far advanced he has seen good results; also in angina pectoris, in mitral stenosis and in mitral regurgitation. He differed from Dr. Daland concerning the resemblance between the effect of active exercise on the part of the patient and the gentle resistance movement of the Schott system. In the Schott system there is no muscular exercise on the part of the patient at all. The moment exercise is made the patient defeats the object of the treatment. The method is, he said, "gentle resistance." The benefit obtained is in the starting up of the peripheral muscular pump on the vessels so that the action of the natural rhythmical contraction of the muscles on the vessels continued to assist the work of the heart. The carbon-dioxid gives to the "skin heart" a much more active stimulation than could be secured from massage or electricity, though the principle is just the same, the diversion of the blood to the surface and the stimulation of the vasomotor reaction.

DR. P. S. DONNELLAN said that he believes it is the combination of the baths, the resistance exercises, the environment and the care in diet which contribute to the success of the Nauheim treatment. A good feature, he pointed out, is that the bathtub is sunken into the ground. He considers the resistance exercises a valuable addition to the treatment in that they supply a distinct element of cure in those cases of cardiac dilatation, arteriosclerosis and some valvular conditions. He thinks that great care should be exercised in the selection of cases sent to Nauheim. He referred to the importance of the after-cure, which consisted in the patient being sent to the Black Forest or to some portions of Switzerland to complete the cure after a period of six or eight weeks' treatment at Nauheim.

DR. WILLIAM S. WADSWORTH referred to the physiologic principles underlying all treatment. In regard to the effect of the various ingredients of the bath on the stimulation of the skin and the effect on the sensory nerves, there is, he said, a very great additional effect not mentioned, the effect on the skin itself. For example, on putting a piece of skin, alive or dead, into water there is obtained a certain amount of maceration and an entire change in the feeling of the skin. If the finger is put into the water for half an hour the sensations are entirely different from those encountered from the air. All, he said, know the difference between the sea bath and the ordinary bath. Another factor in the bath, he pointed out, is the suspension of the body in a material which is of a certain specific gravity. Putting the body on a water bed, he considered, is also a very important factor. The changes of the specific gravity will bear the closest clinical study and should give interesting results. In the resistance movements Dr. Wadsworth stated there is a series of valuable factors developed of a purely mechanical sort. On the chemical side there is another group; a chemical change taking place in the muscle itself. Certain substances are taken up, causing change of tone of the whole system. Fatigue stuffs are thrown out which have a distinct effect on every organ that comes in contact with the blood.

DR. J. MADISON TAYLOR emphasized the importance of the physician, himself knowing enough about the question of exercise to direct a competent person to do the work. He thinks much can be gained if men will take the trouble to study their cases thoroughly, and watch them through from start to finish.

DR. J. M. ANDERS said that he is not convinced that the home treatment can be carried forward with much success. To have a suitable establishment in this country would require a specialist in heart disease to make the treatment a special study, and this one should watch the patient daily, noting the effect of every bath and every application of the resistance movements.

Formaldehyd for Disinfecting.—An improved method of disinfecting is the subject of a recent English patent, according to the *Pharmaceutical Era*. One part of paraformaldehyd and six parts of carbon, both in finely powdered condition, are mixed with sufficient gum tragacanth or other suitable gum to form a stiff paste, which is pressed into blocks and dried. When required, the blocks are ignited, formaldehyd vapor being thereby gradually and uniformly disseminated.

PARAURETHRITIS.

AN ANATOMIC REVIEW, WITH A REPORT OF TWO CASES.

J. W. CHURCHMAN, M.D.

BALTIMORE.

