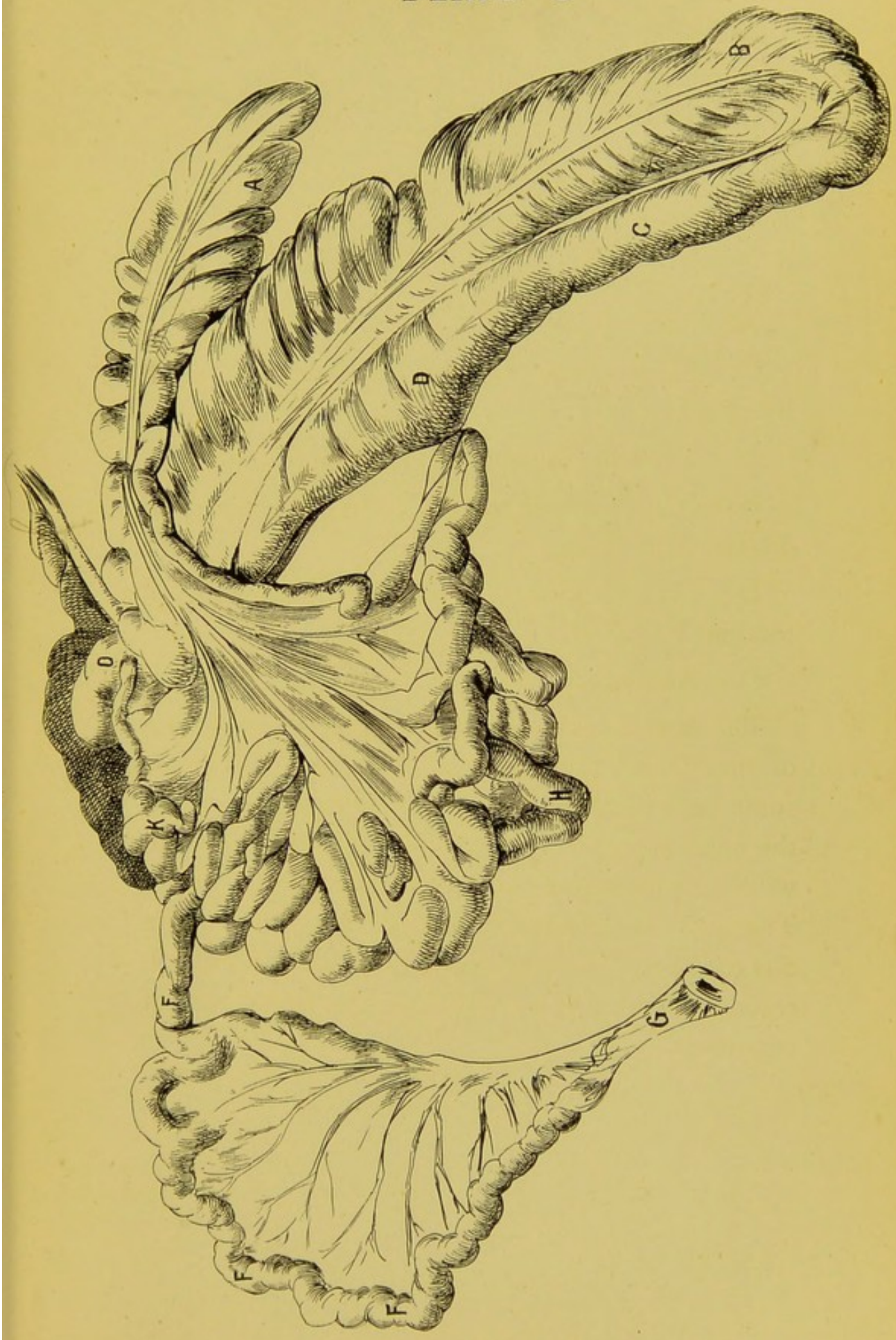

Plate 4

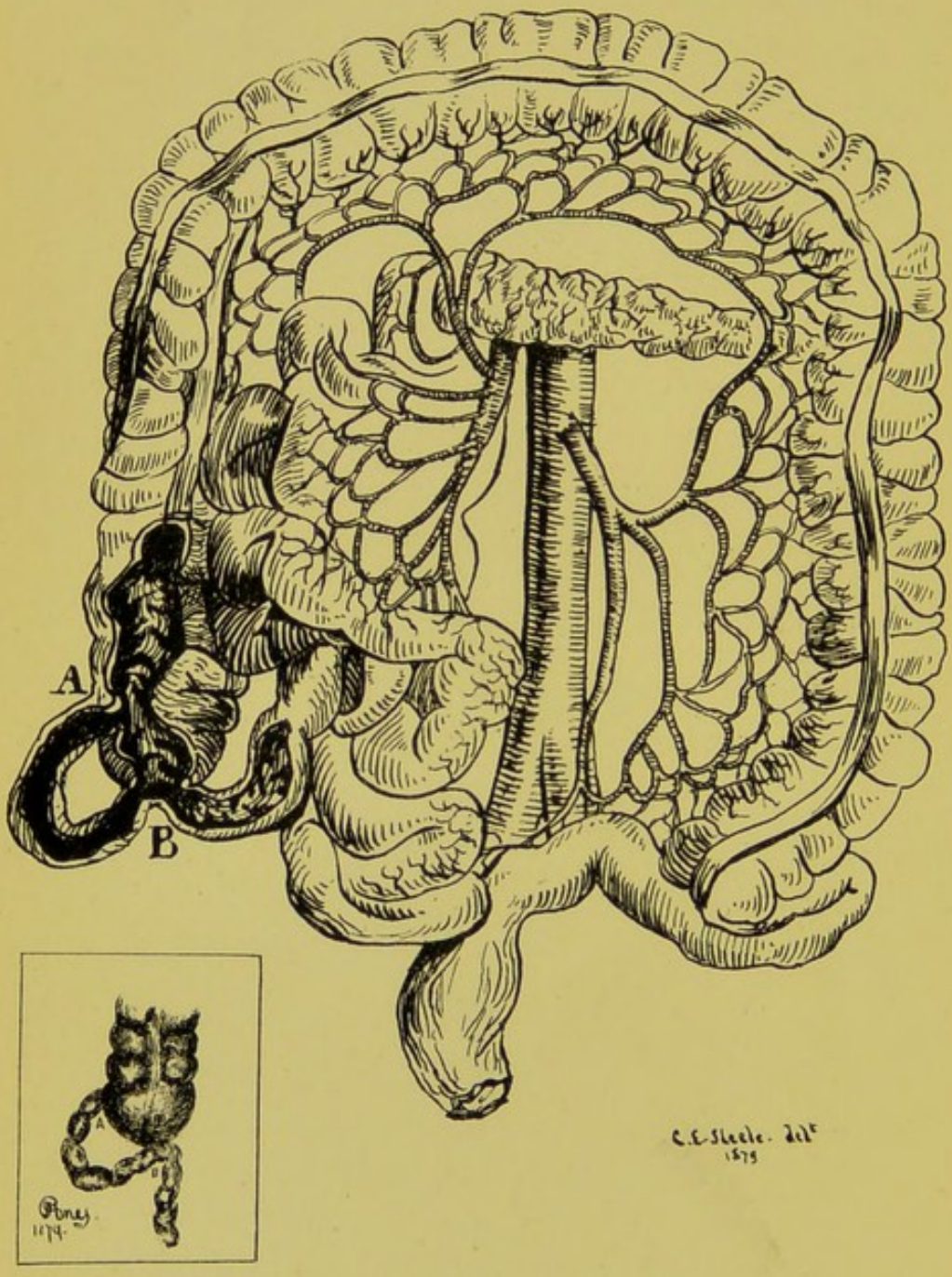

Illustration to Case No. 25.

Plate IV.

A. Intussusception, involving the ileo-cœcal valve.

B. Correction of obstruction by an ulcerative process, isolating a portion of the small intestine.