

surrounded by a set of sympathizing friends, who believe in the reality of this false disease; who encourage every supposed pain and ailment; who shrink from anything being done; and unless the patient can be removed from such surroundings and started anew, frequently a cure is almost impossible. These cases, as I say, should be treated firmly; but they should be treated charitably; for they are practically and really a disease of the mind, and should be treated like other mental affections. Most of them, sooner or later, get well. Sometimes they take a year or two, sometimes some years. Occasionally one remains permanently through life; and such instances, of course, are very painful, because as time goes on it is evident that there is no disease; because the patient does not alter; no change in the joints; no abscess; no ankylosis; no formation of cancer; no pulpy degeneration; and the patient remains bedridden, but perfectly well.

HIP DISEASE.

Hip disease is one of the more marked diseases of the joints. It most frequently comes in children, fortunately, because in children it is capable of cure; and in adults it is not; unless the spontaneous stages of the disease have been gone through and the diseased condition terminated by the time puberty comes on; so far as my experience goes, the patient never gets well if the age of puberty is passed, and the active changes of hip disease go on; they last then through life, or until they destroy the patient.

This disease is supposed to originate in two different ways. Undoubtedly it does, like all the forms of which we have spoken, originate in two ways; beginning in the synovial sac, or in the head of the bone itself. It may begin as a chronic synovitis, with pulpy degeneration of the synovial membrane and ulceration of the cartilage, from cutting off of nutrition from that side of the cartilage; or it may begin as a tuberculous deposit in the head of the femur, and from want of nutrition from the inner side, lead to erosion of the cartilage; abscess, and all the phenomena of hip disease.

The symptoms which present themselves first are, usually, that the child begins to throw out the foot of the affected side a little more than the other side, as it walks. The limb is apparently lengthened. The child limps a little as it walks. It does not complain of much pain. No changes have taken place about the joint which give any characteristic appearances from the outside. As the disease goes on a little further, more pain is manifested; inability to walk with any freedom; and, after a while, the position of the limb and foot changes, and apparently a little shortening takes place. About this time the child usually becomes very sick, and an acute fever supervenes, with intense pain in the joint; the child lies in bed with the limb drawn up towards the abdomen to relieve and relax the part. The parts all about become shiny and thin and change in shape. The fold which exists normally between the buttock and the femoral muscles is lost. The hollow in the groin becomes filled up, so that the diseased side is full and flat; and, in addition, intense nightly starting pains with hectic; rise of temperature; sweats, chills, etc.; and then sudden and immediate and perfect ease. The child turns over, begins to laugh, feels better, wants to get up. The explanation is, that the earlier stages, marked by such extreme suffering, were those of an abscess distending the synovial sac to the point of

bursting. Finally it bursts; pus pours out into the cellular tissues; the pain ceases; all symptoms are relieved, and there is a great remission in the course of the disease. This remission, however, is not of long duration; and after the child gets up it is soon found that dislocation of the femur takes place; the foot is turned in opposite the other; shortening of one and a half inches occurs. Another attack of fever comes on. The child goes to bed; is sicker than before; the hip becomes shiny; abscess bursts and the pus escapes externally. Relief of symptoms again follows. The child gets up and goes around with a stick or crutch, with dislocation on the dorsum; inverted foot; and the disease goes on through its other stages, which are chronic caries; and if cure can occur, finally, drying up of the abscess, and bony ankylosis on the dorsum of the ilium, with the head fastened in its new and false position.

Original Articles.

STRANGULATED HERNIA.¹

BY GEORGE W. GAY, M.D.
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It is to be hoped that a report of the following cases of strangulated hernia may draw the attention of the younger members of the profession to the importance of giving to these patients *early* relief, and also to the necessity of rapid operations under certain circumstances. Another important lesson which one learns, before he has had very much to do with these cases, is that in many instances the vitality of the patient is exhausted to a much greater degree than is indicated to the ordinary observer by the general symptoms and appearance.

A Case of "Compound" Inguinal Hernia.

Mr. S., aged thirty-seven years, was operated upon at the City Hospital in 1878, for a recent hernia, which was attended by urgent symptoms indicating danger of strangulation. Eleven years later an effort was made to obtain a radical cure of the rupture by operative measures, but without success.

