contained large quantities of pus and broken down kidney epithelium. Cystoscopy and catheterization of ureters showed discharge of pus from both, and although we did not find bacilli tuberculosis, I still believe that the patient was suffering from tubercular kidney; as she did not improve, I advised a nephrotomy, which was done Aug. 16, 1896, as I did not think a nephrectomy would be practicable, first from the fact that both kidneys were affected; second, that in these advanced cases adhesions are so extensive that in all probability death would be the result. On dividing the tissues down to the kidney I found it firmly bound by adhesions. When the kidney was incised pus escaped in considerable quantity, together with broken down kidney substance, which macroscopically, had all the appearance of a tubercular deposit and afterward proved to be so. It is not always possible to determine specifically the true character of secretions and excretions from important organs even by careful microscopic examinations. I removed as much of the cheesy material as was possible with the curette. The hemorrhage, which was profuse, was controlled by packing the cavity with gauze.

From such a history and condition the ultimate result must be necessarily fatal by any operative procedure that might be instituted. I therefore prescribed the nuclein treatment with which I have had very satisfactory results in surgical tuberculosis, especially of the genito-urinary organs. Little could be expected in so forlorn a case; she, however, began to improve in a few days, had a better color, improved appetite, and entire subsidence of bladder symptoms, retaining urine nearly all night. She left the hospital September 9, with the wound still open and discharging. The result in this case is uncertain.

Case 3. Movable kidney; fixation by modified operation.—Miss A. Z., age 23, was referred to me, at St. Mary's Hospital, August 25, 1896, by Dr. A. H. Steinbrecher of Detroit, for operation.

Since leaving her native country, Russia, three years ago she has been an invalid. Chronic constipation, flatulence, indigestion, supra-orbital neuralgia, were the prominent symptoms, together with distress and pain in the right hypochondriac and lumbar regions. This latter symptom, for the last eleven months, has been more distressing when she was in an upright position compelling her to remain in bed most of the time. A tumor, freely movable, was discovered in the right lower hypochondriac region, and toward the median line. No difficulty was experienced in displacing from and replacing it in the normal position of the kidney. The urine was found to be normal. My experience in fixation of movable kidney has been extensive but not always with the most satisfactory results, by the usual methods advocated. The operation that I employed in this case, although original personally, I find in looking up the literature on the subject that others have resorted to a similar method. I operated August 26, 1896. The patient was placed in the semi-prone position and the space between the ribs and the ilium made prominent by a sand bag. The incision was made in a similar manner as in the previous case and the kidney freely exposed, permitting thorough inspection and palpation, drawing it well out through the opening, which was easily done on account of the existence of a long pedicle. Not discovering anything abnormal either of the kidney or the upper end of the ureter, it was placed in its proper position and the capsule divided for a distance of three inches on its convexity longitudinally, using care not to wound the cortical substance. The capsule was then separated from the kidney, for a distance of half to one inch, entirely around the cut, and the cut edges were fastened to the fasciæ and muscles, by interrupted catgut sutures, so that when the suturing was complete, there was a solidity of fixation never equaled in any other method that I have used.

It will be observed that I did not, as others have recommended, introduce a suture through the deep substance of the kidney for the purpose of holding it in position while the suturing of the capsule was being done. This is unnecessary if it has been freely liberated from its bed. The deep suture very easily cuts its way through the substance of the kidney even though gentle traction only is made by the assistant. This cutting is often followed by almost intractable hemorrhage and leaves a damaged kidney.

The wound was united by deep silkworm gut sutures, excepting at its lower end, which was left open, and the cavity packed with a long strip of gauze, in order to favor slow cicatrization and a firm attachment of the kidney. It is a question, how-

ever, whether a complete closure at once would not result as satisfactorily as though the wound was left to heal by slow granulation. This solution will be better ascertained by further experience.

This patient, August 12, is still in the hospital with the wound nearly healed and will be kept in bed until after the expiration of four weeks, when she will be permitted to get up, as by that time, it is reasonable to suppose that the adhesions will be firm enough to hold the kidney in place.

The frequent occurrence of movable kidneys, about one in every five or six women, makes the subject one of importance and much depends on the surgeon to relieve the distressing symptoms that are liable to occur. Limited displacement is quite as apt to cause suffering as those more extensive, for it has been frequently noticed that a kidney with a long pedicle produces symptoms that are but trifling. The simplicity of the method just described commends itself both as to safety and a greater possibility of permanent satisfactory results. The various methods of transfixion of the kidney with ligature are uncertain as to results and to a greater or less extent dangerous as regards its future function.