The recent occurrence within ten days of two rather unfamiliar forms of gonorrheal infection seemed to offer material of enough clinical interest to be worth recording and of enough anatomic interest to warrant detailed study of the structural features illustrated; and at the suggestion of Dr. Young,¹ in whose practice the cases occurred, the following report has been prepared:

The urethra may be roughly described as a tubular structure, with dependent glandular adjuncts; for throughout its whole extent, from meatus to internal sphincter, and even beyond in the trigone, glands or crypts are to be found occupying a "para-position" in relation to it. All of these are of clinical interest as haunts of infection; some, like the prostate and vesicles, have, beside, a very definite pathologic and physiologic interest of their own; but many (most of them, though small, by no means insignificant) bear so intimate a relation to the urethra that we can only speak of them as paraurethral and of their infection as paraurethritis. Strangely enough, the well-known proper names associated with many of these structures are so associated with little or no justice. Tyson's glands do not exist; Skene's glands were described and their gonorrheal infection noted by Astruc 125 years before the American publication, and again by Guérin in 1864; Littre was probably looking at something quite different from the glands which have since borne his name when he noted structures in the membranous urethra which were, as now seems likely, not glandular at all; and Cowper was antedated just eighteen years by Méry in describing the glands usually known as his.

For their discoverer, in 1680, there was no doubt as to the glandular nature of the depressions he saw on corona and cervix, and from their supposed function (they were first observed in the orang-outang) Tyson called them odoriferous glands. Morgagni subsequently denied their existence as anything more than depressions. So did Haller, Finger and others; and Sprunk, in a Königsberg thesis (1897), reported that an examination of 300 adults had failed to reveal Tyson's glands in a single case. Kölliker, taking a safe middle position, regarded them as inconstant, and only sebaceous glands at best. It seems quite probable, as Delbet² has shown from a study of the published cases, that what Tyson and others took to be true glands were only the papillae and interpapillary spaces of Littre, and that there are no true glandular structures on corona or cervix. Behind the corona and on the mucous layer of the prepuce there are, of course, sebaceous glands, atrophied and rudimentary, and the products of these unite with some desquamated epithelium to form smegma.

The features of the urethral mucosa proper begin with the valve of Guérin, an epithelial transverse fold lying in front of the fossa navicularis, which it closes off somewhat as the aortic valve does the aorta. It is sometimes described as analogous to the lacunæ of Morgagni (so Janet³); but both its histology (its epithelium is

1. I am also indebted to Dr. Young for suggestions as to the best use to make of the material he was kind enough to put at my disposal.

2. Delbet: L'Appareil Génital de l'Homme (in Poirier and Charpy's *Traité d'Anatomie Humaine*).

3. Janet: Les Repaires Microbiens de l'Urètre, *Annales des Maladies des Organes Génito-Urinaires*, No. 19, 1901, p. 897.

squamous in type) and its embryology show that it really deserves separate consideration. For the genito-urinary it is chiefly of interest as offering resistance to the introduction of instruments; and it provides the stereotyped exception for that stereotyped rule of the textbooks about hugging the superior urethral wall in passing sounds. Just back of this peculiar valvular fold begins the familiar series of glands and lacunæ usually associated with the names of Morgagni and Littre. Of these glands it may in general be said that they are more numerous on the upper (anterior) wall than on the lower (posterior); that they are present throughout the urethra, reaching even into the bladder as the aberrant glands of Littre, and that they appear about the third month of fetal life, though their development probably continues after birth (Rubin and Cadiat). Around the prostatic portion they lie in linear series; in the membranous they are scattered without order, though Motz and Bartrina⁴ have recently called attention to the clinical importance of certain definite groups; and in the spongy portion they are abundant on the upper and numerous on the lateral surfaces. Their importance as harborers of gon-

clitoridean gland. In the urethra itself true acinous glands, though less numerous than in the male, exist throughout its extent. Of much greater interest and importance, however, are the well-known paraurethral structures to which Skene's name, by a sort of common consent, has become inseparably attached. Anatomically they are a puzzle. For a long time supposed to be the remains of Gärtner's canal, they were later explained as analogues of the urethral lacunæ; but their early appearance (they are first seen in the 65 mm. fetus), their constancy in the human female, and their general developmental history, make it probable that they are really homologues of the *prostatic glandules*—a probability pointed out by Astruc as early as 1755. The position of their orifices, the general course of their canals and their relation to urethral infections suggest quite strongly their clinical analogy to the paraurethral ducts seen in the male, whatever be their exact anatomic nature.

