ART. XIII.

On the Operation for Strangulated Hernia. By HENRY HANCOCK, F.R.C.S.E., President of the Medical Society of London, Surgeon and Lecturer on Surgery, Charing Cross Hospital, &c.—London, 1850. 8vo, pp. 94.

BETWEEN extremes, we generally meet with the truth, and it is by the antagonism of such extremes that the truth is elicited;—an observation which has been repeatedly verified in our own profession, and of which the subject we now propose to consider offers, to our mind, a striking example. Trusting to the antagonism of which we have spoken, we are never disposed to quarrel with any man for taking up the subject he advocates with warmth and earnestness,—provided always he do it conscientiously,—because we are confident that the rejoinder will come sooner or later, in which assertions will be questioned, statistics sifted, fallacious reasoning exposed, and the mists of partiality dispelled; though it may be to substitute other imperfect statistics, supported by fresh sophistry, and still clouded by prejudice. Yet much is thus effected; for the *facts* are placed in different lights before the public, which is able to pass a dispassionate verdict on the validity of the information adduced, and the merits of the reasoning founded thereon.

Mr. Hancock is at issue with many of his predecessors and contemporaries on two important points in the treatment of strangulated hernia; viz. the administration of purgative medicines, and the mode of conducting the operation for the relief of the strictured intestine. We think he has much reason on his side; and our own practice has been very much influenced in the same direction, and on the same grounds, for some time past. We do not, however, go the full length with him, in entirely denouncing one mode of practice, and as exclusively adopting the other. This we consider a mischievous extreme, and scarcely warranted as a practical conclusion from his own statistics and experience.

Before entering upon such brief review as our space will afford, of the subjects under consideration, it may be as well to state each position separately; and then proceed to the discussion of the opinions maintained by the supporters of the several views, and the grounds on which they base their inferences. First, of the operation for the relief of strangulated hernia.

The most usual mode of performing this operation is, by laying open the peritoneum which forms the sac, and then dividing the stricture. For reasons to be presently stated, some surgeons have thought right to deviate from this practice, and to adopt, as a general rule, the division of the stricture external to the sac of investing peritoneum, which surrounds the strangulated gut or omentum. This plan has received the distinguishing appellation of Petit's operation; though it dates its origin to a time prior to its advocacy by that surgeon.—The question is, which of these two modes of practice is to be adopted as the *general rule*: and it is right that we should here at once add, that the supporters of the 'new style' are not *exclusives*; though many who give a preference to the old plan, do so to the entire exclusion of the new. Our author belongs to the latter class. The question is, doubtless, one of grave importance; and the

innovation (if we may so term it) has been countenanced by many good surgeons, who have had large personal opportunities of testing its value. It is not, however, so much of an abstract question, as, at first sight, it might appear. The information we require is, which is the safer operation in the hands of the many: and in the multitude are, of course, included those whose personal experience is comparatively limited, and who, therefore, cannot be expected to apply those delicate tests in the diagnosis of individual cases, which such men as Mr. Key and Mr. Luke could do. We believe, in short, that the operation without opening the sac may be regarded as the preferable alternative by surgeons of large experience, who are fully alive to the fact that, in the ordinary routine of practice, the exceptions may embrace a much more numerous class of cases than the rule; but we have as little hesitation in regarding the older plan of opening the sac in all cases, as a more certain and less dangerous course, to be pursued by surgeons, to whose lot it falls only occasionally to perform this serious though simple operation. This view has not been taken by writers on the subject, who have treated it as involving only the abstract question of which is the preferable method as a general rule of practice; and the advocates of each plan have considered that their statistics have borne out their several opinions. A review of these, and of the whole subject, has satisfied us that the consideration we have just pointed out constitutes, in a practical point of view, an important element in discussing the question. With this foregone conclusion, on our own part, we proceed to analyse the contents of Mr. Hancock's volume.