In making a choice of a route to reach the kidney, it seems to me, there should be no hesitancy in selecting the anterior, in preference to the lumbar route. The only reason would be the making of a nephrotomy for the purpose of drainage of an abscess of the kidney. Lumbar nephrotomy is much more difficult and dangerous than by the anterior route. In doing an nephrotomy for relief of a kidney, with multiple abscess, by the lumbar route, it would often be found necessary to do a nephrectomy as it is frequently impossible to empty all the abscess cavities without making a T incision. The danger from the hemorrhage is necessarily limited by full exposure of the kidney and there is less susceptibility of sepsis from a kidney where free dissection is made, than by the tearing and pulling by the lumbar route.

In conclusion, I am inclined to the following opinions:

1. That the most practical route to the kidney is anteriorly.
2. The selection of the lumbar route is largely by precedent and unnecessary timidity on the part of the surgeon.
3. A nephrectomy for tubercular kidney is not always practicable.
4. Fixation of a movable kidney by stitching its reflected capsule to the muscles is much to be preferred to that of transfixion and anchorage by stout ligatures.

ORIGINAL ARTICLES.

IMPROVED TRACHELORRHAPHY.

Read by title in the Section of Obstetrics and Diseases of Women, at the Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY AUGUSTIN H. GOELET, M.D.

PROFESSOR OF GYNECOLOGY IN THE NEW YORK SCHOOL OF CLINICAL MEDICINE, ETC.

The benefit afforded by properly performed trachelorrhaphy in appropriate cases is very generally admitted, and though the operation may be applied unnecessarily by some and may be performed incorrectly by others, upon the whole it has perhaps been productive of more good than any other operation in gynecologic surgery. The difficulty in those cases which do not yield satisfactory results lies usually in

not removing a sufficient amount of the diseased tissue of the cervix, or in removing too much on the outer or vaginal margin and not enough on the inner margin or that next the canal, thus leaving a wedge of tissue which prevents proper coaptation of the flaps and puts too much strain on the sutures. This is partly because the denudation is done with scissors, which can seldom be made to cut through such dense tissue where it is desired to cut. They invariably slip, and considerable trimming is necessary afterward to get the flaps in proper condition for the application of the sutures. This consumes a great deal of time and is a serious disadvantage, as well as the fact that the scissors will frequently cut where it is not desired to cut and too much or too little tissue is removed.

Another serious objection to the ordinary trachelorrhaphy is the great difficulty of inserting the sutures, because of the density of the tissue and the awkward position, for the operator, of the parts to be united. I venture to assert that any operator would rather do an abdominal section than one of these tedious and fatiguing cervix operations. It is therefore, because I believe I have simplified the operation and made it quicker and easier, that I have been encouraged to describe the method which I have employed with so much satisfaction.

In the first place, the denudation is done with a knife especially designed for the purpose, which consists of a short two-edged blade set at an obtuse angle to the shaft and handle (see Fig. 1). I am well aware

FIGURE 1.

that several knives have been designed for this purpose before, but so far as I know none have been made upon the principle of this one, and they have not proven satisfactory else they would have been more used. These knives are made in two sizes so as to be useful in all cases, since the cervix in some instances is thick and the flaps deep, and in other thin by compression. The method of using the knife is to seize one angle of the laceration with a tenaculum and transfix it with the knife, which is then drawn forward, making a clean cut and denuding the flap out to the lower margin of the cervix with one stroke. It is then inserted again on the other side and the opposite flap denuded in the same manner. If now the tissue which is to be removed remains attached at the angle, a reverse movement of the knife severs it with its other cutting edge. Besides the greater ease of denuding with the knife, there is another advantage, namely, it can be inserted and held in such manner as to avoid leaving a wedge of tissue on the inner edge of the denuded surface.

In the next place, a special needle is employed for inserting the sutures. I have abandoned the straight needles and the needles with slight bend near the point, and use a nearly half-curved, round needle, much smaller in diameter than the needles usually employed in this operation, with a flattened spear point. These needles can be inserted into the hardest cervix with the greatest ease. I have never yet broken one of these needles, and find that they can be inserted

with very much less force than any other needles which I have used.

Next I use for suture material either silver wire or silkworm gut which has been especially prepared so as to render it pliable and easily tied. I do not think catgut, silk, or any other suture which is not imperious should be used in plastic work upon the cervix. The silkworm gut is prepared in this manner: Each strand is carefully wiped off with a pledget of gauze or cotton saturated with ether, and a number of strands are put into a glass tube of suitable length, the ends being stoppered with corks. The tube is then filled with a 2 per cent. solution of lysol, one end is left uncorked, and it is placed in a sterilizer with the uncorked end above the level of the water and it is boiled for half an hour. The lysol solution makes the silkworm gut very pliable, so it can be tied as easily as catgut, and in addition it renders it thoroughly aseptic.

The operation is further facilitated by placing the patient in the lithotomy position.