All these features of the male and female urethra occur with enough constancy to be considered normal. In a certain number of cases, however, additional depressions and ducts are found, whose infrequent occurrence

Fig. 1.—Diagram of paraurethral structures above the urethra. a. True dorsal fistula. (Modified from Janet.)

Fig. 2.—Diagram of paraurethral structures lateral to the urethra. a. Diaphragm formation; seen at b. reaching only partly around the urethral circumference. (Modified from Janet.)

ococci needs, of course, no mention. The crypts of Morgagni—blind depressions, having the same structure as the urethra, and not glandular at all—are found from the valve of Guérin to the membranous urethra, where they usually disappear. They are arranged in linear series and were divided by Morgagni into foramina and foraminula, to which Sappey made the somewhat superfluous addition of a middle class. In the median line and on the dorsal surface they are largest, reaching their maximum in the well-known lacuna magna of the fossa navicularis. One 27 mm. deep was reported by Cruveilhier, but usually they do not run more than 6 or 7 mm.

In the female the urethral glands have less clinical importance, in proportion as urethritis is a less troublesome disease. In the clitoris, the morphologic analogue of the glans, no true glands exist, though there is usually a mucous crypt on the posterior inferior face, where in one case Wertheimer found the opening of a true

gives them anatomic and clinical interest. They may take various forms,³ from a mere depression on the lip of the meatus to the system of small canals, giving to the glans of hypospadias a veritable moth-eaten character. In any case, they are admirably fitted to store away the elusive organisms—better fitted, of course, as their complication or the deepness of their site increases. Most frequently they occur as small openings on the lips of the meatus, which may prove to be mere depressions (Fig. 1), the mouths of culs-de-sac, or the orifices of true, and, in some cases, long canals, running in general parallel with the urethra (Fig. 2). Varied, too, are their terminations; now they lie beside the meatus as pin-point orifices or suggesting a double meatus; again they are found to open into the fossa navicularis, like a complete fistula; occasionally they burrow through one urethral wall to form a true sinus (Fig. 3a); sometimes (the subphrenal pouches) they run along in the prepuce, where they may be felt as cords, to open into the urethra, or exteriorly, or both (Fig. 3a). In other cases a transverse depression occurs in the lateral walls of the fossa

4. Motz and Bartrina: Contribution à l'Étude des Abscesses Périnéaux et des Phlegmons diffus d'Origine uréthrale, Annales des Maladies des Organes Génito-Urinaires, No. 21, Nov. 1, 1903.

navicularis and forms a diaphragm running, in certain of the patients, only partly around, and suggesting, by the combination of a vertical with a transverse meatus, the beginning of hypospadias (Fig. 2b). A true dorsal fistula may also occur, beginning just behind the glans and running back to the pubic symphysis (Fig. 1a). It is easy to see how complicated a picture combinations of these conditions may give, and this is what we actually get in hypospadias. In this deformity small median de-

Fig. 3.—a. Diagram of paraurethral structures below the urethra. b. Lateral urethral pouches. c. Guyon's case. (Modified from Janet.)

pressions on the floor of the false meatus, or of what is really the opened fossa navicularis, are very frequently seen (Figs. 3c and 4); but all sorts of lateral and median canaliculi have also been observed, all of which, except the large, pouch-like urethral auxiliaries seen in Figure 3b, were observed in a patient of Guyon's (Fig. 3c), the richness of whose penile anatomy was somewhat counterbalanced by the co-existence of monorchism. Of the unusual paraurethral gland-like structures it may then, in brief, be said:

Fig. 4.—Diagram showing conditions in Case 2. (D. C.)

