

THE AMERICAN
JOURNAL OF OBSTETRICS
AND
DISEASES OF WOMEN AND CHILDREN.

VOL. XXXIII. FEBRUARY, 1896.

No. 2.

ORIGINAL COMMUNICATIONS.

AN OPERATION FOR THE CURE OF INCONTINENCE OF
URINE IN THE FEMALE.

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(With two illustrations.)

THE woman affected with incontinence of urine is in a pitiable plight. She is practically ostracised from society and unfitted for the nicer duties of home life. If single she must abandon all hope of marriage. If married she is made conscious of the fact that her husband tolerates her companionship through a sense of duty only. In short, as Thomas aptly expresses it in another connection, "she becomes an object of loathing to herself and of disgust to those around her."

For years I have been, from time to time, approached by such women, whose sad faces and dejected air plead for relief even more eloquently than the tongue. To such I could only say: "There is no help for you."

When I have thus been compelled to turn away these poor, unhappy creatures I have experienced a feeling akin to guilt, and the question has obtruded itself over and over again: "Why may not such be amenable to surgical relief?"

Finally there came a patient, a girl of about 18 years. She had suffered from incontinence from infancy. She was examined. The examination revealed an anomalous band attached to the urethra and spreading itself over the muscles of the anterior aspect of the vulvo-vaginal junction. This was clipped and her infirmity disappeared as if by magic. I had partially formulated a technique, but it did not presuppose anything of this kind. I was now on the alert. Others came, and I looked for the band but did not find it. The fault was mine, for I did not look aright, as the sequel will show. Furthermore, I had not grasped the full import of the condition as an etiological factor. I believed that the band acted solely as a mechanical impediment to the closure of the urethral orifice. I was beginning to feel that this first case was a *rara avis* and that it was in no way the representative of a class. At this juncture another case presented. She was 21, beautiful and accomplished, the daughter of wealthy parents. Money had been expended lavishly in quest of relief. There was no bar to her happiness except this humiliating affliction, but this was enough to embitter the lives of parents and patient. I examined her, but could note no abnormality. I then placed her under medical treatment, with the usual result. Finally it occurred to me to free the urethral margins from the surrounding tissues. To this she readily consented, and she was accordingly placed under an anesthetic with this in view. To my astonishment, when the parts were exposed under the anesthetic and *put upon the stretch* a membrane was disclosed occupying the position of the anterior segment of the hymen, and which was attached to the sides and under surface of the urethra. It presented the appearance of wings. This was excised, an incision carried up along the urethra on either side for the distance of one-third of an inch, and the raw surfaces closed in by interrupted suture. From that moment she had complete control of the bladder, which she continues to enjoy to the present day.

My colleague, Prof. Thomas C. Hoover, informs me that he had a case some years ago in which the incontinence depended upon a growth from above downward over the urethra. This

growth was indurated and seemed to act as a splint, preventing the closure of the urethral orifice. This was excised and the patient cured. How much of this patient's trouble was due to the splint-like action of this growth and how much to reflex action can only be conjectured.

A few weeks since, in scanning the pages of a medical journal, I came across a short description of what was called the test operation for incontinence of urine. It consists in making an incision on either side of the meatus urinarius and introducing sutures so as to bring the line of union at right angles to the line of incision. This was practically what I had done, but the expressed object here was to form a buttress on either side of the meatus by banking up the tissues so as to close it by mechanical pressure. From what I have observed I can hardly think this is the only explanation of the *modus operandi* of cure, nor yet always a necessary part of the operation. In the first place, I have often observed very large and patulous urethras in which incontinence did not exist, and, if I mistake not, there are cases on record wherein the urethra has been used for copulative purposes without interfering with its proper function. Furthermore, the first case cited here and that of Prof. Hoover both bear me out in this deduction. I am free to confess that the idea of compressing the urethral outlet as a means of cure for incontinence had never occurred to me, and at first I did not take kindly to it, but the more I think of it the more plausible it seems. The habit of young children crossing their legs and pressing the thighs together to restrain an impending urination may be cited in support of this view, and yet we cannot even here eliminate the factor of reflex influence. The well-known manœuvre of making pressure on the upper lip just below the nose to avert sneezing is analogous, and yet the efficacy of the act depends entirely on nerve influence. My view has been that the incontinence is due to orificial excitation with resulting reflex action of the detrusive forces. By destroying these bands the urethra is relieved from the influence of muscular spasm or engorgement of erectile tissues communicated through them. There also remains the possibility of direct nervous connections with the highly excitable structures about the vaginal orifice. That sexual excitement has the effect of provoking detrusive efforts is evinced most strikingly in many of the lower animals, in whom, when under the dominance of

the sexual passion, frequent urination is a constant phenomenon. It does not follow that in the human female salacity, or even a conscious degree of sexual excitement, is necessary to the result, but I believe that an erythism of the parts exists nevertheless and that it is an etiological factor in the trouble. It is claimed