The various objections to the ordinary mode of operating are fully and fairly stated by our author. They are these:—Peritoneal inflammation consequent on exposure and handling of the contents of the sac, and admission of air into the serous cavity; hemorrhage; risk of wounding the intestine, or of rupturing it by drawing it down to examine its condition at the seat of stricture; extreme prostration; danger of disorganization from exposure.—The validity of these objections, as a whole, is first questioned by Mr. Hancock, who regards the exaggeration of the danger attending the usual operation by the advocates of Petit's method, as fraught with mischief; inasmuch as it tends to perpetuate the system of delay which has acted so prejudicially in augmenting the calendar of fatal cases. In this opinion we concur. Simple delay each hour diminishes the chance of the patient's recovery; and when we have superadded to this negative cause, the positive injury done to the intestine by violent and prolonged taxis, with the additional agency of stimulant cathartics upon the mucous and muscular coats of the bowel, we may fairly anticipate that the "last resource" will fail. In this respect, then, we think it is a favorable point in the newer operation, that it induces the surgeon to propose, and the patient to submit, at an earlier period, to operative interference; and if the operator be only prepared, by previously acquired tact and knowledge, to discriminate whether it is safe to complete the operation without opening the sac, he may safely adopt Petit's method as his general rule; always bearing in mind, as we have already remarked, that the exceptions to such rule are very numerous. Mr. Key attributes the usual fatality of the ordinary operation to exposure of the inflamed or strangulated portion of bowel. Mr. Hancock says, that comparatively few patients die of simple peritonitis after this operation, and supports

his opinion by referring to his own experience, with statistics, adduced (for other purposes) by Mr. Gay, and by the fact that the "amount of mortality is not in the same ratio as the extent of intestine exposed." It is quite true, that small herniæ excite, generally, the most urgent symptoms; but this is because they are generally recent, and the ring through which the gut descends is contracted; the stricture, in consequence, is generally tighter in these cases, and the intestine more susceptible on its first protrusion. We do not, therefore, attach much weight to this remark of our author. But it is certainly true, that a large old hernia may be often exposed and roughly handled, without the same risk which attends a similar exposure of one of recent descent; and, for this and other reasons, we are disposed to regard Petit's operation as more applicable in recent than in old ruptures. There is less probability of adhesion on the one part, and less risk from exposure of the contents of the sac on the other.

Again, is the incision of the peritoneum fraught with the risk attributed to it? Our author thinks not, when the serous membrane is already in a diseased condition; and considers that his position is proved by the impunity with which the large abdominal sections for ovariotomy are made. The operation for paracentesis abdominis, and the removal of large portions of omentum, are also regarded as affording confirmatory evidence on the same point. We are not prepared to go the full length with Mr. Hancock in this opinion. If inflammation is less likely to occur in some of the instances he has adduced, it is rather because the system generally is less prone to destructive forms of inflammation when partially prostrated by disease, than where the frame is suddenly subjected to a severe injury, involving an important serous membrane, such as is the peritoneum. But, be this as it may, we have no hesitation in ascribing infinitely more importance to the prolonged pressure by the ring of stricture upon the strangulated intestine, than to the small and clean incision which is required to liberate the gut; and, if there be no unnecessary handling, the general sac of the peritoneum need be very little interfered with.

We shall not now stop to analyse the cases cited to prove that purgatives are a frequent cause of death. This subject is treated of under a separate head, and we prefer keeping the questions distinct.—The sudden prostration which sometimes occurs after operation, has been attributed, and we think unjustly, to exposure of the bowel. Of this objection, Mr. Hancock takes a right view, in regarding it as belonging to that category which has been so ably treated of in Mr. Travers's invaluable work on 'Constitutional Irritation.'—The risk of wounding the intestine may be dismissed as a question of simple dexterity; and, unless the surgeon possess the requisite tact to avoid such a catastrophe, he ought not to handle the knife. It is true that the adjacent surfaces of sac and gut may be adherent; but then the operation of Petit can scarcely be said to be applicable to such cases; at any rate, few of its advocates, we apprehend, would be willing to leave the contents of the sac unreturned, or run the risk of returning the sac with them. Our author objects to opening the sac near its neck, and thinks there is more risk, in so doing, of wounding the intestine. He is probably right; and certainly there is no object in making such a limited incision, if the hernia be small. The healing process involves a certain amount of suppuration of the sac, and it is

better there should be a free exit for the discharge. In large hernial protrusions, there can be no question about the advisability of making a limited incision, and that near to the neck of the sac.