On April 18, 1893, this man came to the hospital in a buggy, walked into the accident room, and letting down his trousers showed what has been very aptly termed a "compound" hernia, by which is meant a protrusion of a portion of the intestines through the skin. The patient gave the following account of the accident: Twenty-four hours before coming to the hospital, while lifting a heavy weight, the cicatricial tissues at the site of the previous operation gave way, thereby letting the bowel protrude through the rent in the skin. He got into a car, rode home, went to bed, and remained there without any treatment whatever until the following day, when he got up, dressed, and rode to the hospital with a friend in an ordinary wagon.

Upon examination, about four inches of the small intestines were seen protruding from a small opening in the skin in the right inguinal region, between one and two inches in diameter. The bowel was distended and covered with a thick layer of dirty, grayish lymph. There were no signs nor symptoms of strangulation, a

¹ Read before the Boston Society for Medical Improvement, November 13, 1893.

condition that would probably not occur as readily from the constriction of thin, attenuated skin, as it would from the pressure of dense, unyielding fasciæ and tendons.

There was no vomiting, and the pain was only moderate. The belly was not distended, nor was there other evidence of general peritonitis. In short, the man was in very good condition.

The patient was profoundly etherized, the exposed gut was cleansed as thoroughly and carefully as possible, and after enlarging the opening in the skin, an effort was made to replace the protruding bowel. This proceeding required the combined manipulations of two pairs of hands for several minutes for its accomplishment, owing to the coughing and straining of the patient, who was very strong and muscular.

The lower or outer pillar of the external ring was absent, but a fairly successful effort was made to close the large aperture in the abdominal walls by uniting the inner pillar to the deep fascia below with silk sutures. The external wound was partially closed, and dressed with antiseptic compresses and spica bandage.

Little shock followed the operation. He vomited occasionally for two or three days, for which calomel was given in small doses. The bowels moved freely on the third day, and the convalescence was tedious and uneventful. The wound suppurated freely as was to be expected, but there were no complications. He was discharged from the hospital in eleven weeks, wearing a truss over a small granulating surface.

Considering the exposure and irritation of this patient's intestine, it is surprising that he did not develop general peritonitis. The external causes would seem to have been ample to produce such a result. We may express our ignorance upon this point by saying, that his tissue or his system was in a favorable condition to resist the onset or extension of serious inflammatory processes.

Several years ago a girl was admitted to the hospital with a large rosette of intestines protruding from a rent in the abdominal walls. The accident was due to the sudden rupture of an abscess. The bowel was covered with recent adhesive lymph, which matted the coils more or less firmly together. Dr. Cheever carefully cleansed the mass, separated the adhesions, and replaced the protruding structures. No untoward result followed.

Intestinal Resection for a Strangulated Inguinal Hernia. Death in eleven days.

Mrs. P., aged fifty-two years, entered the City Hospital April 6, 1893, with a strangulated inguinal hernia upon the right side. The rupture had existed fourteen years, and had been controlled by a truss till within a year. Symptoms of strangulation had been present for a week, and consisted of vomiting, constipation and pain in lower abdomen. A tumor the size of a hen's egg was situated over the right inguinal canal. It was free from impulse, and was irreducible. Considering the duration of the symptoms, the patient was in fair condition. The pulse was frequent, but of pretty good strength. The vomiting was stercoraceous. No delirium nor stupor.

The sac was opened quickly, and a perforation half an inch in length was found at the seat of the tight constriction at the internal ring. Three and a half inches of the small intestine, which was purple, thickened and not glistening, were excised. The bowel

was closed by end-to-end coaptation with two rows of continuous silk Lembert sutures. Operation lasted about three-quarters of an hour. Only an ounce and a half of ether was required. Shock was moderate, from which she rallied well.

With the exception of some diarrhœa, the patient was very comfortable the next day. Two days later, she was taking food without difficulty; there was no vomiting nor pain. Everything went on favorably for over a week, except that on the fifth day the temperature dropped to 96.4°. Wound united by first intention, and the sutures were removed on the seventh day. There was no tenderness, nor distention, nor other local signs of peritonitis at this time. On the ninth day pain in the belly came on with vomiting and tympanitis. The wound opened, and its edges became dark and sloughing. Exploration revealed extensive adhesions everywhere among the intestines, but no pus nor feces could be found. The urine, which was examined and reported normal when she entered the hospital, now contained albumen, and hyaline and granular casts.

