

work, having had no return of the inflammatory symptoms.

Dr. Warren finds that the use of the sinus dilator simplifies many operations performed for the purpose of reaching pus. An abscess of the prostate pointing in the rectum was opened in this way without the use of the knife. In making the permanent opening in empyema a fold of skin may be pinched up at the desired point and divided with the knife, the dilator is then thrust through the intercostal muscle and pleura, and the opening thus made is spread to the desired width.

New Instruments.

DOUBLE IRRIGATION, INJECTION, AND DRAINAGE TUBES.¹

BY HENRY O. MARCY, M. D.

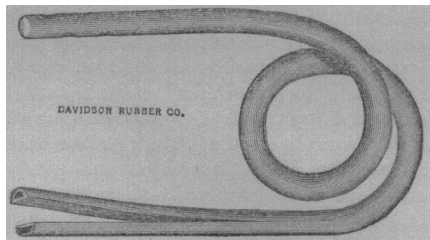
In the recent progress of surgery, thorough drainage of wounds and suppurating cavities is considered scarcely less important than even their antiseptic treatment.

The instruments for which I ask consideration, are designed in a large degree to aid, under certain difficult conditions, a somewhat similar purpose.

There is no novelty in double tubes, the value of which has long been appreciated by the profession, but, so far as known, they have been hitherto constructed of metal or other stiff material, and on this account their utility is greatly lessened.

Since the curing of rubber in glass moulds, thus giving such perfection of finish and durability to its surface, the rubber catheter has in a large measure, for most excellent reasons, supplanted the use of the older and more expensive instruments. It seemed to me possible to furnish a tube of various dimensions, double through its entire length, and of equal beauty of finish.

After experimentation in this direction, the Davidson Rubber Company, of Boston have succeeded in preparing for me tubes varying in measurements. They are French scale, 18, 22, 25, 27, 35, 40, and in length from fourteen to twenty-four inches.



The thought which most prominently prompted their usage was to obtain, in any cavity, not only a thorough cleansing from its contents, the removal and destruction of septic material, but especially to give to its surfaces the results caused by the secondary effects of heat and moisture, results well known to the profession in the external use of poultices, the vaginal douche, etc.

This, for some years, we have been accustomed to make available by the use of double metallic tubes, as, for example, the intra-uterine douche, and in cystitis. The double canula, known widely as Dr. Bixby's

¹ Read before the American Medical Association, May, 1881.

double tube, is by far the best hitherto met, and in the use of which was felt the great desirability of a similar effective instrument which should be flexible. However advantageous, such instruments cause pain and suffering, while they are more or less difficult and dangerous of introduction.

With the double rubber tubes these disadvantages are almost completely avoided. The applicability of such tubes readily suggests itself as wide and varied.

In diseases of the bladder the No. 18 is sufficiently small to enter the adult male bladder unless the passage thereto is constricted. Even with a considerably enlarged prostate it enters quite easily, and the benefit of the continuous current is very speedy and marked.

The relief comes, not only from the washing out of mucus and decomposing urine and the destruction of bacteria, but, continued, as has been my habit, for one half hour, night and morning, at the temperature of about 100° F., the congestive thickening and vascular supply of the mucous membrane are greatly diminished, the prostatic irritability is largely held in control, and permanent improvement ensues.

In hæmorrhage from ulcerations or other processes the results are even of greater value. In illustration I cite briefly the following case: Mrs. T., aged sixty-four, always well until within one year. Noticed trouble in passing water about six months since. Micturition frequent and painful; sediment thick and ropy. About a month before consultation began to pass bloody and coffee-colored urine, and clots were in the deposit. Despite every attention of the family physician she grew steadily worse, until at visit, and for two weeks preceding had been in bed. Was emaciated, very anæmic and feeble. It was apparent the patient could not much longer sustain the continued loss of blood. A careful examination revealed no evidence of renal complication, but there was a contracted bladder, with thick walls, a roughened surface, and hæmorrhage was increased after examination. Retained catheter for a considerable period to allow of complete rest of organ, but without benefit. Used hot-water current one hour without lessening the hæmorrhage, although it gave no suffering; then arranged for its continuous use at a carefully regulated temperature of 100° F., slightly carbolized, which was continued forty-eight hours, after which the bladder was allowed to be emptied voluntarily. There was no return of the hæmorrhage; the urine remained free from pus and mucus. Rapid convalescence followed, which was continued for more than six months.

In acute cystitis the results have been even more gratifying.

In the large class of cases, where the uterus has become the receptacle of septic and decomposing materials, the tubes have proved of great value. After childbirth, I have found the larger sizes the most convenient and advantageous. Their introduction is easier, as a rule, and the clots and *débris* come away with greater readiness. The intra-uterine douche under such circumstances has appeared to me of such service that it may challenge comparison in beneficial results with the vaginal douche, as recommended by Dr. Emmet, which has been found of such marked advantage in uterine and pelvic inflammations, that already it has generally won the confidence of the profession. Hitherto intra-uterine injections have been usually considered as dangerous, because a free return current has not been secured, and, on this account, even in the most marked

cases of septic poisoning from decomposing materials retained in the uterus, the removal of the cause is undertaken only exceptionally. Guided by the dogmatic conservatism of the past, and the fear of patent Fallopian tubes, many a patient has been allowed to die.