An allusion is made by Mr. Hancock to the modification of Petit's operation, recommended by Mr. Gay. He regards it as presenting no superiority over those of Petit and Luke, and thinks it does not carry out the principle contended for by its author, viz. that of not making the incisions deeper, or wounding more structures, than is absolutely necessary. We think, with our author, that it is far better, in such an operation, to see a little more what we are about. In this, as indeed in some instances of Petit's operation, we would suggest the possibility of wounding both sac and intestine. We were very recently withheld from completing an operation for femoral hernia, according to Petit's method, from a dread of this risk; the stricture being very tight, and the contents of the sac pressing the latter abruptly and prominently inwards, below Gimbernat's ligament. Such an obstacle, however, to the completion of Petit's operation is, we admit, of rare existence.

We think the objection, that the gut may be ruptured by drawing it down to examine its condition at the seat of stricture, altogether idle, and inapplicable to the question under discussion. Though a wise precaution, under most circumstances, this does not constitute a necessary part of the operation in which the sac is opened; and we, for our part, should not hesitate in regarding such rotten condition of the bowel (if we were acquainted with it) as a sufficient reason, *per se*, for completing the operation according to the ordinary method, and not of pushing back, without examination, a portion of intestine which would be very likely to give way spontaneously when returned. With respect to the risk of disorganization from exposure, we believe, with Mr. Hancock, that this is rather due to violent manipulation in the prior employment of the taxis, which is a far more rife cause of fatal peritonitis than exposure of a limited portion of the peritoneal surface. We pass by the fanciful objections urged by Mr. Gay against the ordinary operation, as one which "may prove fatal, by inducing unhealthy processes in the external wound," and proceed to grapple with something more real. This we find in the risk of hemorrhage into the abdominal cavity from a wounded artery. Fortunately this is rare; it can scarcely occur under ordinary circumstances, and if ordinary precaution be exercised. Where there is a deviation in the usual course of blood-vessels, no doubt the utmost dexterity cannot always avert the mischief. Moreover, such abnormal arrangement is certainly not frequent in connexion with either the femoral or the inguinal rings; the epigastric is the bugbear in one case, and the obturator in the other. The latter vessel *very frequently* arises from the former, but *very rarely* passes in such a position as to encircle the neck of a protruding femoral rupture, and thus become obnoxious to injury from the knife of the operator. Further, an artery taking such an irregular course would be as liable to injury in one as in the other form of operation; and, in either case, such wound would not necessarily, or even generally, prove fatal. Whilst alluding to this subject, we may as well remark, that it is desirable, in all cases, carefully to examine the circumference of the neck of the sac, especially in crural hernia, to ascertain whether there exist any unusual arrangement of the arteries in its neighbourhood.

We now come to Mr. Hancock's objections to the newer method of operating (Petit's); and, as he has fairly disposed of the objections on the other side, we will give him an open field and fair play, by allowing him to plead for himself.

"My objections to Petit's operation are, that it is not applicable to all cases, and that, consequently, the patient is exposed to the danger attending error of selection. In performing operations, it is our duty to select that method which is capable of embracing, as far as may be, all difficulties and modifications which may be met with during such operation, and which it is impossible to ascertain before the operation has commenced; and, moreover, we ought to employ that mode which holds out the greatest certainty of effecting that for which it was undertaken, and of which, in strangulated hernia, we can never be certain, unless the sac be opened. It is of great importance that we should be able to judge of the condition of the contents of the hernial sac; whether the intestine be healthy, ulcerated, or gangrenous,—whether adhesions confine it to any part of the sac; the condition and disposition of the omentum, the number of protrusions, the condition and arrangement of the sac, whether double, single, or otherwise, and the seat of the stricture, are all matters influencing the success of the operation." (p. 25.)