1. They are more frequently seen with hypospadias than in the normal penis.
2. They may occur above, below or lateral to the urethra.
3. They are oftenest seen, when hypospadias is not present, on the lips of the meatus.
4. They vary in extent from slight depressions to long ducts.
5. They may be independent of the urethra or directly connected with its lumen.
6. They secrete a clear serous fluid.

7. They may take the form of a true fistula running either more or less parallel with the urethra or burrowing through the body of the penis to connect with its lumen.

8. The most frequent form, in hypospadias, consists of median depressions in the wall of the fossa navicularis.

9. They may be responsible for persistent infection by offering a safe haunt for organisms.

In the deeper portions of the urethra we find, of course, paraurethral structures analogous to those in front; but these, by reason of their familiarity and their right to a consideration as distinct organs rather than urethral adjuncts, do not concern us here. It may be of interest, however, to note, in connection with the question of infection of paraurethral structures, the valuable article recently published by Motz and Bartrina.⁴ These writers, from a study of a large number of pathologic specimens, have come to the somewhat novel conclusion that the conventional ideas about perineal abscess following stricture are all wrong; that Hunter was on the right track when he spoke of these conditions as primarily urethral or periurethral suppurations; that they actually start in suppuration of the "urogenital glandular thoroughfare," composed of prostate, vesicles, Lit-

Figure 5.

Fig. 5.—Showing a drop of pus exuding from infected gland in Case 2. (Drawing from photograph.)

Figure 6.

Fig. 6.—Showing extent and direction of infected gland in Case 2. a. Hypodermic needle. (Drawing from photograph.)

tré's glands, Cowper's glands, and the aberrant Cowper's or intrabulbar glands; that often, if not usually, the urethra is intact, and that "infiltration of urine" is a misnomer for what is really a diffuse bacterial phlegmon (Albarran's "acute septic edema of urinary origin"), the urine being not causative at all, but quite secondary.

CASE 1.—(S. W.) This was a case of paraurethral infection appearing during the course of a urethritis and occurring in an otherwise normal penis. The patient was first seen on Nov. 26, 1902. The history was of exposure five days previously. There had been urethral burning for three days, but the discharge had not been seen until the day before admission. The left inguinal glands were palpable. There was pus in the first glass; the second and third were clear; the patient denied all previous genitourinary trouble. Gonococci in great numbers were found in the discharge and the case was, of course, one of ordinary acute anterior gonorrhea. The usual treatment with daily irrigations was instituted, santal being given internally and the patient advised to drink copiously of water. For three weeks the course was uneventful, the urine showing no posterior involvement and the discharge gradually diminishing in amount and becoming more chronic in character.

On Sunday, December 26, patient first noticed a small papule on the glans penis near the urethral orifice. On examination I found a pin-point opening on the lips just to the left of the meatus and about opposite its middle point, surrounded by a reddened area with no accompanying induration. On squeezing, a small drop of pus exuded, rich in gonococci. A fine probe could be inserted for a distance of about 3 cm., and ran back and somewhat to the left. No other gland could be found. The urine, which on the patient's last visit had been suspicious of posterior involvement, now pointed to it plainly so that posterior irrigations of 1 to 10,000 silver nitrate were started—treatment of the urethritis from this time on taking the usual course. The infected paraurethral gland was touched with pure carbolic acid on a fine probe, a small piece of cotton was inserted between foreskin and glans and the latter cleaned with peroxid. For the next three days the paraurethral gland continued to discharge despite daily touchings with pure carbolic acid. On January 13 a very little seropurulent discharge could be squeezed from the gland, made up of disintegrated pus cells. One cell was seen containing gonococci. The next day an injection of 2 per cent. protargol was given with a blunt hypodermic needle, and on the 19th no pus could be obtained and no induration felt. On the 22d, however, a fairly large number of gonococci were found in the pus squeezed from the gland and an injection of peroxid was given. The patient was next seen on February 11, when the paraurethral infection had entirely subsided and no discharge could be squeezed from the gland. The subsequent history was the conventional story of chronic urethritis.

