

purposely omitted their discussion. Nor, have I entered into a detailed description of the complicating factors and multiplicity of abnormal deviations of an anatomical type, which are commonly met with in the hernial diseases, here considered, feeling, that while endeavoring to condense as much as possible, rather, too much space, has been occupied. And further, for the reason that as my opportunities for observations continue and time will permit, the description of these, will later, engage my attention.

CONCLUSIONS.

Although during the past fifteen years, very much has been written on hernial operations; much in America, but more in Europe; so far as can be learned in the current, home and foreign medical literature, no one has made an attempt in a methodical manner, in any brochure or treatise yet published, to systematically describe and classify those herniæ which are operable and those which are not. For the purpose, of at least, in part, filling in that gap this essay is offered.

In epitomizing the subject and considering the question of treatment of hernia in a general way, it may be said, with definite certainty. * * * *

1. That inasmuch as no operative scheme yet devised, or even can be, will always effectually remove the causes of every species of hernia; in consequence of this, a permanent cure, is out of the question, in certain cases.

2. The radical cure of hernia may be regarded as one of the most satisfactory operations in surgery. The fact that the disease often relapses, constitutes no valid objection against surgical intervention; for this is commonly the case in the major part of operations performed on the human body.

3. A radical operation for a non-strangulated hernia, which gives no serious inconvenience is not a justifiable procedure and should not be encouraged, unless there are pressing reasons for it, as the presence of a neoplastic growth in it; a prolapsed ovary or other viscus.

4. Hernial operations should not be performed in extremes of age. In very early life, there is seldom pressing necessity for them. In very advanced life, the risk, immediate or remote, to life or health, involved by operation more than compensate in the prospective benefit.

5. Unless, there are especially contra-indicating factors in given cases, inguinal hernia in women should be always treated by a radical operation, which, with them, is so often attended by a permanent cure.

6. As a rule, all operations on reducible, or incarcerated herniæ are radically curative, though the disease commonly relapses; nevertheless, the immediate danger of strangulation has been removed and the hernia has been placed in a position, to be more comfortably borne by a truss.

7. Every operation for strangulated, inguinal hernia, should always include, such additional steps, as will effect, thereafter a complete obliteration of the inguinal canal but permit the passage of the spermatic cord and, remove the chances of a hernia again occurring.

8. Very large, old herniæ, in any of the abdominal regions are not operable; except, in the event of strangulation; as their return, is attended, frequently, with mental consequences.

IS AMPUTATION EVER INDICATED IN COXITIS?

Read in the Section of Surgery and Anatomy, at the Forty-third Annual Meeting of the American Medical Association, held at Detroit, Mich., June 8, 1892.

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I have no intention of describing the methods and dangers of amputation in the hip-joint, but simply to inquire into its indications in coxitis. That it has often been done we may learn from the table in the International Encyclopedia of Surgery. 276 had the operation done on account of disease, 65 of which, at least, had coxitis and many of which had been previously resected. Ashhurst gives a table of 34 cases of primary and 31 cases of secondary amputations for coxitis (probably the same 65 cases mentioned) with a mortality of 31 per cent. He states that the mortality is almost exclusively due to constitutional conditions and very little dependent upon the management of the wound.

Primary amputation for coxitis will, of course, be abandoned as surgeons, little by little, learn the indications for excision and also, that done at the proper time, this operation is not dangerous and the results quite excellent. It is, therefore, only with secondary or consecutive amputation that we have to do, the indication for which, according to Ashhurst, occurs, when after excision the discharge increases and it is evident that caries has recurred and is too extensive for spontaneous recovery, re-excision or, when with the same conditions, the patient's general health begins to fail.

We may properly ask, what the cause is for this increased discharge and the recurrence of caries? The increased discharge depends probably in all cases on improper antiseptic precautions and on the imperfect extirpation of the tuberculous capsule, pieces of which have been left behind, and it may be prevented by exercising due care in this regard during the operation.

