BASSINI AND HALSTED OPERATIONS FOR INGUINAL HERNIA.

LIGATION OF FEMORAL FOR TRAUMATIC ANEURISM—
MASTOID DISEASE—PELVIC ABSCESS ESCAPING
THROUGH GREAT SACRO SCIATIC NOTCH
—HEMOPHILITIC KNEE JOINT.

(Surgical notes Presbyterian Hospital, June 10, 1894.)

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Case 1.—The first case which I present to you is one of double inguinal hernia. This patient is 30 years of age, is a laborer; general health and history good. Has had this double rupture for twelve years. Examination demonstrates that they are oblique inguinal herniæ; from long existence the internal ring has been dragged down until it is opposite the external ring, thus simulating direct hernia. The term, straight hernia, is used to designate this condition. This man has continuously worn a truss, but even with the truss the condition has been a source of constant annoyance to him. My personal experience with the operation for radical cure of hernia, something more than thirty cases, has been so gratifying both with regard to permanence of cure and freedom from mortality that I feel warranted in advising this man to submit to operation.

On the right side I shall do a Bassini operation and on the left a Halsted, so that you may have an opportunity of comparing these two methods.

The Bassini.—I now make an incision through the integument and superficial fascia over the inguinal canal, about three inches in length, extending above the internal ring and down into the scrotum. This exposes the intercolumnar fascial covering of the hernia; this is the most superficial of the three coverings common to the cord and the hernial sac, the other two being the cremasteric fascia and the transversalis fascia. These three coverings must be divided before we can expose the peritoneal sac and separate it from the tissues of the cord. Many surgeons will tell you that it is difficult or impossible to distinguish these layers. I tell you that in almost all cases these coverings can be more readily demonstrated in an operation for radical cure of hernia than they can be on a cadaver in the dissecting room, and further that it is very desirable to be able to do this. It is only occasionally that we run across an old complicated hernia in which this is difficult or impossible. I shall give you a rule which will make it easy for you to identify these structures:

1. The intercolumnar fascia is exposed after the division of the skin and superficial fascia; it is the strongest, firmest, most fibrous covering of a hernia; this should be divided the entire length of the sac and as high up as the internal ring. The division of this layer exposes the second covering, the cremasteric fascia, which can be recognized from this fact and by the looped muscular fibers running through it. The division of this layer exposed the third, the transversalis fascia, which is recognized simply from its position. It has no distinguishing feature, beyond the fact that it is situated between the cremasteric fascia and the peritoneum.

It is at this point of the dissection that a layer of fascia sometimes presents itself which may confuse the inexperienced anatomist and operator, *i.e.*, the subperitoneal fatty layer which intervenes between the transversalis fascia and the peritoneum. This is often mistaken for the omentum. Its position, the ease with which it tears, its lack of large vessels and lack of peritoneal lustre enable the experienced operator to distinguish it from the omentum. I now expose the sac, separate it from the cord with fingers and forceps as high up as the internal ring. In this case the sac is very transparent. I can see that it contains neither omentum nor intestine and I shall not open it. I ligate the sac as high as possible and cut away the redundant portions. I now lift the spermatic cord out of its bed, separate the aponeurosis of the external oblique from the conjoined tendon with forceps and blunt dissector, free Poupart's ligament from the adjacent tissues, that is the superficial fascia and the cremasteric fascia. With silk sutures, seven in number, I close the entire inguinal canal by sewing together the transversalis fascia and conjoined tendon on the inner side to Poupart's ligament on the outer side. The spermatic cord is now laid over this closed canal and covered, by sewing over it the aponeurosis of the external oblique. The external incision is closed, without

drainage, by silkworm gut sutures placed an inch apart, acting as tension sutures, and a fine continuous catgut suture placed an eighth of an inch from the margin of the skin and one-fourth of an inch apart.

