Ricketts (B. M.)

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ABDOMINAL INCISION FOR ASCITES.[1]

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Mr. Chairman and Gentlemen:

The object of this paper is to call attention to a class of pathological conditions which has from time immemorial been treated medicinally, but which the writer thinks should be dealt with surgically, viz., fluid in the abdominal cavity abnormal in quality or quantity. In fact, all cavities containing fluid should be dealt with surgically. But this discourse will be limited to the abdominal cavity.

The use of the trocar should be ignored except for diagnostic purposes, for the reason that it is attended with many dangers, uncertainty of securing a free escape of the fluid, and the numerous adhesions of the viscera to the belly wall after multiple punctures; also for the reason that it does not afford means of inspection of the cavity. It must therefore be a very unscientific procedure, and must give way to means more certain, more efficacious and less dangerous.

Free drainage is desired, and was first attempted through the bladder by Buchanan (*Glasgow Medical Journal*, 1828, i, 195–205). Bennett was successful in curing a case by establishing a fistulous opening in the abdominal wall (*American Journal Medical Sciences*, Philadelphia, 1859, N. S. xxxiii, 556). This seems to be the first successful case with the trocar. However, few cases have resulted favorably with this instrument.

The cause of the ascites is not mentioned in either of these cases, nor is it probable that the cause was ever known to them. This uncertainty is the most potent factor in the abolition of the use of the trocar or aspirator. Thus it is that modern surgery cannot submit to its use except to determine the presence or the character of the fluid.

Reference was not made in the author's paper read at the National Association of Railway Surgeons (Chicago, September 24, 1895) to the abdominal cavity, as he hoped to acquire greater experience in dealing with conditions found in that cavity before saying anything further about it, but his experience since that time has been of so satisfactory a nature that he feels warranted in bringing it before the profession, which he now does.

Incision (of which no mention can be found except in the Wallace paper) from two to four inches in length will enable a close inspection to be made of the liver, spleen, kidneys, pancreas, uterus, ovaries, tubes and chyle ducts. In fact, almost any part of the peritoneum may be subjected to the sense of touch or ocular inspection. Then, too, the subjection of the peritoneum to the atmosphere is many times followed by beneficial results. It has been pretty well demonstrated that it is the atmosphere, and not the light, which causes the so-called capillary or peripheral stimulation which follows the opening of the peritoneal cavity in disease. Many times the effusion is the result of localized peritonitis, which may be caused by abscess, benign or malignant tumor growth, adhesions, malformations or displacements of organs or viscera.

1 Read before the Mississippi Valley Medical Association, at Louisville, Ky., October 5–8, 1897.

Presented by the author

Wallace (*British Medical Journal*, July 10, 1897, p. 79) suggest the use of a tubular speculum for the examination of the abdominal viscera. He also makes mention of the use of rubber and glass tubes for drainage, but the good to be derived is not established, as the continuous presence causes adhesions of such a nature as to preclude the possibility of free drainage. It would appear more rational to drain with gauze, now and then detaching the adhesions with the finger without local or general anesthesia. The sense of touch is most desirable in such an event. Double incision, one above and one below the umbilicus, one or two inches in length, should be made in large adults where doubt exists as to the location of the lesion where the speculum is to be used. Indeed, Wallace prefers the low incision, although he occasionally makes the high one. He does not, however, suggest that the two be made simultaneously.

In punctures of the legs it is not necessary to leave the cannula inserted subcutaneously, as practiced by Ewald, for its presence is not only painful, but many times followed by cutaneous necrosis. Daily massage, as a matter of course, greatly facilitates the escape of fluid, and also tends to keep the punctures open.

The writer's experience is limited to three cases, two in which constant drainage was secured by means of the trocar and one (a case of acute Bright's disease) in which abdominal section was resorted to, together with multiple incisions of the lower extremities.

CASE I.

