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THE TREATMENT OF HERNIA IN OLD MEN.*

BY A. J. OCHSNER, M.D., Chicago.

Surgeon-in-Chief of Augustana Hospital, etc.

It is a well-known fact that hernias in men frequently become much more troublesome after the age of fifty or sixty.. In many cases a simple truss will suffice to retain a hernia for many years with perfect comfort to the patient until he reaches this age, when it gradually becomes more and more troublesome, until it seems almost or quite impossible to retain the hernia comfortably, notwithstanding the use of the best trusses.

This fact has been explained by the condition of the tissues at this age, by the tendency many patients have to become obese, and by the general depression of vitality.

There is another factor of far greater importance which seems to have been entirely overlooked—I refer to the increase in intra-abdominal pressure during the evacuation of the bladder and rectum, necessitated by the obstruction due to enlargement of the prostate gland, which is so common in old men.

The influence of strictures in adults and phimosis in children upon hernias has been pointed out repeatedly, and my observations have led me to the positive conclusion that in old men the enlarged prostate gland plays quite as important a part.

†Since Prof. Wm. White has pointed out a comparatively simple surgical remedy for the relief of this pathological condition, it has appeared to me that the treatment of hernias in old men should be modified.

* Read at the meeting of the Mississippi Valley Medical Association, Oct. 6, 1897.

† In studying the literature upon this subject I find that Sinizin of Moscow. claims to have performed castration for the cure of prostatic hypertrophy in 1886. Priority is also claimed for Ramm, but it is certainly due to the energetic work of White that the operation has received proper recognition.

The procedure which I should advise in these cases simply consists in a combination of the operation for radical cure of hernia with castration or resection of the vasa-deferentia.

The former operation has been advised repeatedly for the cure of unilateral inguinal hernia in men, because by removing the tissues of the cord from the inguinal canal, the closure of the latter is simpler and firmer, but it has never attained any great foothold for esthetic reasons. In old men the loss of this organ is not counted so high, and consequently the objection loses in weight.

It has been shown many times that old age in itself is not a contraindication to the operation of herniotomy. Old patients recover quite as rapidly and as thoroughly from the operation as younger ones, and being able to offer benefit in two directions simultaneously it seems as though herniotomy in old men were particularly indicated.

The following are, in brief, the steps of the operation. An incision is made over the inguinal canal to a point about an inch from the scrotum down to the hernial sac. This is dissected out and opened. If it contains omentum, this is drawn out as far as it will come easily, it is ligated with a number of fine catgut ligatures, being careful not to draw these too tightly; then the superfluous omentum is cut away, leaving half an inch projecting beyond the ligatures. The stump of the omentum is now replaced in the abdominal cavity. The foot of the table is then elevated, placing the patient in the Trendelenburg position, in order to cause the intestines to recede from the vicinity of the operation. The sac is now dissected to a point just inside of the abdominal cavity, ligated with fine double catgut, cut off half an inch outside the ligature, and the stump permitted to retract within the abdominal cavity. Now, the tissues of the cord are brought up into the wound, and the vas deferens together with the nerves and vessels is

ligated within the internal ring and also opposite the lower end of the wound, being careful to leave enough vessels to prevent the testicle from sloughing. The intervening portion is now excised. This permits the stump to withdraw within the abdominal cavity, remaining, of course, covered with peritoneum. The inguinal canal is now closed by suturing the conjoined tendon to Poupart's ligament by means of a continuous suture of chromicized catgut of small caliber and used double. The tissues beyond are closed by means of deep and superficial silkworm-gut or horsehair or by buried catgut sutures. The continuous double catgut suture has a decided advantage over the interrupted or the single continuous suture, because finer material can be used with safety and the number of knots is reduced to one at each end. The chromicized catgut is not absorbed for four weeks, making it an ideal suture material for this operation.

If the patient is suffering from double hernia, the same operation is repeated on the opposite side; if not, the next step consists in making an incision less than an inch in length just below the external ring on the opposite side. The cord is fished up with a strabismus hook, ligated as on the other side, resected and dropped. The wound is closed with a deep suture of horsehair or silkworm-gut or by a buried catgut suture. The ordinary dressing is applied The foot of the patient's bed is elevated twelve to eighteen inches, so that coughing or vomiting will not force the intestines against the wound with sufficient force to cause disturbance. It is, of course, necessary to change this position in case there is any sign of pulmonary congestion.

It is kept in this position for a week or ten days. The patient is kept in bed from four to five weeks in order to permit the wound to become strongly united, and to permit the prostate gland to reduce in size. He is given an abundance of distilled water to drink in order to make the urine non-irritating. In case

cystitis exists, this is treated according to the indications in each case. In case the testicle is not normal, castration may be substituted for resection of the cord.