The recurrence of the caries is probably less a recurrence than a continuation of the original trouble, particularly in the form of a chronic osteomyelitis in the shaft of the femur, and it is about the treatment of this particular affection that I wish to offer a suggestion in this short paper.

In some of my earliest resections for neglected cases of coxitis I have occasionally found a chronic osteomyelitis and osteitis extending all the way down the shaft of the femur to the lower epiphysis. The periosteum was found thickened, swollen and so easily loosened from the congested and osteoporotic bone, that the whole shaft could be forced out of the wound, leaving the periosteum intact like the finger of a glove. Necessarily we would in such a case find continued suppuration and recurrence or rather continuation of the carious process, unless we removed the whole diseased shaft, in which case, if we succeeded in healing the wound, we would get a useless fail-joint.

It is obvious that to make a resection and leave the diseased bone behind is useless, and to remove the whole diseased shaft produces a useless limb. Amputation has so far been the only resource and the various text-books on surgery recommend this proceeding under the circumstances mentioned.

And yet, by a very simple, easy and reasonable

operation we are able to overcome this complication, if I can judge from a couple of cases lately operated.

Case 1.—Augusta P., aged 11, entered the Sisters' of Charity Hospital on February 12, 1892, with the following history: When six years of age she fell down stairs injuring left hip. She has since complained of slight lameness until last May (1891), when it increased, accompanied with fever, pain in the knee, emaciation, etc. Left leg abducted, flexed and rotated outwards; marked lordosis and crepitus in joint. A large cold abscess over anterior part of femur.

The abscess was opened by incision, four inches long, the tuberculous membrane removed with sharp spoon, the wound closed with sutures. It healed by first intention and gave no further trouble. The joint was thereafter resected by posterior incision, the bone being cut through above trochanter minor. The head was found loose in the joint, the synovial membrane of which was tuberculous and was removed. The whole neck and trochanter was in a state of chronic osteitis, no particular primary lesion being found. A chronic osteo-myelitis was found extending down through the shaft to the lower epiphysis, the cavity being found filled with tuberculous masses, softened bone and fluid fat. The periosteum was swollen, thickened and could with ease be detached from the dark red, congested bone. I decided to treat this complication in the same way as I would treat acute osteomyelitis and therefore removed the whole marrow and all the softened bone with a long sharp spoon, made thereafter with a chisel a counter opening into the cavity of the femur above the external condyle near the epiphyseal line, brought a strong piece of silk thread through by aid of a long probe, and after a thorough disinfection of the cavity with corrosive sublimate introduced by aid of the silk thread a long mesh of the iodoform gauze through the whole femoral canal and out through the resection wound. The acetabulum was thereafter plugged with iodoform gauze, the wound partly sutured and antiseptic dressing and a Volkmann's sliding splint with 5 pounds weight applied. The wounds were dressed every six days under narcosis for four weeks, a new mesh of iodoform gauze being introduced each time by being attached to the old one before it was removed. As the wound then looked perfectly healthy, the mesh was omitted and the wound then closed rapidly. The extension was discontinued on April 15, a plaster cast applied on May 4, and on May 10 she left the hospital on crutches in excellent health, having gained 12 pounds in weight. The shortening was one inch, the joint firm and freely movable, all wounds healed. She will not, of course, for three or six months be allowed to use the limb.

Case 2.—Thomas M., aged 13, entered the Sisters' Hospital on March 17, 1892, with the following history: He began to complain in April, 1890, of pain in the left knee, limping, had fever, starting pains at night and emaciated rapidly.

A plaster cast was applied by an orthopedic surgeon and allowed to remain on for three months, the child meanwhile walking on crutches. An abscess was then found on anterior part of femur and lanced, but did not heal. He continued under same treatment till July, 1891, and had since then been wholly neglected.

