HERNIA.

cated by bands of adhesion; but its use will, by reducing the size of the gut protruded, make the ulterior cutting operation easier. In a very small hernial knuckle, such as is not infrequently found in the femoral region, little will be achieved by aspiration. With these exceptions, there is abundant proof that the process is of wide applicability, and eminently useful for the reduction of herniæ resisting all efforts at replacement by taxis, even when aided by chloroform freely administered. There can be little doubt that the general use of the aspirator would in such circumstances save many a useful life, which is sacrificed by the continued employment of a very dangerous operation for one incomparably safer and easier of performance.

Baths.—The warm bath is used to depress the system and produce relaxation of the abdominal muscles. Commencing with a temperature of 95°, it should be raised to 110° Fah. Owing to its inconvenience, however and the great facility of chloroform, the bath is but little used at present.

Cold, applied to the tumor and around it, is valuable in effecting relaxation and preventing inflammation. It may be done by laying a bladder of pounded ice on the tumor, or by cloths wrung out in icewater, or by a refrigerant lotion, (as p. 33,) or by a thin sponge saturated with ether, by enemata of ice-water, or by the ether spray.

Cupping.—Dr. B. H. Washington, of Tennessee, (Nashville Journal of Medicine and Surgery, September, 1876,) states that the Russian peasantry reduce hernia by a dry-cupping on a grand scale; they take a small cooking-pot, and make the bottom as hot as they can without making the rim too hot, and then applying it over the abdomen, cool the abdomen with cold wet cloths, and thus suck up a large portion of the intestines, that they are able to make sufficient traction to draw it back.

He has modified this plan very successfully, and considers it far superior to the ordinary tedious, pai ful, and sometimes dangerous taxis. His plan consists in applying a dry cup to the abdominal wall, say over the umbilicus; then let an assistant stand between the legs of the patient and lift the hips as high as he can; then the operator, drawing on the dry cup, produces a vacuum, and, atmospheric pressure being superadded to the weight of the intestines gravitating towards the chest, a reduction is easily effected in less than a minute.

The operation is almost painless, and really seems so to the patient,

for the relief from the preceding pain is so great that he never says a word about any suffering from the operation.

This method was also suggested by Dr. Lipscomb, in the American Practitioner, October, 1875.

Dilatation.—Dr. H. R. Allen, of California, advocates the use of the dilator for the relief of the strangulation, without having recourse to herniotomy. Dr. Allen says that some years ago he succeeded in reducing a few cases of severe strangulation which seemed urgently to demand herniotomy as the only hope of relief, by introducing the index finger forcibly into the ring and distending it by lifting or pulling upon the stricture. He says: "I found it easily lacerated in some cases, and the tension was at once relieved; but other cases proved more firm and unyielding, and I feared that the necessary pressure to insert the finger might be injurious; although the tissues of the hernia rested upon a smooth posterior wall, and the finger substituted a distributed pressure, instead of the sharp cutting edge of the stricture, I felt that some instrument might be devised which would enable me to accomplish the same result without any of the apprehended dangers."

The instrument which Dr. Allen has devised he terms a dilator. "To use the instrument the patient is placed upon his back, the scrotum invaginated with the finger, which is carried up to the ring. The finger guides the blunt probe into the stricture as it would a uterine sound into the uterus." The advantages claimed for this method are that it is "perfectly safe, as the skin is not punctured and the laceration is subcutaneous. * * * The amount of laceration is perfectly at the option of the operator; and if the first attempt proves insufficient, it may be repeated. * * * One great advantage is, it is admissible at any stage, when the parts are not fatally injured, and if employed immediately when taxis fails, all the danger of inflammation or gangrene is avoided. The laceration, instead of being injurious, has so far proved an advantage, by inducing sufficient inflammation of the ring to produce adhesion if a firm truss is at once employed, and quiet enjoined. The operation, so far, has not only been easy and safe, but a life-saving treatment, relieving strangulated hernia of its terrors and fatal results."

