sion of the first molars is the simple treatment required here; but if not accomplished the case will result in severe malocclusion.

Fig. 12 shown simply to illustrate a case of the second class treated for a young woman of nineteen years. The changes here noticed were accomplished in four months without pain or special inconvenience and with very pleasing facial results.

Fig. 13 is shown to illustrate what very satisfactory facial improvement may be accomplished. This is not an unusual result following the correction of malocclusion and the stimulation of the contiguous bony structure.

A CASE OF SUPRAPUBIC CYSTOSTOMY ON A PROSTATIC; WITH REMARKS ON THE TECHNIC AND INDICATIONS OF THIS OPERATION.

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PROSTATIC hypertrophy is an affection of slow evolution and of unlimited duration, which, in its multiple stages, requires a treatment suitable to each one, and, although I am far from being a partisan of palliative operations in this particular class of cases, yet at the same time I feel that the operation of suprapubic cystotomy, which has been much abused, as well as neglected, has its field in certain instances. Dr. Gouley, in his recent and excellent book, entitled "Surgery of the Genito-Urinary Organs," expresses himself as follows: "Suprapubic drainage is necessary

when catheterism becomes difficult or impossible. This drainage has been accomplished by simply puncturing the bladder and establishing a fistula, or by a systematic epi-cystotomy, as the late Hunter McGuire has done so successfully in many cases. Men in feeble health, who at no time were in condition for a radical operation, have survived these processes for years, with but little inconvenience." This sizes up the question.

In November, 1905, I was asked to see a man, sixty-nine years of age, on account of chronic urinary retention. The history of the case is briefly as follows: the patient had always been a thin although wiry man, but has never enjoyed robust health. The disturbances of micturition dated back some eighteen years, at which time he commenced to urinate more frequently than usual and the quantity voided at each micturition was rather small in amount. For the first three or four years he apparently did not suffer from nocturnal micturition, but little by little this developed, so that the patient was obliged to arise two or three times in a night. About three years before seeing this patient he had consulted an excellent physician, who had diagnosed prostatic hypertrophy with residual urine and had instructed the patient in the use of the catheter. He followed his physician's directions for a certain time, and having been considerably alleviated from his symptoms after a number of months, he neglected the use of his instrument.

When I saw the patient the first time, he was urinating six or seven times during the day, and three or four times during the night, the act being accompanied with considerable straining. In the intervals, the patient said that he passed urine involuntarily, and, as will be shown, this was merely due to overflow of a distended bladder from chronic retention. Occasionally, in the evening, the patient experienced slight chills, he complained of ardent thirst, tongue was dry and digestive disturbances were evident.

Upon rectal examination the prostate was found enormously developed, at least the size of an apple, but its surface was smooth and in consistency it was everywhere equal; in other words, the hypertrophy was regular.

Exploration of the urethra with a bulbous bougie, No. 22 French, showed that the instrument passed the entire length of the canal up to the prostate without any evidence of stricture, but when an endeavor was made to enter the bladder, it was practically impossible without the use of undue force to make any instrument enter.

The patient complained of much hypogastric pain, which had been present for five days previously and was increasing, while by percussion, the bladder was found distended to within two fingers' breadth of the umbilicus.

The patient both from the temperature and pulse, as well as the general symptoms present, including his age, was looked upon as a very poor surgical risk, but, to save life, it appeared evident that some interference must be undertaken, in order to relieve the sepsis, which was undermining the patient's strength. After deliberation, I decided to perform suprapubic cystotomy, which was done the following morning, Nov. 17, 1905.

The patient having been fully prepared the afternoon before, ethyl-chloride-ether narcosis was administered; the bladder was rapidly opened and stitched to the skin, the entire interference lasting seven minutes. As the subject was thin, the operation was exceedingly easy.

On the next day the temperature had fallen to normal, while the pulse, which had been about 100 and very wiry in character, had become fuller and beat 72. The expression of the patient was also much better. Irrigation of the bladder, with a 1-3000 solution of silver nitrate.

The sutures were removed on the sixth day, when perfect union of the artificial meatus was found to have taken place.

The patient lived eighteen months after the operation in a very comfortable condition, having had a suitable apparatus made for the hypogastric meatus. He died from cerebral hemorrhage. No autopsy could be obtained.