We shall now do a Halsted on the other side. The external incision is the same as before, except that it is carried nearer the anterior superior spine of the ilium. I separate the sac as before, but instead of ligating it I cut it open with scissors parallel to the external incision; this incision extends above the internal ring and divides the neck of the sac. This exposes the general peritoneal cavity. The opening in the peritoneum is closed with mattress sutures and the redundant portion of sac cut away. The next step in the operation is the ligation of the great mass of the spermatic veins as high up as possible and at a second point below the external ring. The portion between the ligatures is cut away leaving the vas deferens and a few vessels. The canal is now closed with sutures which pass through the conjoined tendon, transversalis fascia and external oblique internally, and Poupart's ligament externally. The cord is then laid over this closed canal and the external incision closed as before. An aseptic compress is applied and retained by means of a double spica. One little point in the dressing of these cases is to sling the scrotum up over the abdomen with a silk or gauze handkerchief to prevent the gravitating into the loose tissues of the scrotum, of the blood and wound secretions, an accident which I have had occur several times when this precaution has been omitted. Subsequent history: Case ran a normal aseptic course with perfect closure of canals.

The second case operated upon was shown later at a meeting of the Chicago Medical Society:

Case 2.—A young man of 20; four weeks ago cut himself with a bit of glass over the inner and upper aspect of the left thigh at a point near the apex of Scarpa's triangle and in a line with the femoral artery. Profuse hemorrhage occurred but was readily controlled by bandage. He was taken to Cook County Hospital; the case treated as an incised wound; discharged at the end of two weeks with small suppurating sinus. A few days ago noticed an enlargement at the seat of injury and was brought to the Presbyterian Hospital. The condition, that of traumatic aneurism of femoral is evident. The operation which I shall do is the old operation of Antyllus, *i.e.*, cutting into the aneurism, turning out contents of sac, ligating both proximal and distal ends of vessel.

Cutting directly into the aneurism I find the sac composed of the deep fascia, sheath of femoral vessels and intermuscular septa. Turning out the blood clot I find a wound three-fourths of an inch in length in the anterior wall of the femoral artery; the vein is to the outer side, the internal saphenous nerve between the two vessels. The artery is ligated above and below the wound in vessel and vessel divided between the ligatures. The sac is very thin and does not demand removal. Subsequent history: No interference with circulation of limb. Patient discharged at end of two weeks cured.

Case 3.—The third case which I now present is one of mastoid disease. History: Measles, inflammation of middle ear, later involvement of the mastoid. This last occurred about a year ago. He now has a sinus about two inches behind the external auditory meatus; this suppurates freely at times, at times closes and then the pus escapes from the ear. Opening up the sinus an opening into the cranial cavity is found which is in the line of suture between the mastoid portion of the temporal and the occipital bone. It is evident that in this case the pus has worked its way from the mastoid process or middle ear into the inferior fossa at base of skull between the bone and dura, or else that we have a case of suppuration of the lateral sinus to deal with, and fortunately for the patient the suppuration has found a means of exit through the temporo-occipital suture; following this sinus with a chisel it is found to lead into the mastoid antrum; this is carefully scraped out, great care being necessary because of the proximity of the lateral sinus, if indeed the suppurating tract is not the lateral sinus itself.

Subsequent history: No uncomfortable symptoms; patient about on second day; still under observation.

Case 4.—This woman was confined five weeks ago; had septic inflammation following confinement. She presents herself to us with this huge swelling over the buttock covered evidently by the gluteus maximus muscle; temperature 103.5; fluctuation is distinctly felt. Upon opening the abscess I find that I can insert my index finger easily into the great sacro-sciatic notch; this is evidently a case of pelvic suppuration escaping through the great sacro sciatic notch

It is the second case of the kind which has come under my observation. Subsequent history: Disappearance of symptoms; five weeks after operation there is still a small discharging sinus.