Further particulars respecting this method, together with a woodcut of the instrument he employs, will be found in the original paper

HERNIA.

by Dr. Allen, in the Medical and Surgical Reporter for July 10th, 1875.

Elastic Pressure.—Some European surgeons report reductions of scrotal herniæ by winding layer after layer of elastic bandage upon the scrotum, until the tension of the rubber forces the gut back into the abdomen.

Electrolysis was suggested by Nelaton, and has been lately employed by Dr. Morari, of Madrid. (Liglo Medico, 1880.) In a case where taxis was unavailing, the electro-magnetic machine of Breton was used, one rheophore being applied in ano, while the other was placed in contact with a needle passed deeply into the tumor. The current was applied interruptedly at intervals of ten minutes. At the first application the hernia became considerably reduced in size. After the second the needle was removed, and taxis having been applied the whole mass was readily returned into the abdomen.

Enemata.—When the hernia is not very acutely strangulated, it is good practice to commence the treatment by the administration of a large enema. This, by emptying the lower bowel, will alter the relation of the abdominal contents, and may materially aid reduction. The best enema is one of gruel and castor oil, with some turpentine added. (ERICHSEN.) A full-sized tube should be used, passing high up into the gut. Enemata of ice-water sometimes are efficient relaxants to the ring. In very desperate cases of strangulated hernia with stercoraceous vomiting, where an operation could not be performed, Mr. W. Adams, of London, reports some extraordinary cures with large enemata of mixed oil:

381. R. Olei olivæ, Oiv.
Olei ricini, Olei terebinthinæ, āā f. \(\mathcal{Z} \) iij. M.
This whole amount, (over two quarts,) for one injection, to be repeated if required.

The injection should be performed slowly, with an elastic tube nine or ten inches long. (British Medical Journal, December, 1874.)

Ergot, both by the mouth, locally to the tumor, by hypodermic injection and enema has been tried, and in some cases with apparent success. (Medical and Surgical Reporter, May 3d, 1879.)

Errhines.—Dr. Charles Denison, of Colorado, has found the act of sneezing of decided assistance as an auxiliary to the taxis. Ordinary snuff may be used. He explains the action of the sneezing by saying

there seems to be a billowy movement of the anterior wall of the abdominal cavity, from above downwards, which is suddenly reversed. This reversed action is accompanied by a sudden relaxation, as it were, at which instant a little of the contents of the hernial sac shoots back through the intestinal ring.

Heat.—Hot fomentations and hot immersions are valuable relaxants. There is no rule which can be laid down as to when heat or cold should be preferred.

Inflation.—Inflation of the lower bowel in hernia has for some time been popular with French surgeons to aid in reduction of herniæ. A long elastic tube should be inserted into the rectum after the latter has been well washed out, and air slowly injected by a bellows, syringe or hand ball. The inflation produced exercises a traction on the implicated bowel much more accurately in the line of reduction than can pressure from without. It is well to aid the efforts of inflation by applying cold to the tumor, and properly relaxing the muscular system.

Nauseants.—In former times tobacco, tartar emetic, lobelia, etc., were used as depressants, and to relax the system. Their employment is wholly superseded by anæsthetic and other means.

Opium.—A large dose of opium, by hypodermic injection of morphia or otherwise, will induce relaxation and avoid the necessity of an operation.

Position.—To obtain the greatest aid from the force of gravity is of much importance in the taxis, and to do this, everything depends upon placing the patient in the most suitable position. The following rules have been laid down by good authorities:

The erect position is that proper in the reduction of strangulated inguinal hernia, the thigh flexed and adducted, the head and shoulders bent forward, the spinal column inclined toward the groin in which the tumor exists. If this fails, the patient may be placed upon his back, the head and shoulders raised on pillows, inclined as before, the knees drawn up and adducted; or, in a semi-prone position, upon his hands and knees, with head depressed and pelvis elevated; or, as has been highly recommended, in the semi-prone position, upon the side of the hernia, the thighs flexed upon the body. Complete inversion—holding the patient up by the feet—has been much lauded by some surgeons, but according to others rarely proves successful, and is very

exhausting to both patient and physician when it falls to the lot of the latter to perform it.