CASE 2.—(D. C.) This was one of paraurethritis appearing as the primary gonorrheal lesion in a patient with hypospadias. This penile deformity was an inheritance which had come through the mother's family, three maternal uncles and one maternal great uncle having had hypospadias exactly similar to the patient's. Two brothers, both dead in infancy, had no such deformity. The accompanying very small urethral orifice had, during childhood, given the patient no trouble except the inconvenience of a small urine stream. There was no history of nocturnal enuresis. At 9 years of age the patient was circumcised and the urethral orifice enlarged. Since his fourteenth year he had a good deal of urethral irritability, which began after a small dose of turpentine followed shortly afterward by dreadful strangury without hematuria. Since this time, however, when the urine is dark in color and "concentrated," urination has been accompanied by mild burning. A second attack of strangury without hematuria occurred last year subsequent to the taking of a large number of oranges. There was no history of previous genitourinary trouble. The patient was first seen January 8, giving a history of exposure on December 29 and 31, to the second of which he had reason for tracing his infection. There had been no previous exposure since October 15. Absolutely nothing was noticed until the morning of January 7, when there was some slight itching on the glans. On the night of the 7th a slightly inflamed point on the right lip of the false meatus was noticed, without any suspicion of urethral symptoms. The patient, who was a medical man, thought immediately of lues and spent a miserable night with the books of his student days. He was seen next morning in a highly nervous state, thoroughly convinced that two years of mercury and iodids lay before him. On examination the testicles were found normal, the globus major on both sides palpable, but not tender; veins of the cord enlarged. No rash, glands nor constitutional symptoms. The penis was deformed, as shown in Figure 4. On the right lip of the open fossa navicularis, about one inch from the true meatus, was a small reddened papule with no surrounding induration. No opening was to be seen, but on squeezing the papule a small drop of pus exuded (Fig. 5). A smear showed intracellular diplococci somewhat larger than gonococci and not uniformly stained. Nor was the Gram test decisive, some of the organisms decolorizing and others retaining the stain; but smears made next day on hydrocele agar gave a pure culture of gonococci with a typical Gram reaction. The urethral orifice was somewhat reddened, but there was no sign of discharge nor

had there been any burning or other sensation. In the first glass were a few flakes of pus which did not contain gonococci; second and third glasses absolutely clear. The glandular orifice was cauterized with pure carbolic acid, the glans and then the anterior urethra well washed with potassium permanganate. The patient was told to keep the glans clean with peroxid. That afternoon the gland was again cauterized, the anterior urethra washed with a mild bichlorid solution, after carefully cleaning off all infection from the glans, and an effort made toward prophylaxis of the anterior urethra, possibly not yet infected, by an instillation of a 2 per cent. protargol. Lafayette mixture and large quantities of water were ordered internally. Next day there were still shreds in the first glass and carbolic cautery for the gland with 2 per cent. protargol in the urethra was again used. This was repeated on January 10, and on January 11 protargol, 2 per cent., was injected into the infected gland with a blunt hypodermic needle (Fig. 6), the glans being afterward wrapped in cotton soaked with protargol which, owing to the deformity, could fortunately be made to cover the infected orifice without blocking the urethra. January 12 the gland was still discharging; a smear made just at the meatus showed some gonococci, but as there was no discharge beyond a small amount of mucus, and as there had been absolutely no symptoms, it was felt that these might well be accidental from the infected gland and not from an infected urethra. A few flakes of degenerate pus continued in the first glass, but no gonococci could be found in it. On January 13 there was slight enlargement and tenderness of the glands of both groins and the patient reported having had priapism, without pain or chordee, during the previous night. Next day there was a slight amount of pus at the meatus which contained gonococci. The usual treatment of the gland was continued and regular tri-daily permanganate irrigations of the anterior urethra were started (1 to 2,000, increasing to 1 to 800). On January 16 a lymphangitis running along the left side of the penis was noted. The gland was irrigated with 1 to 1,000 bichlorid and injected with 2 per cent. protargol. On January 17 pus could be squeezed from the gland in quantity and peroxid was injected with a blunt hypodermic. January 19 there was marked improvement. The urethral conditions remained the same and no gonococci could yet be found in the flakes of pus which continued in the first glass. On January 25 silver nitrate, 1 to 5,000, was substituted for permanganate in the urethral irrigations. No gonococci could be found in a smear from the urethra nor in the pus of the first glass. On January 26 the patient complained of some pain in the right hip joint and next day he was confined to bed with grip. Gonococci gradually decreased in number under treatment and on February 9 they could not be found in the gland which, four days later, was absolutely healed. Continued search for organisms in the urethra and in the few shreds which continued in the first glass failed to reveal them, but an irrigation test showed that some of the shreds had a posterior origin and posterior irrigations were started on February 11. Slight strangury followed their use, and on February 17 patient was taken with rectal pain, a severe chill, vomiting and temperature of 100 degrees. This condition lasted all night, but patient was well again next day. On February 28 examination of anterior urethra on a bougie was made and a few small indurations found. The massage caused some burning and on the night of March 2 patient had a chill with vomiting and fever. A few shreds still persisted in the first glass and a few indurations were palpable on a bougie, but there were no symptoms, and the prostatic examination showed only a few leucocytes in the secretion.