In narrowing of the rectum from inflammatory conditions of the pelvic organs, the relief and benefit have been in every case most marked. In these instances the tube enters the colon, and the water is left, without strain upon the intestinal wall, at a point above the inflamed or involved part; not only is the large intestine emptied of its gas and contents, and the tenesmus and pain removed, but the poultice-like effect of the continuous current is very efficacious in reducing the congestive and inflammatory processes of any of the pelvic organs.

The comfort and advantage have been equally marked after various pelvic surgical operations, where gaseous distentions are often so troublesome. In one case, where I removed the uterus and both ovaries, this procedure, commenced upon the second day, was not only painless but of such service that it was continued until convalescence was assured.

The use of the double current through such a soft flexible tube renders it easy and effectual to cleanse the pleural cavity in empyema, to wash out long, irregular sinuses, deep gun-shot wounds where necrosis of tissue must follow the track of the bullet and frequently shreds of clothing, small pieces of bone, etc., are retained.¹

In nutritive enemata I have felt considerable gain has followed the introduction of the fluids thus high in the transverse colon, and can but recommend their use for further trial. The subject of the absorption of nutrient enemata has deservedly occupied the attention of the profession, and is invested with a new interest by the recent statements of a number of independent observers that something of a reversed peristaltic action takes place. It has been even claimed that the entire intestinal tract may be permeated by injections. The deduction would seem logical, the higher the enemata can be safely and conveniently carried the more surely will the absorptive and restorative processes be aided thereby.

In certain chronic diseases of the large intestine I have been equally confident of the benefit secured by this continuous use of hot water, and, although I have not as yet had occasion to use water thus applied in dysentery, either hot or cold, it would seem that a trial thereof might be thoughtfully recommended.

The longer tubes are of easy application for the evacuation of the stomach. Said a friend, "they are not introduced, they are swallowed;" at least almost equally easy do they enter the stomach, in marked contrast with the ordinary stiff tube of the stomach pump. A tube of this character and an ordinary rubber syringe are all that are necessary for the speedy and effective emptying of the stomach; and feeding by this means is, in like manner, easily accomplished. This I have had recourse to in a number of instances with children as well as adults.

The *modus operandi* is too simple to require detailed description. For the secondary effects the siphon is the simplest and most convenient method, from a height sufficient to insure a slow but continuous current.

¹ One of these tubes was used in washing out the deep sinus in the case of our late President.

Usually it is well to lengthen the tubes by connections of rubber tubing as deemed convenient.

Although I have written in an exceptional enthusiastic manner, I assure the profession I have kept within the limit of the seeming just deductions from my experience in these directions, lest it might appear that I was a partial and untrustworthy witness for truth. I am convinced that results will confirm more of good than I have indicated.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

M. M. RICHARDSON, M. D., SECRETARY.

JUNE 6th, 1881. DR. INCHES read the regular paper on

A CASE OF ABSCESS OF THE LUNG.²

DR. BOWDITCH asked if there had been any examination as to the position of the heart. That was an important point in the diagnosis between pleurisy and pneumonia.

DR. INCHES replied that there had been no percussion with that view. There had been, however, no disturbance of pulse or respiration.

DR. BOWDITCH asked whether the lower part of the back was resonant or flat.

DR. INCHES replied that it was flat.

DR. BOWDITCH then asked if it was not singular that after the discharge of pus there was no evidence of it in the lung; it seemed to him strange. The facts did not convince him that there was not, after all, a considerable effusion into the chest. The fluid may have got through the pleura.

DR. INCHES thought there would necessarily be air in the pleural cavity in case of perforation into the lung. There was no trace of it. As to the absence of gurgling and moist râles he would say that no examination could be made at the time without endangering the life of the patient. None could be made between the twelfth and the twenty-third days. When it was safe to examine gurgling and bubbling sounds were heard.

DR. MARTIN, of Roxbury, said that, thinking the regular paper was to be on a case of gangrene of the lung, he would briefly report two such cases which had occurred in his practice:—

The first case was that of an Irishman, forty-five years old, who had had slight cough for several weeks. With the cough was an increasing debility. At the first examination, the only symptom being slight cough, Dr. Martin found the right lung very flat with bronchial respiration and broncho pleurisy; no crepitation; no signs of pneumonia. He was told to go home and take nourishing food and quinia. In twenty-three days patient had great hæmorrhage from the lungs and fetor. He continued to have these hæmorrhages very profusely. Supporting treatment with ergot and digitalis were ineffectual. In order to correct the terrible fetor Dr. Martin took a gallon of impure carbolic acid and ten pounds of unslacked lime, and having put into several dishes from one to two pounds of lime he poured on these one pint to six ounces of carbolic acid. The acid slacked the lime and a very sharp vapor was thrown into the air which was very decidedly perceptible to the person

² See page 415 of this number of the JOURNAL.