The patient gradually sank, and died eleven days after the operation, from peritonitis and nephritis. No autopsy was made, and hence the condition of the intestinal wound is not known.

This is the third case of intestinal resection done by the writer during the past few years. The first patient lived a week, and died from peritonitis. The second patient, a feeble old woman, recovered in a surprisingly short time, but died several months later from an operation for the removal of an ovarian tumor. She had no further intestinal trouble, and her death was due to shock and exhaustion consequent upon a laparotomy of moderate severity. No autopsy could be obtained in any of these cases; hence we are in the dark as to the exact condition of the intestinal suture.

Strangulated Inguinal Hernia. Patient in collapse when brought to hospital. Quick operation: Recovery.

Mr. M., aged fifty-six years, entered the City Hospital April 23, 1893, in a state of collapse. An inguinal hernia had existed upon the left side a year, for which he had never worn a truss. It had been strangulated a week, and profuse stercoraceous vomiting had persisted for three days. The extremities were cold; he was pulseless at the wrist, and had hiccough. The superficial arteries were calcified. Urine contained albumen, and hyaline and granular casts.

The patient was surrounded with heaters, well covered up, and brandy freely injected under the skin. A very little ether was given, the sac was quickly opened, and the bowel found to be covered with a thick, dark layer of lymph, mottled in places, threatening sphacelus. The constriction was divided, the bowel placed just inside the wound, which was packed with baked gauze. This was done to give exit to the intestinal contents, should occasion require it. The operation lasted but a very short time.

The patient rallied very slowly from his most desperate condition. The vomiting persisted for five days, gradually diminishing in amount and frequency. He was fed and stimulated by the mouth and rectum. At the end of a week the hiccough and vomiting had ceased, and there seemed a chance for his recovery. The wound was closed with sutures in five days after the operation, and it was healed completely in five weeks. Although the rupture returned before the

patient left the hospital, yet the rings were so large that strangulation in the future would seem to be impossible. He was ordered a truss, and told to wear it during the remainder of his life.

This man had wonderful powers of endurance and of recuperation, yet it may fairly be claimed that his recovery was due in no small degree to the mode of treatment which was adopted. The method was fully described in a paper presented to this Society ten years ago,² and consists of the following essentials:

Just enough ether is given to control the cutaneous sensation; scarcely more than the primary effects are requisite. In other words, the anæsthesia is light and frequently interrupted, the patient at no time being profoundly unconscious. The operation is best performed in the warm bed, the body being well covered, surrounded by hot bottles, kept dry, and moved as little as is necessary. The operation is to be done as quickly as possible, and no time is to be wasted in trifling refinements of technique. It goes without saying, that hæmorrhage must be controlled in the speediest manner compatible with the patient's safety. The sooner the necessary dressings are applied, and the person is arranged in his bed, and left alone with his nurse, the better are his chances for recovery. In three cases of gangrenous hernia operated upon by me, while the patient was in a state of marked collapse, I have deliberately opened the bowel, as one would open an ordinary superficial abscess, with one stroke of the knife, and have then divided the constriction by carrying the herniotome into the lumen of the intestine. This very unscientific method was adopted rather than to risk a long, tedious, and hence dangerous dissection in a mass of gangrenous and extensively infiltrated tissues, in which all of the ordinary anatomical landmarks were obliterated by the prolonged morbid processes. Two of these patients lived a fortnight. The third, an old man at the time of the operation, is alive and well, and is earning his living as a printer, now, several years after his serious illness.

This method of relieving strangulation is manifestly justifiable only under the most desperate conditions, such as those which have been described above, and under no other circumstances should it be resorted to, or thought of.

A case of very large omental hernia is here alluded to because of an unusual complication, namely, hæmorrhage. A man, twenty-five years of age, had never worn a truss upon a rupture in his right inguinal region, although it had troubled him for ten years. Had been operated upon for strangulation some years ago. Present symptoms, vomiting and pain, were of twenty-four hours' duration.

On opening the sac, about six inches of small intestine was found entangled in a large mass of adherent omentum. The bowel was readily returned after a free division of the constriction had been made, but the omentum was returned with great difficulty, owing to the numerous firm adhesions. While dividing some of these dense bands upon the inner side of the mass, an enormous omental vein was wounded, giving rise to a profuse hæmorrhage. As is frequently the case in wounds of large veins, it was impossible to control the bleeding with forceps. It was readily done, however, by packing the wound with sterilized gauze, which was removed piecemeal from the third to the fifth day, without recurrence of the bleeding. The patient made

a good recovery in five weeks, and left the hospital wearing a firm pad and spica bandage.