There is much that is just and true in the above quotation; and the illustrative examples, subsequently cited by our author, unquestionably support his views, yet they are scarcely sufficient to justify his conclusion, that the operation of Petit should be discarded altogether. But we will examine the validity of the objections a little more in detail. The "difficulties and modifications" alluded to are, the engagement of the testicle in the ring, conjointly with the hernia; omentum surrounding the intestine, or adhering to the interior of the sac, or strangulating the intestine by crossing and binding it down; a multiplicity of sacs; the coexistence of two forms of hernia, the one masking the other; great density of the sac; its rupture, and the escape of the intestine through the rent; complication of hernia with hydrocele, and strangulation by rupture of the sac; plurality of necks to the sac, &c. Now, many of these—indeed, most of them—are complications of rare occurrence. Further, the history of some, and the condition of others, would declare the real condition of parts. And it is to be borne in mind, that, in commencing an operation with the intention of completing it without opening the sac, the surgeon always has the option of exposing its contents, if any suspicious circumstance excite his attention; and then, as we have said before, there should be no hesitation on the subject. We have ourselves, in one instance, operated where the testicle was engaged in the ring with a congenital hernia; but the history of the case and the absence of the testicle were sufficient to indicate the actual state of parts.

There are, however, some other conditions, to which the objections of our author apply with more force; and one, in particular, is the strangulation of the gut by an adventitious band, at, or within, the internal ring,—a circumstance which nothing can reveal, short of actual examination, by the introduction of the finger, after the sac has been opened and its neck incised. We, therefore, quite agree with Mr. Hancock, that the practice of gently passing up the finger within the ring, whether inguinal or femoral, is desirable, and can excite no mischief if it be done with great caution and gentleness.

The parallel between the taxis and operating without opening the sac is scarcely admissible; and our author justly asserts the distinction, by

pointing out the reducibility of the hernia as constituting an all-important contrast between the two. We would even venture to go further, by remarking, that the reduction by taxis had better not be effected at all, than by great violence; for rupture of the gut under such coarse manipulation is not the only serious consequence to be anticipated. The bowel may be fatally and irrecoverably bruised, or the mucous membrane may have sustained lesion, leading to hemorrhage. These are not fanciful, but real risks, which we have actually witnessed.

We must pass by some illustrative cases which follow, and pause for a few moments, to examine our author's analysis of the statistics adduced by Mr. Gay, in favour of Petit's operation. The cases subjected to this ordeal are those of Howship, Poland, Luke, and Hewett. Howship's and Poland's cases are first disposed of, and certainly they are not particularly favorable to the adoption of the newer operation, though there appear to have been very sufficient reasons why the patients should not have recovered in those cases which proved fatal. And we may here remark, that statistics, derived exclusively from the professional experience of a surgeon whose practice it is to operate, *as a rule*, without opening the sac, are not available for comparison, or for testing the relative merits of the two modes of operating; inasmuch as we may fairly conclude, that the least promising cases were those which had been subjected to the exceptional treatment, by opening the sac. Further, the character of the operator for dexterity and discrimination constitutes another and not unimportant element in the consideration; but respecting this, we, of course, can have little means of judging, and must say nothing; although results of operations are very much dependent on this, and on the judicious and watchful application of such medical treatment as the peculiarity of each case may require.