A somewhat modified form of inversion, which he calls the "tractile method" has been described by Dr. D. Leasure, of Pittsburgh. (American Journal of Medical Science, April, 1874.) It is as follows:

After having given the patient a full dose of morphia, or morphia and atropia, hypodermically, to allay pain and vomiting, hot fomentations are applied to the hernial tumor for the space of an hour or two, so as to insure as favorable a condition as possible of the contents of the sac, before attempting to return them into the abdominal cavity; he administers an anæsthetic, and when it has well overcome muscular resistance the patient is raised by the feet or hams till only the head and shoulders rest upon the bed. The muscles of the abdomen, diaphragm, and the muscles of the chest which control the bony framework of the thorax, are thus relaxed by the anæsthetic. The abdominal viscera gravitate against the diaphragm, which offering feeble resistance, retreats before them into the cavity of the chest, while the diaphragmatic breathing is diminished, the respiration becomes almost entirely thoracic, and the contents of the abdominal cone, now resting on its base instead of its apex, fall by their own gravitation still further away from the brim of the pelvis, and the mesentery, borne down along with its attached bowel, pulls every portion of its intestinal border after it, and if any portion of that intestinal border be entrapped within a hernial sac it pulls it out, and if there be any portion of omentum in the sac, the weight of the intestines, now resting in the reversed lap of the omental apron, drags it down towards the diaphragm and pulls it also out of the hernial sac, and the hernia is reduced.

Another still further modified form of inversion has been used by Dr. J. H. Thornton, of the Indian Medical Service. (Lancet, Aug., 1875.) It consists in placing the patient in such a position as to bring the force of gravity into play to reduce the rupture. This may easily be effected by raising the foot of the patient's bed, and keeping it supported at an angle of 45°. In this posture the intestines naturally gravitate towards the upper part of the abdominal cavity, and gradually draw in the ruptured portion. It is evident from the nature of the case, that a force acting gradually and equally from within the

abdomen must be far safer and more effectual than any pressure applied externally.

He believes that the advantages of inversion over all other modes of treatment are, that it is generally effectual, absolutely safe, and universally applicable. It can be used by any person, at any time, in any place; and should it prove unsuccessful in effecting reduction (which will rarely be the case unless adhesions have formed), the patient is in a more favorable condition for the performance of the necessary operation than he would be after the employment of the other methods.

Purgatives are sweepingly condemned by some authorities. Mr. Erichsen, however, points out that in the treatment of the incarcerated hernia of elderly people a good purgative injection, as the compound colocynth enema, should be thrown well up into the bowel; and that after the reduction an active purgative should be administered by the mouth.

Relaxants.—The most important of these are the anæsthetics (which see.) Nauseating relaxants should be used continually or not at all. Coffee has proved in a number of instances very valuable. A number of small cups of very strong hot coffee, administered at short intervals, will often greatly facilitate the taxis.

SUBCUTANEOUS INJECTIONS.

The radical cure of hernia has been successfully practiced in a number of cases where the herniæ are small, by the injection of stimulating liquids in the neighborhood of the neck of the sac, in the manner proposed by

PROFESSOR JOSEPH PANCOAST, OF PHILADELPHIA.