On entering he was extremely emaciated and anæmic, walked with two crutches. Left limb adducted and flexed, apparent shortening with marked lordosis. A sinus was seen in Scarpa's triangle discharging curdy pus. Under narcosis the sinus was enlarged and was found leading to the joint, which was then resected by posterior incision, the bone being severed above trochanter minor. The joint was found in a state of chronic arthrotitis, but not tuberculous, the cartilages being more or less transformed into a fibrous tissue forming strong adhesions and making the removal of the head quite difficult. The neck and trochanter were found in a state of chronic osteitis with formation of a number of cavities containing tuberculous material and bone-detritus.

The same condition was found extending through the shaft of the femur down to the lower epiphysis. The marrow was removed with sharp spoon, a counter-opening made as in the previous case near the lower epiphysis, the cavity disinfected and an iodoform-mesh introduced. It was changed once a week for five weeks and then discontinued as the wound looked perfectly healthy.

The wounds then closed rapidly. The patient has greatly improved, gained considerably in flesh. There is a good firm joint with free motion, shortening $1\frac{1}{4}$ inch. He has not been allowed to get out of bed yet.

Since operating these two cases I have found a

similar treatment advocated in the *New York Medical Journal* of April 23, 1892, by Dr. C. T. Poore, of New York. He found the conditions described in 21 cases. In 11 cases he cleaned out the central cavity, introduced after disinfection a drainage tube in the counter-opening and the result was nine recoveries and two deaths, one 24 hours after the operation from shock, another three years afterwards from amyloid degeneration. Of 10 cases, in which the central cavity was not cleaned out, eight died and two recovered. In one of the eleven cases the whole shaft became enlarged, but has never given any discomfort.

With these results in view is it pertinent to ask, whether amputation is ever indicated in coxitis?

Discussion opened by Dr. Ridlon, of Chicago, who said that unquestionably in the majority of cases, the disease began outside the joint, in the bone and the difficulty of locating the focus of the trouble, raised the question as to whether it was best to operate or await the results of local treatment. Of course, if the patient is growing worse, operation is indicated, but otherwise, unless we can be sure we can remove all the diseased tissue and cure the case without relapse, within the time in which wounds usually heal, it is a question whether the operation should be done and the chances taken of septic infection through the sinuses leading into the joint or into the surrounding healthy tissue. His prejudices were against operating unless as a life saving measure.

Dr. Andrews, of Chicago, thought that in a large proportion of cases, after suppuration has commenced excision will be the best way out of the difficulty, though this may not be absolutely necessary to life, as has been shown by cases that have done well without excision. Such cases, however, recover more quickly after operation. Before the age of puberty there is very little danger from shock. He favored increased employment of operative procedures, but there are exceptions to all rules.

Dr. Mynter ascribed his excellent results to the great care with which he removed every portion of the diseased tissue, and also the fact that he did not try to get primary union and did not want it as he believed the wound did better if packed with iodoform gauze and allowed to granulate, as strong fibrous tissue then was formed and flail-joints avoided.

THE CREMASTERIC REFLEX IN VARICOCELE.

Read before the Section of Surgery and Anatomy, at the Forty-third Annual Meeting of the American Medical Association, at Detroit, Mich., June, 1892.

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I wish in this paper to make a short mention of certain observations and theories which I am not yet prepared to publish in full.

The accepted theory in regard to the causation and pathology of varicocele had never been entirely satisfactory to the profession. While it may be admitted that certain anatomical relations more especially of veins on the left side of the body may predispose to the disease, and while there can be no doubt of the occasional agency of injuries and venereal excesses in producing it, we must nevertheless acknowledge our ignorance of the exact pathological processes which lead to its development. We cannot explain why of two men of apparently similar constitution and habits of life one should suffer from the disease and the other escape. We may accept as the truth, the statement that the size, winding course and numerous anastomoses of the veins near the testis, their lack of support by the loose and inelastic tissues which surround them; the length and small size of their efferent trunks, the perpendicular course