Another case of strangulated hernia lately operated upon is of interest by reason of the obscurity of the origin of the symptoms. A young man was sent to the hospital by Dr. Boland, with the appearance of approaching collapse; general abdominal pain, tenderness and distention, faecal vomiting of three days' duration, cool extremities, congested skin, and pinched features. There was evidently general peritonitis. For fifteen years he had had a rupture in the left inguinal region, which came and went readily according to the position of the body. Had never worn a truss. Present symptoms began five days before entrance to the hospital.

In the left inguinal region was a soft, painless tumor the size of an almond. It was not tender, nor was the skin reddened or indurated. The bunch could be moved about in all directions, and felt very much like a lymphatic gland. The question naturally arose as to the relation of this apparently insignificant tumor, and the grave symptoms, as related above.

An exploratory incision showed that the little bunch was a mixed hernia, composed of omentum, in which was entangled about an inch and a half of small intestine. The constriction, which was very tight, firm, and located high above the internal ring, was freely divided with the herniotome, and the contents of the sac were easily returned to their proper place.

The patient rallied slowly, and the convalescence was tedious, owing in part to an attack of septicæmia, as indicated by chills, fever, parotitis, and a sloughing condition of the wound. He recovered, and left the hospital in seven weeks, wearing a pad and bandage.

This case leads me to mention three others in which I have been called upon to operate, for the reason that the symptoms did not subside after the hernia had apparently been reduced. The first case was that of a middle-aged man, with a strangulated hernia in the right groin of about twenty-four hours' duration. It was reduced by his physician at night without undue force. Upon the following morning, the symptoms not having subsided in the least, the abdomen was opened just above the inguinal canal upon the right side. A knuckle of small intestine was found to be tightly constricted by the neck of the sac, situated above the internal ring, and freely movable. It had been reduced *en bloc*, but there were no signs of injury from the taxis. The intestine, while deeply congested, showed no indications of mortification or other lesion. The constriction was divided from above. The patient died from shock and exhaustion in about twenty-four hours.

A patient of Dr. Goss, an elderly man, had a strangulated inguinal hernia upon the right side. Moderate taxis applied by the patient himself caused the tumor to disappear several hours before summoning the physician; but the symptoms, pain, restlessness and vomiting, persisted. At the end of twelve hours an ordinary herniotomy was done. The constriction was reached with difficulty by carrying the finger high up through the canal and rings. It was divided, the bowel brought down, examined, and found to be in good condition. Union by first intention followed, and the patient made a quick recovery.

The third case was that of an old man, seen with Drs. Reed and Gavin. Shock, prostration and vomiting were urgent. An operation revealed a tight con-

² Vide Boston Medical and Surgical Journal, October, 1883.

striction high above the internal ring. The bowel was in fair condition, but the patient died in about twenty-four hours.

It is a noticeable fact, that the constricting band in these four cases was located above the internal inguinal ring, and with its contents was very movable, thereby explaining the ready disappearance of the hernia. These cases serve to emphasize the fact, that the only reliable indication of the success of taxis, is a marked change in the symptoms for the better. If they do not show unmistakable signs of improvement within twelve hours after an apparent reduction, the probabilities are, that the obstruction is not removed, and that operative measures are called for to ascertain beyond a doubt the exact condition of the structures involved. Intestinal obstruction, complete enough to produce vomiting, cannot be relieved too early. The prostration resulting from this calamity is always serious, oftentimes insidious, and not infrequently deceiving the surgeon as to its severity. The recuperative powers of the patient are often reduced to a much lower state than are indicated by his general appearance and symptoms. Hence the danger of delay. The risks of an operation are as nothing compared to the perils of a strangulated bowel. The sooner obstruction is relieved, the safer the patient.

In conclusion, I can only say what has already been better said many times before in relation to the treatment of strangulated hernia. If the symptoms are urgent, waste little time upon efforts at taxis, as they seldom succeed under these circumstances. The tissues, already more or less damaged, are rendered still more incapable of repair by the manipulations. While the application of cold, and pressure by means of weight and elastic bandages, raising the foot of the bed, etc., may succeed occasionally in reducing a rupture, yet, as a rule, more harm than good follows their use, owing to the difficulty in making a proper selection of cases, and also to the fact that valuable time is lost in making the experiments. Be chary in the use of opiates before and after taxis, and after operation, lest they mask the symptoms, and lull the attendant's suspicion, until the patient is beyond relief.