The contents of the hernial sac being returned into the abdomen, and the ring explored to ascertain that no portion of the intestine protrudes, the pad of a well-fitting truss is slipped down so as to make pressure on the inguinal canal, and prevent any escape of the hernia. With the fore-finger of the left hand, the spermatic cord, as it passes out from the external inguinal opening, is pressed upwards on the pelvic bone, so as to prevent it from being injured. A delicate trocar and canula, the latter having fitted to it a small Anel's syringe, is now carefully but firmly forced through the integuments with a rotary

motion to facilitate its progress, and pushed forwards till it enters the external inguinal ring, or neck, at the sac. The trocar being now withdrawn, the canula is kept firmly in place, and twenty or thirty drops of the tincture of iodine, tincture of cantharides, or sulphuric ether, thrown in, and lodged in the neck of the sac, when this is practicable, or else in the vicinity of the external abdominal ring. Subsequently a small compress is applied over the minute wound made by the trocar, the pad of the truss slipping down over it, and the patient directed, for a week or two, to maintain the recumbent position.

In addition to the injection, in some of the operations, a tenotomy knife is introduced, and the internal surface of the neck of the sac scarified. The operation is not followed by bad results, the pain and inconvenience hardly amounting to that presented by a case of hydrocele treated by injection; and it may be concluded that in ruptures where the neck of the sac is small, and the abdominal aperture not too much enlarged by repeated descents of the hernia, there is a prospect of a radical cure; and that, in most cases the operation mitigates the infirmity, allowing the hernia to be more readily retained by the ordinary mechanical means. (Dr. J. Mason Warren, Surgical Observations, Boston, 1867.)

DR. GEORGE HEATON, OF BOSTON.*

The method for the radical cure of hernia proposed by this writer, and practiced by him successfully in a number of instances, he calls that by tendinous irritation. It is not unlike the preceding in its principle, but differs from it in several important details, and the irritant employed.

The patient is placed on a bed in a recumbent position, the contents of the hernia returned into the abdomen, and the hernial sac also, when possible. Taking an instrument resembling an ordinary subcutaneous syringe loaded with the necessary amount of the irritant fluid, the operator introduces its beak into the inguinal canal, but outside of the sac, if this has been suffered to remain, in the following manner: invaginate the right forefinger in the scrotum and find the external abdominal ring, then with the left forefinger press perpendicularly upon the integument directly over this ring, and use sufficient

force to, if possible, press the integument together with the finger directly into the ring. The left forefinger being at or in the ring, the spermatic cord and the sac, if in the way, are to be pushed to one side, so that nothing may remain between the external pillar of the ring and the finger except the integument and subjacent superficial fasciæ. Keeping the left forefinger thus, take the instrument in the right hand and introduce its freshly-sharpened and polished beak quickly, penetrating the integument and superficial fasciæ, just passing but not grazing the external pillar, and entering the canal at once. Then remove the left forefinger and gently insinuate the beak further on, well into the canal, exercising the greatest care not to impinge upon the spermatic cord, which is sensitive to the slightest touch, or upon the fibrous walls of the canal. To wound any of these parts endangers the success of the operation, and to penetrate the transversalis fascia would be particularly unfortunate. If the operator in attempting to pass through the ring should impinge upon or transfix one of the pillars (an accident to which the tyro is very liable,) the instrument will not be able to be freely and easily moved about, which it is to a remarkable extent when the canal is successfully entered. But before proceeding any further the surgeon may do well to confirm his diagnosis of position by transferring the instrument to the left hand, while with the right forefinger invaginated in the scrotal tissues he explores the inguinal region, and examines the exact situation of the beak. Beyond the prick of the puncture, the patient suffers but little pain if the introduction is skillfully performed. But any awkward movements of the beak about the spermatic cord will cause sharp pain, which is referred to the testicle or to the deeper parts of the abdomen.

Having satisfied himself that the beak of his instrument is in the canal, the surgeon then deposits about ten minims of the liquid irritant, emitting drop by drop, and spreading it as much as possible. The beak of the instrument should be well swept about while delivering its contents, passing around the exterior of the sac if unreduced, and wetting all the fibrous tissues. Particular care should be taken that the intercolumnar or arciform fibres, and the inner edges of the external ring are wet with the irritant. The canal is usually found much more free than would be anticipated, and any adventitious adhesions can be either broken or avoided. A small though essential amount of the irritant should be placed in the extreme upper portion of the canal, so as to operate upon the fibres embracing the internal

^{*}The Cure of Rupture. Boston, 1877.