Man, aged sixty, heavy drinker of alcohol, chronic hepatitis, extensive general anasarca with great cyanosis. Urine contained 40 per cent. of albumen by volume. Constitution such as to cause great anxiety as to immediate dissolution. Abdomen tightly distended and containing fluid, as shown by the exploring needle. Multiple incisions were made in genitalia and a large trocar introduced into abdomen above pubis. Three and one-half gallons of fluid were removed from cavity and one-half gallon from genitals. Fluid continued to flow through the opening into the abdomen for three months, a probe being occasionally introduced to prevent complete closure of it. The incision into the genitals enabled the fluid to escape for two weeks. The patient experienced instant relief, and continued to improve for eighteen months, during which time he was able to transact his business, such being that of a banker. He died in a similar attack at the end of the above stated time.

CASE II.

Woman, aged forty-nine; cardiac dropsy in abdominal cavity, which had existed for ten weeks. There was extensive infiltration of lower extremities. Punctures were made in lower legs, enabling a large amount of fluid to escape, aided by massage. Slight improvement was manifested at the end of a few days, when a large trocar was introduced into the abdominal cavity and fifteen pints of fluid removed. With the aid of a probe the presence of the opening was continued for eight weeks, at the end of which time there had been great improvement. Her condition remained most gratifying for five weeks, when she died suddenly.

CASE III.

Man, aged twenty-five, chronic parenchymatous Bright's disease of thirteen months' duration. The symptoms were well marked, the edema of the face and lower extremities, limited at first, rapidly becoming general, with transudation of the fluid into the thoracic and abdominal cavities. The amount of urine passed *per diem* was not much diminished, but contained a large amount of albumen—at least 50 per cent. by volume. The effusion into the thoracic cavity was small in amount, but that into the abdominal cavity steadily increased to such an extent as to necessitate tapping once, and sometimes twice, a week, as much as a gallon to a gallon and a half of fluid being withdrawn at each séance. Despite heroic treatment with digitalis, salines, vapor baths, etc., reaccumulation of the fluid was rapid, and twenty-eight tappings were per-

formed within a period of four months, with only temporary relief of the urgent dyspnea and cardiac distress.

As adhesions had formed above the site of previous trocar punctures, preventing the free escape of fluid after tapping, and a relief from the pressure symptoms was imperative, it was decided to make a free incision into the abdominal cavity and institute permanent drainage. This was done. Under chloroform anesthesia, an incision three inches in length was made in the median line midway between the umbilicus and symphysis pubis. A large quantity of ascitic fluid escaped, and after exploring the abdominal cavity for morbid growths, etc., which were not found, a large rubber drainage-tube was carried down to the bottom of the pelvic cavity and the abdominal wound closed. The patient reacted promptly from the operation, having borne the chloroform as well if not better than one with sound lungs, heart and kidneys. The effects of the drainage were immediate and beneficial, the edema of the lower extremities cleared up and the limbs returned almost to their normal size. The improvement in the face and upper extremities, while not so great, was well marked, and almost all the fluid in the chest also disappeared, and the patient was much improved in appetite and general condition. The drainage-tube was removed at the end of the first week, as the peritoneum had become intolerant to it, and drainage was kept up by gauze wick until the patient's death. Ten weeks after the operation the effusion in the right pleural cavity became purulent, and was removed by open incision and drainage. The patient rallied well from the operation and anesthetic (chloroform), but died forty-eight hours afterward from gradual failure of the vital forces.

Since writing this paper the author has had the opportunity of seeing Dr. Edwin Ricketts open an abdomen in which tubercular peritonitis was present. The cavity was anterior to the intestines, which formed the cavity wall except the anterior portion, which consisted of the belly wall. Such adhesions precluded the possibility of using the speculum, and it is mentioned for that reason.

Another interesting feature in this connection, that of drainage, has been presented to the writer by Dr. Ashburn, who, with Dr. Mitchell, saw a lady with a large abdominal tumor, the contents of which escaped into the bladder and through the urethra, thus causing complete disappearance of the tumor, which, in all probability, was an ovarian cyst. The rarity of such an occurrence causes me to make mention of this case.