It cannot be denied, that Mr. Luke's cases appear greatly to favour the operation to which he gives the preference; and there is such internal evidence of impartiality and candour in his statements, that they deserve the greater attention and confidence. The gross results of Petit's operation by him, in fifty-nine cases, between 1831 and 1841, yields a mortality of only seven,—an unprecedented success, it must be allowed. But then Mr. Luke candidly admits, that, of these cases, many were selected, and ought not, therefore, to be admitted as fair subjects for comparison. In short out of a total of 84 cases, in 25 of which the sac was opened, he considers it right to exclude 30, partly for the above reason; and, on the other hand, because some, in which the operation was performed, were hopeless.* Thus, of 54 cases which remain, Petit's operation was completed in 33, and of these only 2 died; whilst, of 21, in which the sac was opened, 3 died. We repeat, that this is unusual success, especially as the bulk of the cases occurred, we presume, in Mr. Luke's hospital practice; and, whether we regard with preference one or another mode of operating, we cannot fail to draw an inference very favorable to the dexterity of the operator. We do not, however, regard these statistics as so conclusive as Mr. Luke himself does, and for the reason already stated, viz. that the class of cases excluded from the Petit category, and doomed, so to speak, to an alternative which the operator would willingly avoid if he could, is not likely, for this very reason, to yield such favorable results. It is but

* We should remark, that whilst we write, we have Mr. Luke's own statement, in his paper in the 31st vol. of the Med.-Chir. Trans., before us.

just to add that Mr. Luke informs us in his excellent paper on the subject, that where the sac *was* opened, the aperture was made as limited as possible, so that the intestine was but little exposed.

Mr. Hewett's cases certainly prove but little in favour of either plan of treatment; for in the majority of the nine fatal cases in which the sac was opened, out of thirty-four, there were sufficient reasons for the death of the patients, apart from the mode of operating.

Our author concludes this part of his subject, by a comparison between cases subjected to the two forms of operation. The total number of cases is considerable; but we apprehend that the supporters of Petit's method would object to the exclusion of the *large* number of the unsuccessful cases in which the sac was opened, and the omission of the *small* number of similar cases in which it was not opened. We are tempted, however, to give this analysis at length, as the facts are valuable and interesting; and our readers are at liberty to draw their own deductions from them.

"Through the kindness of Mr. Hamilton and Mr. Puleston, I have been enabled to obtain the particulars of 548 cases of strangulated hernia, collected from various sources. Of these, the sac was opened in 474, the operation proving successful in 307, unsuccessful in 167. In 3, the gut was injured in dividing adhesions; 61 proved fatal, without any complications; and of the remaining 103, in 33 the gut was gangrenous; in 13, it was gangrenous and had burst; in 13, the gut was perforated by ulceration; in 1, the patient had burst the intestine in his endeavours to return it before the operation; in 6, the intestine was adherent to the internal ring; in 7, adherent to the sac; in 8, gangrenous omentum; in 7, adventitious bands and adhesions together; in 2, double sacs; in 2, sacs contained pus; in 1, colon was twisted, and could not be returned; in 1, Petit's operation was first tried and failed; in 1, patient delirious, in *articulo mortis*; in 1, sloughing placenta found in the uterus after death; in 1, disease of the brain; in 1, ossification of the aorta; in 1, encysted hernia of tunica vaginalis, unrelieved; in 1, pneumonia, after twenty-three days; in 1, constricted intestine at point of stricture, the rectum severely ulcerated from very hot enemata; in 1, the patient had been operated upon three times; and in another, the patient had taken several doses of croton oil, turpentine, &c., before the operation; immediately the gut was liberated, the bowels began to act, and continued to do so, almost without intermission, until she died, twelve hours after.

"It should be stated, that the condition of parts here given was in almost every instance found at the time of operation, and not merely observed after death; it must therefore be admitted that the above 103 cases would have terminated fatally had Petit's operation been performed; consequently the number should be calculated at 307 successful, 64 unsuccessful, or one in six.

"On the other hand, the sac was not opened in 74. In 5 it failed, under circumstances which would equally have influenced any operation. I therefore leave those out, and take unsuccessful cases, in one of which the gut was wounded, as 17, leaving 52 successful cases, or one in four." (p. 53-4.)

We now address ourselves, though it must be briefly, to the question of the general medical treatment; and here we are more prepared to go the whole length with our author, in the judicious but by no means singular view which he takes of the subject.