305

abdominal ring. Owing not only to its proximity to the abdomen, but also, and more especially, to the usual presence in the upper part of the canal of a few muscular fibres of the internal oblique, the sensitiveness to irritation here is extreme and the slightest amount of material produces all the effect that is usually desirable.

Having wet the entire fibrous interior of the canal and of the inguinal rings, the beak is then withdrawn quickly, so that none of the injection may be left in the cellular tissue and fasciæ lying beneath the integument and just exterior to the external abdominal ring. At the instant of withdrawing the beak, press the finger over the puncture, thus preventing any oozing of blood which might occur if the skin is delicate, and also in the case of a hernia with a free opening hindering any of the injection which has not been absorbed from oozing outward. The application of the irritant may cause some slight immediate pain, which is soon allayed by the morphine which is contained in the injection. The previous protrusion should not be allowed to descend after the application of the irritant, nor the patient be permitted to assume even the sitting position, until a suitable bandage or means of support has been properly applied.

Irritant.—Take of Thayer's fluid extract of quercus alba, prepared in vacuo, one-half an ounce; of the solid alcoholic extract of quercus alba, about fourteen grains. Triturate with the aid of gentle heat for a long time in a mortar until the solution is as perfect as possible. It is well not to exceed this amount of the solid extract, else the mixture will be too irritating. Dr. Heaton usually prepares a quantity of this mixture sufficient for six months' or a year's supply, and is very cautious in first using it, adding a little more of the solid or the fluid extract, accordingly as he observes it produces too little or too great an effect. Having once adjusted the proportions in this manner, and satisfactorily tested the mixture, he uses it and no other until the supply is exhausted. The proportions never need vary much from what is stated above.

Of late years it has been his habit to add to this mixture the sulphate of morphine in the proportion of about one grain to the ounce. This has the effect of diminishing the dull aching that follows the operation, which is caused by the irritation of tendinous tissue. It also serves the further purpose of constipating the bowels, which is also induced by the tannin in the mixture. The amount of this mixture used at any one operation is, as said before, about ten minims.

Taxis.—The rules for taxis properly belong to operative surgery. The following brief suggestions, as to when it may be employed, from an article by Dr. MAX SCHEDE (Centralblatt für Chirurgie, Nov. 25th, 1874,) will, however, be in place:

When the integuments still retain their normal condition, when the tumor is not tender, and when no crepitation can be felt, we can always conclude, according to this author, that the walls of the gut still have sufficient resistance to permit energetic taxis without danger. It is impossible to lay down general rules as to the period when attempts at reposition are still admissible: neither the number of days since the incarceration nor the presence or absence of stercoraceous vomiting can furnish these. In each case a thorough local examination, combined with a consideration of the general condition of the patient, is called for. In order that taxis may succeed-firstly profound narcosis is necessary; secondly the position of the outlet must be determined exactly. The author generally employs both thumbs, with which he exerts alternate strong pressure in the direction of the outlet on a portion of the tumor which is near it; when the hernia is very small, he exerts his pressure directly on the summit of the hernia. In the cases successfully reduced by taxis, the author has seldom exerted pressure less than five minutes, and never more than a quarter of an hour, but during this time he has employed a degree of force which would generally be regarded as inadmissible. He believes that the danger of causing reduction en masse, and of failing to recognize it when it has been produced, is not great; for, though the persistence of symptoms of incarceration may sometimes be confounded with the effects of the anæsthetic, the tendency of hernia to reproduce itself will always be an indication that the reduction has not been performed in a proper manner.

Taxis through the colon by introducing the hand into the rectum is of equivocal value.