One word now as to the technic which I deem should be employed in these cases. First of all, given the age of these subjects and their very low vitality, operative rapidity is of paramount importance and, therefore, the procedure should be as simple as possible.

Like any operation the patient should, if possible, be properly prepared. The large intestine should be emptied by a copious enema and the field of operation thoroughly shaven and treated as for any ordinary laparotomy. After narcosis is obtained, the patient is placed in Trendelenburg position and, if the bladder is not distended with urine, it should be filled with a solution of boracic acid. Of course, when the organ is distended, this is not needed. I have always considered that the use of Peterson's bag was both useless and dangerous.

The incision should be made in the linea alba, measuring from 6 to 8 cm. in length and carried down to the pubic bone. The linea alba is then incised to almost the extent of the cutaneous incision, but in order to avoid involving the peritoneal cul-de-sac, it is more prudent to stop the incision a few millimeters below the skin incision. When the linea alba and transverse fascia have been incised, the left index should be introduced into the prevesical cellular tissue behind the posterior aspect of the pubic bone, down to the neck of the bladder. Occasionally, on account of the tension of the abdominal muscles, or when the bladder is deeply seated, a certain amount of dissection with the finger may be necessary. A bladder distended by retention is easy to recognize on account of its reddish muscular fibers. The peritoneal cul-de-sac is pushed upwards and retained in this position by the left index finger.

The question now comes up as to whether the bladder should be first opened or a cystopexy done, in order to prevent the urine from escaping into prevesical cellular tissue, and to settle this I would say that all depends upon the condition of the bladder. A bladder which is not too distended will have thick walls, and in this case it is better to do cystopexy first, while in cases of complete retention the bladder, being greatly distended, possesses thin walls and one would, from this fact, be liable to penetrate directly into the bladder cavity with the needles, thus giving exit to the urine. Consequently, in these cases, it is preferable to incise the bladder first and afterwards to suture it. A point which should not be neglected, is to make the incision into the bladder

in the neighborhood of the neck, as McGuire recommended. After the bladder is opened the finger is introduced in order to explore the cavity and ascertain the condition of the prostate. When the bladder is emptied it should be thoroughly irrigated. Six sutures are sufficient to hitch the borders of the organ to the skin, and these should include the aponeurosis, the internal border of each rectus, the subcutaneous fat and the skin. When the opening in the bladder is made near the neck and when the cellular tissue is thick, it is perhaps better to merely include the skin in the sutures. The sutures should not be too tight and the coaptation should be made with as much care as possible.

The after-treatment should consist in irrigations of the bladder, and a proper apparatus for drainage established, so that no urine will soil the wound. There are plenty of excellent contrivances which constantly aspirate the urine from the bladder and thus keep the wound perfectly clean, and when attention is paid to this detail, the result in these cases will be most satisfactory.

To sum up, it may be said that suprapubic cystostomy should be resorted to in those cases where the patient is too feeble to undergo a radical cure of his prostatic hypertrophy and where the accidents of prostatism are serious. The operation is indicated when it is impossible to pass a catheter where there is acute retention in a mechanical prostatic, but this condition of affairs is rarely met with in practice. Usually, after suprapubic aspiration of the bladder, catheterism becomes possible and the permanent catheter will be sufficient. Pain, difficulty in catheterism, or the impossibility of the patient's tolerating the permanent catheter might also be indications for this operation. In acute and supracute infections, when the permanent catheter does not do away with the phenomena of infection, cystostomy should be undertaken in order to save the patient's life.

In the chronic form it occasionally is indicated when the permanent catheter does not influence the infection, or improve the general condition of the patient, or when accidents of sepsis reappear each time the catheter is removed. In old prostatites, the cystitides, rebellious to every treatment, require cystostomy, because the bladder pains cease as soon as the organ is opened. Abundant or repeated vesical hematuria places elderly patients' lives in danger and suprapubic cystostomy may frequently be of great service. In cases where calculi are present, especially when the bladder is infected, suprapubic cystostomy becomes both a curative and palliative operation.

Temporary cystostomy should usually be the end to be obtained and one should endeavor to re-establish the functions of the urethra as soon as the serious accidents have disappeared in cases of complete retention, hemorrhage and acute infection. The bladder pain, incomplete chronic retention, the permanent catheter which does not empty the fundus of the bladder, are all conditions which may be benefited by this operation.