Delay, he remarks, is a very rife cause of the fatality attending the operation for hernia; an opinion from which, we presume, no surgeon of experience would venture to dissent. It is, however, quite a different question, what amount of delay is admissible, or desirable; and how long, or to what extent, the taxis should be used. On this subject surgeons hold

very different opinions. We do not hesitate at once to class ourselves with those who are disposed to interfere very early, even at the risk of occasionally operating (as the result *might* have proved) unnecessarily. We refer to this subject, because delay is often excused on the score of its being expedient to try every means, including purgative medicines, before having recourse to the knife. Hence the operation, from the necessary fatality attending it, has got into much discredit; and we again repeat that, by inducing a disposition on the part of the surgeon to operate earlier as a rule, Petit's operation has done, and will do, good service,—provided always he possess the requisite discrimination and experience to expose the contents of the sac without reserve, whenever it may be needed, even in those cases which may have been deemed, *à priori*, peculiarly adapted for the newer operation. We entirely agree with Mr. Hancock in his deprecation of purgatives, when exhibited with a view to procure reduction by exciting peristaltic action of the bowel.

The analogy, however, which he draws, by way of illustration, between the condition of the iris and intestine is not very happy; for belladonna unquestionably will act on an inflamed iris, and a very valuable adjunct it is, in thus preventing adhesions in iritis.

The employment of tobacco we regard as equally objectionable; and believe, with our author, that all the advantage which has ever been ascribed to it may be fulfilled by the far more agreeable and safer exhibition of chloroform. We have not great confidence in large bloodletting; there are, however, circumstances, in which this preparative to the taxis should not be neglected, but its indiscriminate use is most objectionable. Young and hale subjects, with recent herniæ and acute symptoms, are the fittest for the experiment; inasmuch as the loss of blood may operate beneficially as a prophylactic, in the anticipation of acute peritonitis.

We have already stated our opinion as to the protracted and forcible employment of the taxis; and there is no lack of confirmatory evidence on this point, to be gleaned from most practical surgeons. We think it, therefore, unnecessary to follow our author through this division of his subject. Suffice it to say, that the tightness of the stricture very often precludes the employment of the taxis almost entirely, and that, too, in very recent herniæ; the tension of the tumour and its exquisite tenderness are sufficient indications of this condition, and then the operation should not be delayed, although the strangulation may have existed but a very short time. These cases are by no means of infrequent occurrence; we can recall many such, where three or four hours has sufficed to produce all these symptoms, in their full severity; acute umbilical pain is also generally present.

With respect to the after-treatment, it is impossible to lay down any general rules; it must be adapted to meet symptoms as they arise. The early administration of purgatives, we think, with Mr. Hancock, objectionable; but, on the other hand, care must be taken that a loaded condition of the bowel do not act prejudicially to the patient. An injection, or, if required, a moderate dose of castor oil, will suffice to relieve constipation in most instances. Opium, used with caution, is a valuable remedy; and we regard its exhibition, in company with small and repeated doses of calomel, in young and sthenic subjects, as a desirable mode of

treatment, to be commenced immediately after the completion of the operation;—always providing there is not much prostration, and the vitality of the bowel is not endangered from the degree of pressure to which it has been subjected. In short, where peritonitis (local or general) may be reasonably expected, then we think calomel and opium should be given in small doses, every two or three hours. Our author prefers the opium without the calomel, and cites some examples illustrative of his treatment, and the success attending it.

Three tables are appended to the volume; and a summary, containing the deductions of the author, occupies the last three pages. The tables show severally “the relative frequency of different species of hernia, in 537 cases; the influence of age upon the result of the operation for strangulated hernia, in 357 cases; and the influence exerted by the several modes of treatment upon the success of the operation, in 432 cases.”