Trusses.—The following explicit directions are given by Dr. D. HAYES AGNEW: "When you advise a patient to use a truss you should always make it a rule to superintend its first application. If you cannot be present, give your patient the following directions:

1. Never accept a truss until you get one which fits. 2. Try it by putting it on and (a) stooping down and rising up suddenly; (b) by coughing violently and persistently; (c) by separating the limbs and stooping; (d) by crossing the limbs and sitting down; (e) by going

through all kinds of motions. Of course, the truss is not a proper one if the hernia slips away from it in the course of any of these movements. In wearing a truss the following precautions must always be taken!: 1. The patient must never take off the truss till he is in the recumbent position. 2. Before putting it on again the parts must be rubbed until they are all aglow, so that active circulation and full secretion are maintained. 3. The truss must be taken off the last thing before the patient retires, and put on the first thing in the morning. 4. In the case of a child the truss should be worn all the time, day and night, after the first feelings of discomfort have passed away. At first it must be taken off three or four times a day, while the skin is thoroughly rubbed and anointed, and then put carefully on again. If these rules are conscientiously adhered to, a cure may be expected in the course of two or three years. The truss, at any rate, should not be taken off sooner than that. A permanent cure is much more likely to ensue if a hard pad has been employed.

Venesection.—As an efficient means of relaxing the system, general blood-letting was formerly in vogue. Chloroform, however, has now superseded it. Sometimes leeching around the hernial tumor will be a valuable aid in effecting reduction, especially when the local inflammation is high.

IRREDUCIBLE HERNIA.

An irreducible rupture should be protected by a truss with a large concave pad, or by a suspensory bandage, the object being to obtain constant and well-graduated pressure. Various apparatus for this purpose have been devised.

Something may also be done by medical treatment in such cases. Mr. Bransby Cooper has recommended that an attempt should be made to convert the irreducible into a reducible hernia, by keeping the patient in bed several weeks on a low diet, with the continued application of ice to the tumor; and, if it contain much omentum by giving small doses of blue pill and tartar emetic, so as to promote the absorption of the fat.

In the opinion of Mr. ERICHSEN, this plan deserves further trial, as he has witnessed successful results in some cases. Instead, however, of the medicines mentioned, he substitutes iodide of potassium, with advantage.

This suggestion has been put in practice by Dr. R. O. Cowling, of Kentucky (Archives of Clinical Surgery, July, 1877,) in a case of irreducible femoral hernia of the right side. He ordered for the patient an abdominal supporter with a concave pad, and prescribed the iodide of potassium, gr. x thrice daily, with directions to keep it up as long as it seemed to agree with her. The benefit of the treatment was early and marked. She continued it for several months, the hernia decreasing in size, and finally becoming reducible.

INTESTINAL OBSTRUCTION, OCCLUSION AND INTUS-SUSCEPTION.

PROFESSOR GEORGE H. B. MACLEOD, F. R. S. E., OF THE UNIVERSITY OF GLASGOW.

This author says that in any case of intestinal obstruction, opium is our sheet anchor to combat inflammation; it must be used freely. Belladonna and atropia are now little used. Leeches are rarely employed. Ice, by its power of calming irritation and spasm, is of much use. In most cases, purgation must be wholly avoided and only enemata used. When given early, in most instances, purgatives only augment the already exaggerated peristalsis; and, if administered late, they have an exhausted and paralyzed bowel to deal with. When, however, a careful examination fails to show that any organic obstruction exists, and there is otherwise no objection to the practice, the exhibition of from ten to twenty grains of calomel in one doserepeated, if necessitated by its rejection—often work miracles. Galvanism has been tried in cases of obstruction, occasionally with good effects. It is when stercoraceous masses occasion it, that this mode of treatment is of most service. In 1825, LEROY D'ETIOLLES recommended the current to be passed from the mouth to the anus; but DUCHENNE proposed that one pole be inserted into the rectum and the other be moved over the surface of the abdomen, according to the place of suspected stoppage in each case. Even in cases of obstruction by foreign bodies, the use of purgatives is reprehensible. It is now well known by utterers of false coins, who swallow their base counterfeits when detected, that a system the very reverse of purgation best rids them of their burden. They keep their bowels confined and distended by bulky and costive food, so as to envelop the coins and allow them to be slowly carried downwards.