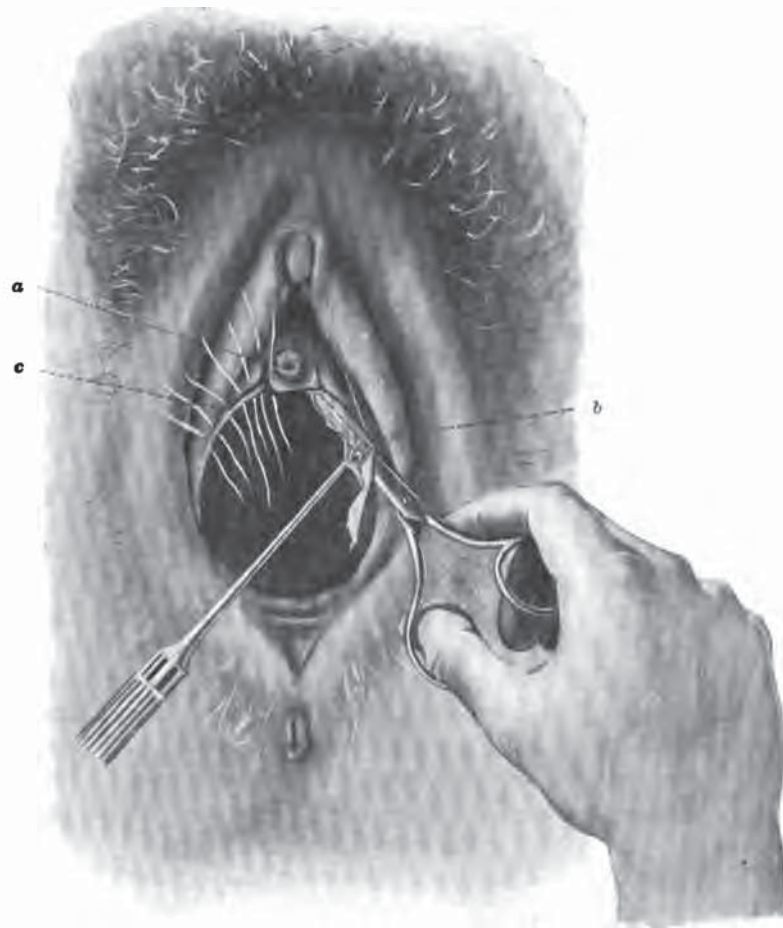


FIG. 1.—a, meatus; b, excision of the membrane; c, sutures introduced after excision of membrane and incision alongside of urethra.

by Stumpf that the exciting cause of nocturnal incontinence is a few drops of urine which find their way into the urethra, which in turn awakens a reflex action, resulting in the complete and instantaneous evacuation of the bladder. To cure such cases

he elevates the hips of the patient by means of pillows, which has the effect of relieving the bladder from intra-abdominal pressure and of allowing a large accumulation of urine without encroaching on the vesico-urethral orifice. By this means he claims to have been almost uniformly successful.

Nocturnal enuresis has, I believe, been referred to hyperemia of the nerve-centres presiding over the act of micturition. The dorsal position favors whilst the erect abates the hyperemia. Stumpf shows that the central trouble is due to eccentric influence—i.e., the sphincter vesicae—while my work in the same line places it one remove further outward, or at the urethral orifice. I wish to state in this connection that I have cured

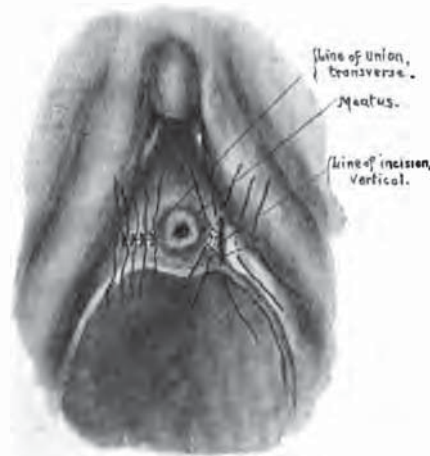


FIG. 2.—Shows the manner in which the incision is carried up alongside the urethra, and the effect after the sutures are tied.

by my operation one of the most inveterate cases of nocturnal enuresis in an adult female that it has ever been my lot to encounter. This lady could not even lie down to take a rest in the daytime without experiencing a mishap. The effects of orificial irritation in producing the expulsive action of the organ to which the orifice is the outlet are too well known to deserve comment. Tickling of the fauces will produce vomiting; irritation of the rectum will produce an action of the bowels; the eyes, the nose, and in fact every secretory organ in the body and every excretory reservoir, may be made to void its contents by orificial irritation. Of course much will depend

upon the esthetic condition of the patient or the parts. It must be remembered, furthermore, that the class of patients with which we are concerned are mostly neurotics, and hence vastly more susceptible to extraneous influences than the woman who enjoys a nervous equipoise.

That these bands of which I speak are capable of provoking and perpetuating a vast amount of local irritation is further evidenced by the vulval hyperesthesia and vaginismus so frequently witnessed as the result of, and calling for the ablation of, the remains of the hymen. Now, I am not prepared to say that a band, however attenuated, exists in all cases, but I do believe that a hyperesthesia exists in all; and the indications are to isolate the terminal extremity of the urethra as much as possible by severing the connection both of the nerves and tissues. In order that nervous communication may not be restored the raw surfaces should be closed in by suture, so as to separate the fibres as far as possible. If no band exist the dissection along the sides of the vulvo-vaginal junction will not be required, and then it will only be necessary to make an incision along either side of the meatus and bring the tissues together at right angles to the line of incision. For the sutures a fine silk thread should be used and the sutures nicely adjusted, both for the purpose of facilitating healing and to prevent hemorrhage, to which there is a strong tendency. A bland protective, such as cold cream, oxide of zinc ointment, or, still better, common white lead paint, will contribute to the comfort of the patient by preventing the contact of urine. After the operation the patient will often go many hours without voiding the urine, but catheterization is neither necessary nor expedient, for the bladder will empty itself in due time—usually once or twice in twenty-four hours. A rest in bed for two or three weeks will be advisable, to secure good, firm union. The operation may not apply to all cases—it would be strange, indeed, if it did—but should it be applicable to any considerable number it will be a boon to womankind proportional to the operation for vesico-vaginal fistula.

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