If a rupture, real or suspected, is accompanied by vomiting, herniotomy, as a rule, is not only justifiable, but it is demanded. Operate early. If the patient be not in good general condition, operate quickly, and avoid shock and prostration. In desperate cases do as little as possible beyond dividing the stricture at the primary operation, and complete the work later, when the patient has rallied sufficiently to justify it. If in doubt as to the reparative powers of the damaged tissues, pack the wound with sterilized gauze for a few days, or until the point has been decided by the natural course of events.

Husband the patient's resources in every possible way. Save time, and avoid shock. Preserve the animal heat, and keep the body dry. Disturb the patient as little as possible by moving. Avoid all unnecessary manipulations inside the peritoneal cavity, as they increase shock. Stimulate and nourish by the skin and rectum. Let the anesthesia be light, and often suspended. And, finally, never lose sight of the fact that the keystone to the operation is a thorough division of the constricting band.

THE editor of the Russian *Grazhdanin* has been sentenced to ten days' imprisonment for defamation of military surgeons.

ON CERTAIN DANGERS ATTENDING THE USE OF ATROPINE, AND THE EMPLOYMENT OF A NEW MYDRIATIC.¹

BY HASKET DERBY, M.D.

In his recent text-book of ophthalmology Professor Fuchs uses the following language:

"The mydriatics may bring about an inflammatory attack (of glaucoma) in an eye predisposed to the same; and this is true not only of the powerful mydriatics, like atropine, but also of homatropine and even of cocaine.

It is therefore better to always inquire into a possible predisposition to glaucoma, before applying a mydriatic in the case of an elderly person."²

Priestley Smith includes duboisine in the above list.

Attention was first called to the unfavorable effect of mydriatics, or rather of belladonna, in acute glaucoma, by Mr. Wharton Jones, more than a generation ago.³ I am not aware however that he alluded to the possibility of its favoring the production of increased pressure where this might be impending. I believe the two cases I reported to the American Ophthalmological Society in 1868,⁴ one occurring in my own practice and the other in that of the late Dr. Althof, of New York, to have been the first published instances of glaucoma supervening directly on the instillation of atropine. At about the same time, although the fact subsequently came to my knowledge, von Graefe published in his *Archiv*⁵ a short observation bearing on this same point; giving no cases, but stating his own experience, and advising the avoidance of the instillation of atropine in chronic glaucoma.

These views met at first with little favor, but they are now generally entertained. Probably the most accepted theory of the causation, or rather acceleration, of the outbreak of glaucoma through mydriatics is that they interpose an obstacle to filtration by pressing the thickened, peripheric portion of the iris from the ciliary processes, towards and against the cornea, thus increasing the narrowing of the filtration angle. "When the filtration angle is already dangerously narrow" says Priestley Smith in his recent excellent treatise on the pathology and treatment of glaucoma (p. 132), "the thickening of the iris base, which accompanies dilatation of the pupil, may suffice to complete the blockade."

If this view be true it must apply to all mydriatics without exception, and it is in fact known that all those in common use have accelerated the onset of glaucoma. In consequence of this we hesitate to employ them on patients who have passed middle age, at any rate for the investigation of refraction, certainly in no case to use them without some preliminary examination.

For therapeutic purposes atropine is undoubtedly the mydriatic in most general use. While its benefits are unquestioned, the occasional disadvantages it entails are by no means to be lost sight of. I shall never forget once instilling two or three drops of a half-per-cent. solution in the eyes of a boy of thirteen, of seeing him after the lapse of an hour stagger as he left the office, and of being sent for the evening of that day, to find him with a flushed face, great dryness of the fauces, and possessed by hallucinations, all of these symptoms passing away in the course of the night.

¹ Read before the New England Ophthalmological Society, December 5, 1893.

² *Lehrbuch der Augenheilkunde*, S. 370.

³ *Medical Times and Gazette*, vol. 1, pp. 111, 112.

⁴ *Transactions for 1868*, p. 35.

⁵ A. F. O., Bd. xiv, Abth. ii, S. 117; see also A. F. O., Bd. xv, Abth. iii, S. 123, note.