If the bowels be much distended with air, they may be punctured with advantage. By percussion, one can easily make out the best spot for the insertion of the small trocar and canula; and then, if gentle pressure be made on the abdomen, both air and fluid may be made to escape. As the distension goes down, the tube must be gently pushed on to prevent it escaping from the portion of the gut it has entered. There is no fear of undue inflammation or extravasation, as adhesions soon form, even when it is desirable to leave the canula in place. Doubtless, in many cases, the aspirator would be found very useful in unburdening the bowel, and so diminishing congestion and tension, and improving the chance of its resuming its function. In cases fitted for it, the small aperture made by the canula might be enlarged by means of a tangle-tent, so as to serve the purpose of an artificial anus. It has been frequently found, after death, that a vast amount of the accumulation about the place of obstruction was sufficiently fluid to be removed in some way as has been above hinted at.

In all cases of obstruction, a most restricted dietary must be observed; in fact, only enough given to support life. No solid or bulky food should be allowed; but small quantities of the most soluble and sustaining meat essences, milk, egg and brandy flip, ice, etc. The stomach must not be loaded even with water. Nutritive enemata will help much.

No reference need be made to exploded methods of administering mercury, shot, etc., to act mechanically in cases of obstruction; and such medicaments as tobacco-injection, strong coffee, ergot, nux vomica, etc., are now very seldom employed.

In volvulus and stricture, the chance of successful treatment is very small. By operation, the bowel may occasionally be reached above the place of closure. Internal herniæ, even if recognized, are almost hopeless. For invagination low down, large enemata or the old Hippocratic plan of distending the bowel (now easily accomplished under chloroform) with air introduced by bellows or special instrument, from below, should be employed, if they can be carried out before the portions of bowel involved have become hopelessly fused together. The inversion of the patient cannot do good; but the careful insertion

of a bougie (possibly armed with a sponge) might prove advantageous in certain cases of intussusception pressing down near the anus. The strength of the patient should be well supported, and time gained for the occurrence of those changes in the bowel by which a spontaneous cure may be secured.

Stercoraceous accumulations must be mechanically removed. A lithotomy scoop or ordinary spoon may get at a good deal of the material; but a stream of warm water, made to play vigorously on the mass, or got more slowly to permeate or integrate it, by being allowed to come into contact with it through a long tube connected with a reservoir raised high above the bed, is a better plan. A calomel and jalap purge will complete the cure.

M. ANTOINE TARIOTE, OF PARIS.

In a thesis on the subject, (1874,) this writer concludes that intestinal occlusions may be divided into two very distinct categories: 1. Intestinal occlusions of slow origin, caused either by simple accumulation of fæcal matters, or by paralysis of the intestine or diminution of its size in consequence of the presence of foreign bodies, stricture and compression; 2. Intestinal occlusions which make their appearance very abruptly and rapidly, arising from true internal strangulation, invagination, retroversion or twisting of the intestine. In gradual intestinal occlusion, opium can only be used to overcome the pain or sufferings of the moribund patient. In sudden intestinal occlusion, if there be no well-confirmed internal strangulation, opium employed from the commencement, concurrently with applications of ice to the abdomen, or blood-lettings, calms the local irritation and the resultant spasm. It also quiets the accidents arising from the general irritation, anxiety, small pulse, chilliness, etc. This treatment may by itself re-establish the circulation of the gases. The re-establishment of the circulation may be advantageously hastened by the administration of a purgative.

DR. THOMAS HAWKINS, OF NEW YORK.

The use of large fluid injections is strongly urged by this writer. (Medical and Surgical Reporter, December, 1876.) He reports a