REMARKS.

This case was of interest by reason of the co-existing hypospadias,⁵ the doubtful diagnosis in its early stage,

5. I have since seen a patient with chronic urethritis and hypospadias who showed paraurethral ducts on the right lip of the fossa navicularis and just to the left of the true meatus (similar to the condition in Case 2). Both are now perfectly normal, but there is definite history of their involvement during the acute attack four years ago.

when it might easily have been taken for a beginning chancre, a small chancroid or even an infected herpetic blister; the subsidiary character of the urethritis (due largely, no doubt, to the accident of co-existing hypospadias), the presence of unusual urethral irritability, making treatment difficult, and the long persistence of gonococci in the infected duct in spite of vigorous treatment. Indeed, having once seen a paraurethral infection, one wonders not that gonorrhea is so seldom cured, but that it is ever cured; and to have observed a duct, thoroughly irrigated with 1-1,000 bichlorid and then cleaned with hydrogen peroxid, the next day discharging gonococci in numbers, makes it easy to understand why gonococcicides have been more numerous than uric acid solvents, and equally effective. The observation of such a case impresses one with the importance of the mechanical effect of irrigations in urethritis, and the relatively small importance of the specific "anti" effect of the material used. The intraurethral glands are, of course, not so deep as the paraurethral glands, but the conditions there are similar to, if not so extreme as, the rarer affections; and in them, as in the paraurethral cases, the gumming of the glandular mouth, with the formation of a sealed tube containing a pure culture of gonococci in a congenial medium, ought, it seems to me, to be combated by irrigations, the frequency of which is of more importance than their composition. In my first case the gland was quite shallow, urethritis was already present, and the treatment was, therefore, quite unimportant. In the second case, conservative measures were persisted in, consisting of irrigations, strong antiseptics and cauterization, for it seemed unwise to cause any bleeding in the presence of a blood-infecting organism; and, moreover, to have converted this cul-de-sac into a sinus open at both ends, while it would, of course, have given better drainage, would, at the same time, have brought the source of infection nearer the meatus and so have abused the very protection against urethritis which Nature had provided in the hypospadias. Operative measures have, however, been advised, and Janet⁶ has devised special instruments for the purpose, the object being either to convert the blind internal fistula into a complete fistula by incising it toward the urethra, or to open its blind end and so provide for through-and-through drainage. The method of incision was used with good results by Genouville⁶ in a case of gonorrhea involving two glands, lateral to the frenum, without a co-existing urethritis; and in a case of recurrent gonorrheal urethritis traced to a latent infection of paraurethral gland in a patient with hypospadias (the canals opening both into the urethra and externally) Raymond effected a cure by instillations of strong permanganate. In Swinburne's⁷ four cases operative treatment was avoided, application to the infected gland being relied on, together with whatever urethral treatment was indicated. One of these cases resembled my second case in several important particulars, for, though there were never any symptoms of urethritis (the infection was lodged in paraurethral meatal glands) and no cloudiness in the urine, gonococci, which, as a rule, could not be found in the urethra, occasionally appeared there, just as I was able to find them now and then without having caused as much burning as the patient often experienced in his uninfected irritable urethra and without appearing there with any consistency.