I have been able to confirm the observation of several authors, that in cases in which there is a simple hypertrophy of the prostate gland, without much chronic inflammation, the gland will reduce in size very rapidly, probably from one-fourth to one-half during the patient's stay in the hospital, and that the patient finds it possible to evacuate the bladder with much less exertion than before the operation.

The patient is advised to drink an abundance of good—preferably distilled—water after leaving the hospital, and to keep the bowels free in order to reduce, as much as possible, the intra-abdominal pressure during micturition and defecation.

If the surgeon has perfect control of the conditions necessary to exclude sepsis, this operation is safe, and it will relieve the patient of a great amount of suffering. Every argument which has been used in favor of operation for radical cure of hernia, as well as everyone that has been brought forward in support of resection of the cord or castration for the relief of conditions due to enlargement of the prostate gland, can be applied with perfect propriety in favor of this operation.

From the conditions present, one would expect a permanent result, but as the oldest one of my cases dates back but eight months, it is as yet too soon to speak from experience.

I will add short histories of four cases operated by me:

Case 1, No. 3483.‡ Entered the Augustana Hospital, Jan. 9, '97, giving the following history: He was born in Germany, eighty years ago. His health has always been excellent, barring a left inguinal hernia,

‡ This number corresponds with the one in my clinical records of cases at the Augustana Hospital.

which he first noticed about forty years ago, and which he attributes to heavy lifting. His hernia did not cause much discomfort until about fifteen years ago. Since that time it has become more and more troublesome, and for several years it has been irreducible and about as large as a man's fist. He has also suffered for some time from hydrocele on the left side as large as a small pear. For several years he has carried both hernia and hydrocele in a bag made of soft leather attached to a belt. It has been difficult for him to evacuate his bladder, but he has never received treatment for this difficulty. His prostate gland is enlarged to the size of half an orange. It is smooth and hard and not very painful upon pressure. Twelve hours before entering the hospital the hernia suddenly became enlarged and strangulated. All attempts at reduction by means of taxis failed, and the patient entered the hospital very much exhausted and suffering frightfully with the usual conditions in such cases. One-fourth grain of morphia was administered hypodermically, then the patient was anæsthetized and placed on the operating table in the Trendelenburg position. An attempt was made to reduce the hernia by means of taxis, but this failed.

After thorough disinfection an incision was made over the inguinal canal. The hernial sac was opened. Its contents were found black throughout on account of the tension and the violent attempts at reduction made by the patient during the day. The sac contained small intestine and omentum.

Favored by the Trendelenburg position, it was possible after some effort to reduce the intestine. The omentum was found adherent to the sac. This was ligated, resected, and the stump returned into the peritoneal cavity. Then the tissues of the cord were ligated, resected, and the stump was permitted to retract beyond the internal ring. The sac, together with the adherent omentum and the testicle, was now lifted out of the scrotum, the former was dis-

sected up to a point within the abdominal cavity where it was ligated with fine double catgut, resected half an inch outside of this ligature, and the stump permitted to retract beyond the internal ring. Now the wound was closed as described above, and the ordinary dressings applied.

The patient was very stubborn, never having been sick in bed before, so he removed the dressings during the absence of the nurse on the second day after the operation, got up out of bed and walked about in the room. From this and other foolish acts a superficial infection resulted. His pulse and temperature, however, remained normal, and he was able to go home well on February 6, a little less than a month after the operation.

He is still perfectly well eight months after the operation; there is not the slightest tendency to return of the hernia.

His urine flows perfectly free, and the prostate gland has decreased very perceptibly in size on the left side, and has become much softer than it was before the operation.

Case 2, No. 3594. A retired farmer, born in Ireland seventy years ago, entered the Augustana Hospital, Feb. 22, 1897. He was strong and vigorous, but very slight. His health had always been good, but he had suffered from double inguinal hernia for nearly forty years. Until about ten years ago an ordinary truss was sufficient to retain the ruptures so that he could do farm work with perfect comfort. Since then it has become more and more difficult to retain the hernia even with a very good truss. The openings have increased in size, and the patient found his condition becoming so constantly worse that it was almost unbearable. He had suffered from constipation and had to use a considerable amount of pressure in evacuating the bowels and the bladder. The prostrate gland was enlarged to the size of a hen's egg. It was somewhat irregular and hard, but not painful upon pressure. The urine was normal.