Amongst the deductions which Mr. Hancock considers himself as justified in drawing, the following are the most important and decided:

“1. That opening the sac does not increase the danger of the operation, but it is to be preferred as the safer mode of proceeding. 2. That comparatively few cases die of simple peritonitis after the ordinary operation. 3. Incisions made into the peritoneum, with a view to relieve an inflamed condition of that membrane, are calculated to diminish, not augment, the inflammation. 4. Rapid depression of the vital powers, with death, are not to be attributed to opening the sac. 5. The risk of wounding the intestine is less in the usual, than in Petit’s operation. 6. Petit’s operation, not being applicable to all cases, exposes the patient to the danger attending error of selection. 7. The practice of exhibiting purgative medicines before operating for strangulated hernia, with a view to the liberation of the gut by its own movement, is improper. 8. The successful cases treated by Petit’s operation would have been equally successful under the usual treatment; a very large number of those in which it failed might have been saved, had the sac been opened. 9. The employment of chloroform should supersede the necessity of warm bath, bleeding, and tobacco, in the treatment of strangulated hernia. 10. The injurious effect of purgative medicines, after the operation for strangulated hernia, are shown by the increased urgency of the symptoms, and the fatal results attendant upon their exhibition.” (pp. 91-4.)

These, we repeat, strike us as the most important amongst a more detailed list of deductions enumerated by our author. We shall not reiterate our comments on these inferences, but merely state our own conviction, as based upon personal observation, and upon the experience of others. It is this:—Petit’s operation may be kept in view as the preferable alternative, when there is no contra-indication; but we believe the ordinary operation to be that which is applicable to a great majority of cases, including all forms of hernia. We regard Petit’s operation as specially applicable to the femoral form of hernia; also to cases in which the rupture is of recent descent, or, if old, when it has been small and easily and entirely reducible. Further, it is specially applicable to cases in which the symptoms of strangulation, though acute, have been but of short duration. We deprecate, with our author, the use of purgatives before operating, and their early use afterwards. We entirely eschew tobacco; have but little faith in the warm bath or bleeding in aiding the taxis; and regard chloroform as a valuable substitute for both; indeed, hernia and dislocation may be included in the same category in making this remark.

Lastly, we approve of opium in most cases, and in many, of calomel in addition, in the after-treatment of patients who have been subjected to operation.

One word more on the taxis, and we have done. A moment's reflection as to the mode in which pressure is applied to a strangulated mass of intestine or omentum, with a view of forcing it through a narrow canal, must at once render obvious to the operator at how great a mechanical disadvantage he is acting; how much better it would be, if he could pull it through from the opposite side. Let the experiment be made with a truncated funnel, filled with intestine, and let the experimenter first try to *push* the gut through, and then reverse the application of the force, by attaching a string around it, and *pulling* it through. Is it impracticable to imitate this latter and far more efficient method, that of traction? We think not. Let the patient's thighs be flexed and rotated inwards; then let an assistant, standing over the patient, raise him or her by both legs, until the whole trunk is fairly lifted from the bed, and the whole weight is thrown upon the shoulders; the pillow having been previously removed from under the head. This posture must be maintained for a short time, and then the buttocks gently lowered and raised again, the surgeon the while keeping his hand on the hernial tumour, and *gently* aiding by taxis the return of the bowel. Such assistance on his part will often not be required, even where the stricture is a tight one, and much pressure will tend to interfere with its success. These remarks apply especially to small, recent, and, of course, reducible herniæ; and to femoral, rather than inguinal. If it fail in such, we should at once desist from any more forcible use of the taxis, being satisfied that it would prove unavailing. The rationale of its success appears to be, that the whole mass of small intestine within the abdomen, of which that in the sac is but an offset, is thrown upwards towards the diaphragm, and must, unless the resistance of the stricture be too great, draw the incarcerated portion with it. Of its success we have no doubt; and cannot too strongly urge its general adoption, in place of the coarse and cruel handling to which recent herniæ are too generally subjected, to the great present anguish of the patient, and his greatly deteriorated chance of surviving an operation if afterwards called for.

After all we have said, it is scarcely necessary to add our thanks to Mr. Hancock for this contribution to practical surgery. His book contains much that is valuable and interesting, although put forth somewhat in the spirit of antagonism of which we spoke at the beginning of this article. We do not, however, quarrel with him on this account, and for the reason there assigned; and we herewith accord him our thanks for placing "the good old method" in as favorable a light as possible before his professional brethren.