It would be interesting to compare the frequency of paraurethritis with the proportion of males having the anatomic abnormality necessary for its development. Theoretically, it is hard to conceive that such glands, when present, would ever escape infection, lying directly exposed, as they do, not only to the original source of infection, but also to the discharges of a urethritis. The strange freaks of contagion, however, are not to be theoretically prophesied with any exactness, for in my second case the urethra, to which careful prophylactic attention was paid, showed signs of at least temporary infection and continually provided the urine with shreds, while the small gland on the opposite meatal lip, though unavoidably exposed and practically untreated, escaped infection entirely. The number of gonorrheal cases with infected paraurethral glands ought to be the same as the number of gonorrheal cases with paraurethral glands to infect; and the relative rarity of paraurethritis means probably that it is frequently overlooked, and that paraurethral glands are a rather rare anatomic feature. In women in whom "gonorrheal urethritis is an almost constant manifestation of fresh infection" (Bumm⁸), Skene's ducts, occupying a site of somewhat similar exposure, are, of course, very frequently infected, causing the well-known reddened, pouting projections at the meatus; so that, whatever may be the exact anatomic analogy between the glandular structures of the male and the female lying near the urethral orifice, the frequency and importance of infections in the exposed paraurethral glands of the female lend clinical support to the otherwise theoretic presumption that the importance and frequency of their involvement in the male may have been overlooked.

SUMMARY.

The cases here reported show that:

1. Gonorrheal infection of paraurethral ducts occurs in the male, and that it may manifest itself either during the course of an ordinary urethritis or before urethral symptoms have appeared.
2. Paraurethritis may, in its very early stages, simulate inflammatory lesions of the surface of the glands, notably beginning chancre, chancroid, or herpes.
3. Paraurethral infection, once it has become established, can be destroyed only with great difficulty, the organisms reappearing in abundance even after cauterization of the duct.
4. The infection can be overcome without surgical intervention, and the continual existence of a neighboring focus of infection does not necessarily mean a bad urethral invasion if careful prophylactic measures are taken.

Clinical Report.

PAPILLOMA OF THE ASCENDING COLON UNDERGOING MALIGNANCY.

ILEO-COLOSTOMY (LATERAL IMPLANTATION); ILEOCECO-COLECTOMY; RECOVERY.*

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Papillomata occur in the colon with sufficient rarity as compared to their appearance elsewhere, e. g., in the mucous membrane of the nose, ear, larynx and genitourinary tract, to justify the report of this case.

8. Bumm: Beitrag zur Kenntniss der Gonorrhoe der weiblichen Genitalien. Archiv für Gynäkologie, 1884, xxlii, 327-349; Velt's Handbuch der Gynäkologie, vol. 1.

* Reported before the San Francisco Academy of Medicine, September, 1904.

6. Genouville and Reymond: Discussion before Asso. Franc. d'Urologie. Annales des Maladies des Organes Génito-Urinaires, No. 17, 1899, p. 1198.

7. Swinburne: Report of Cases Showing Unusual Lodgment of the Gonococcus. Journal of Cutaneous and Genito-Urinary Diseases, October, 1899.