In this case I performed the operation described above for radical cure of hernia and resection of the vasa deferentia. The wounds were dressed with collodion, and the scrotum supported by means of a suspensory bandage. The wounds healed by primary union, and the patient's recovery was normal in every way except that on the third and fourth days he failed to pass urine. Catheterization brought only six ounces of urine on the third day and twice that amount on the fourth During these two days the patient seemed drowsy and sullen and I feared uræmic poisoning, but the following day and throughout the period of convalescence thereafter the urine was normal in quantity and quality and was voided without any difficulty.

No remedy was given excepting an ounce of castor oil and an abundance of distilled water. The patient left the hospital April 3, just five weeks after the operation, perfectly well. He has remained well during the past six months.

Case 3, No. 3,835. Came to the Augustana Hospital May 24, 1897. He was born in Germany fifty-five years ago. He is married and living with his wife for thirty years. He is a miller by trade and is strong and healthy, but his veins throughout the body are considerably dilated. He has a right inguinal hernia and a varicocele on the left side, both of which had become much more troublesome during the past few years. The hernia came on during a paroxysm of sneezing about fifteen years ago. During the first ten years the hernia could be retained comfortably by means of an ordinary truss, but of late the patient has found it impossible to do this.

My assistant performed Bassinis' operation for the cure of hernia on the right and resection of the enlarged veins on the left side. The wound on the right side healed normally, but the testicle on the left side disintegrated, although itremained perfectly aseptic.

Five weeks after the original operation I laid open

the wound on the left side, ligated the cord, and removed the remnants of the testicle and packed the wound with iodoform gauze. Healing progressed normally from this time on, so that the patient was able to return home well three weeks later, on July 24, just two months after entering the hospital. An examination made Sept. 24, 1897, just four months after the herniotomy and not quite three months after the castration, showed a very marked reduction in size of the left lobe of the prostate gland, it being fully one-fourth smaller on the left than on the right side, which is still as large as half a hen's egg.

For several years previous to the operation the patient had found it impossible to pass urine in a free stream, and he was compelled to evacuate his bladder several times during the night. There is a marked improvement regarding both of these features.

Case 4, No. 4,036, entered the Augustana Hospital Aug. 3, 1897, giving the following history: He is an American, sixty-five years of age, a merchant in a small town. One of his sisters died of diabetes, but otherwise his family history is very good. Thirty years ago the patient acquired intermittent diabetes, from which he has noticed a slight amount of inconvenience ever since, but with good habits and a reasonable attention to diet he has been very comfortable and able to work. Three years ago the patient began to suffer from an irritable bladder. He was compelled to micturate frequently, passing only a small amount of urine each time. At this time his condition was diagnosed as diabetes complicated with cystitis. Internal remedies gave only temporary relief, and five months ago the condition had become so much worse that the patient was compelled to depend upon the catheter entirely for emptying his bladder.

Upon entering the hospital his general condition was fair, although he had lost about thirty pounds in weight during the past three years. There was complete obstruction in the prostatic portion of the

urethra. The passage of the catheter gave rise to excruciating pain at this point. It was impossible for him to pass more than a few drops of urine. By passing the catheter three times a day he obtained more comfort than by more frequent catheterization. The urine had a specific gravity of 1030, was acid, contained an abundance of pus, but was normal in every other respect. Fortunately the diabetes had again subsided, so that there was no sugar present.

The prostate gland was enlarged to the size of half an orange, was smooth and hard, and very tender upon pressure. The patient also has a left inguinal hernia, which has existed for ten years, but which has been of so little annoyance to him that he would not have desired an operation for its cure had not his prostatic disease driven him to seek relief. The hernia was easily controlled by means of a truss. As it did not increase the danger of the operation I united herniotomy with resection of both vasa deferentia, as described above.

The wounds healed primarily and the patient was able to return home September 2, just four weeks after his operation. He could pass some urine spontaneously in the morning, but was still compelled to use the catheter three times a day. On September 20, three weeks later, he reported being able to empty the bladder spontaneously during the day, but that in the evening there remained a small amount of residual urine which he evacuated by means of the catheter.

It is plain that no positive conclusions can be based upon so small a number of cases; neither can the permanency of the relief obtained in these cases be established after so short a time of observation, but these histories seem to confirm the reasonableness of this method of treating hernia in old men. At the present time by far the greater number of the surgeons who have written concerning the treatment of

hypertrophied prostate glands by means of castration or resection of the spermatic cords are strongly in favor of these operations, and those who oppose them seem to have had but little personal experience with them.

It appears to me that the operation is sure to find a new field of usefulness in the treatment of hernia in old men.

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