Case 5.—The last case which I present to you is one of great interest. This man 40 years of age has been complaining for some weeks of rheumatic pains. He comes to us with this great swelling in and around the left knee joint; this swelling extends half way up the thigh and half way down the leg; the surface is covered with patches of ecchymosis. Examining the man's body I find multiple patches of ecchymosis on his arms and other thigh. He tells me that these ecchymosed patches occur from the slightest injury; that whenever he cuts himself he bleeds very profusely; that once he had a tooth extracted with alarming hemorrhage following. He does not know that any member of his family is similarly affected. This is evidently a case of hemophilia. The joint is a hemophilic knee joint. The treatment we shall advise is rest, compression with a flannel bandage, careful avoidance in the future of injury. These cases sometimes after repeated attacks have ankylosis result. The subsequent history: Patient was seen at end of two weeks; had improved greatly. He then passed out of observation.

GRAFTING FOR THE CURE OF EPITHELIOMA.

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PHILADELPHIA.

The removal of epithelioma by the knife or caustic has so far, been seldom, if ever a permanent cure, and as this disease appears mostly on the face especially near the eyes or mouth and in persons advancing in years, it becomes a source of distress and pain as well as a blemish, and in the removal by knife or caustic often a very defective scar is left with contractions of the lids and mouth which interfere with the natural and proper use of those parts. Transplanting from neighboring parts creates a greater defect, really defacing two parts; that where the epithelioma was, and that from which the piece of skin transplanted was taken. The drawing of the edges of the wound together where the disease is cut out causes very much contraction, interfering with the opening of the eyes or mouth. Even after such an operation, return of the disease occurs in a very short time, no doubt caused in very many cases by the not complete and thorough removal of the growth in the first place.

Knowing now from the latest studies that epithelioma is entirely a local disease of bacteriologic origin its thorough removal is necessary to insure a cure; and in doing this the gap in the skin must be filled up in some way, and lately grafting has been suggested instead of transplanting, so as to leave as little defect as possible; it is also claimed that the placing of healthy integument in the wound creates a healthy condition of all the surrounding parts and removes the tendency to a return of the disease.

To test the efficacy of this procedure I have during the past winter operated upon a very interesting case which is presented in this paper.

Mr. M., age 54, of Virginia, has been suffering with a slow growing epithelioma in the inner canthus of the right eye for over twelve years. It commenced in a small spot on the lower lid just below the line of the canaliculus. It gradually grew up towards the canthus, when four years ago he underwent an operation for its removal by the electric cautery. It was reported that it had all been removed; the wound, however, never healed properly, but instead, it seemed as if the growth was increased in vitality and started to

grow rapidly, presenting the appearance of Fig. 1 as first seen by me.

Under an anesthetic I removed the disease completely with knife and scissors, and after stopping the hemorrhage, (which is always very free in such cases) by application of hot water sponges, I shaved a very thin graft from his upper arm, in size and shape so as to fit in freely and exactly the gap made by the removal of the diseased part.

Everything was done under thorough antiseptic preparation and influences. The solution of bichlorid of mercury being used 1 to 4000 on the eye and arm. The graft as soon as removed from the arm being

Fig. 1.

placed in a warm saturated solution of salt water, and then carefully transferred and fitted to the wound. The wound was covered with a piece of antiseptic oiled silk, over which were carefully laid and bound moist hot sublimate cloths and antiseptic cotton wool. As soon as the eye was bound up, applications of cloths steeped in hot water were constantly laid over the whole for an hour, and renewed after two hours. This being done to start up vitality in and around the graft. The latter applications I have always found a great adjuvant in the adherency and life of the graft in all such operations. After the

Fig. 2.

second day the oiled silk was removed and dry dressing applied for five days, after which the air was permitted to reach the graft through a thin dry gauze cloth laid over the part.

This operation has now been six months and the eye is as perfect as can be, there being no irritation or sign of the return of the growth.

Fig. 1. shows the case as first presented and Fig. 2 one month after the operation and as it is at present.

The success of this case recommends without doubt, this method of treatment of all cases of epithelioma on any part of the body if taken in time and before too large or deep and attacking vital parts.