Technique of the operation.—It is of the greatest importance that the patient be carefully prepared for the operation. For two weeks every second day a tampon of prepared wool soaked in glycerin is placed against the cervix to deplete and soften it. This is removed after twenty-four hours and a copious douche of hot water is projected against the cervix and vaginal vault by means of a syringe giving an interrupted flow. At each sitting for the introduction of the glycerin tampon any cysts of the Nabothian glands detected on the cervix are punctured and emptied.

Two days previous to the operation the patient is given a calomel and soda purge and she is placed upon a restricted diet. The morning of the operation she is given a saline cathartic, the vulva is shaved and washed in a 1 per cent. solution of lysol and she is given a vaginal douche of lysol solution also.

When anesthetized, she is placed upon the operating-table in the lithotomy position, and the vagina is thoroughly scrubbed with a 1 per cent. solution of lysol and afterward irrigated with a solution of bichlorid, 1 to 2,000. A speculum is then inserted and a ligature is passed through each lip of the cervix and tied with a long loop, which is held by an assistant, usually the nurse, who also holds the speculum and who stands at the left of the operator. The cervix at the angle on one side (the left first) is seized with a tenaculum and the knife (shown in Fig. 1) is made to transfix the cervix on one side of the angle. This done, the tenaculum is loosened and reinserted in the lip near the lower border near where the line of denudation is to terminate on that side, and the knife is drawn forward, making the denudation with one stroke. The knife is again inserted at the angle on the same side of the cervix, but on the opposite flap, and it is denuded in the same manner. If the tissue to be removed remains attached at the angle, a few strokes upward with the other cutting edge of the knife severs it so it can be removed. The same thing is repeated on the other side.

In making the denudation the knife is held at such an angle that rather more tissue is taken from the inner than from the outer surface, so as to remove the ridge along the margin of the new canal of the cervix, which if left would prevent satisfactory coaptation of the flaps. In denuding with scissors this nearly always remains and must be carefully trimmed off afterward, considerable time being consumed in doing so. The sutures of silkworm gut are inserted by means

of the special curved needles described above, being threaded with a carrying thread. It is preferable to insert the outer or lower suture first, so as to get perfect coaptation of the edges of the flaps. The sutures are brought out on the margin of the new canal upon the mucous surface and not upon the denuded surface. As each suture is passed it is clamped by pressure forceps and handed to an assistant to hold. All the sutures on both sides (three on each side being usually sufficient) are inserted before any are tied. Then the flaps are separated, and they are thoroughly irrigated with a solution of bichlorid 1 to 2,000 or 1 per cent. solution of lysol. The sutures are tied from without inward, or from below upward, tying that at the angle last. The ends are cut about an half an inch from the knot, the vagina is washed out, and the patient is removed from the operating table to the bed. No dressing is applied to the cervix or vagina.

108 West 73d Street.

CIRCUMCISION NOT NECESSARY IN YOUNG CHILDREN.

Read in the Section on Diseases of Children, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY W. B. PARKS, M.D.

ATLANTA, GA.

I do not propose to discuss the theory offered by the laity and some doctors that circumcision is necessary from a sanitary standpoint, nor do I propose to criticise a Jewish custom or change a church ordinance, but I desire to show the etiology of a long or abnormal phimosed prepuce in male children. I desire also to show how this abnormal prepuce can be shortened without circumcision. We will first notice these long prepuces found in children. The cause can be found by the following examination: If we retract the prepuce as far as we can without using any violent manipulations, we find at the juncture of the mucous membrane with the true skin a constricted band that has at some time undergone an inflammatory process; this constricted band plays just in front of glans penis, the action of which pulls down and forward resulting in a mechanical action, lengthening the prepuce. This mechanical force that pulls downward and forward is very slight, yet, if we will remember how loose the true skin is that covers the whole organ, the least traction together with a little aid from gravitation is enough to make this long abnormal prepuce. What causes this constricted band which has at some time undergone an inflammatory process. No doubt it is caused from improper adjustment of the cloth or napkin that is constantly used on babies which is intended to keep them dry, but keeps them wet, ordinarily, with careless nurses. This napkin steeped in hot urine, with the little organ imbedded in its fold or pushed on either side with undue force will be quite sufficient to set up an irritation causing the ordinary adhesions of the prepuce to the glans penis and the constricted band.

Treatment without circumcision consists in the plans laid down in the standard works on diseases of children, Starr, Keating and others, which operation is dilating prepuce, breaking up the constricted band. Much care must be observed in dilating this constricted band. A small sized uterine dilator or ordinary dressing forceps is a very good improvised instrument, but the dilation must not be too rapid. You must dilate every second day and as much as the

child can bear each time, leaving the instrument in the stretched prepuce from three to five minutes at each operation. If the operator should use rapid dilation he would find on the second day much inflammation, and, while waiting for the traumatism to subside the constricted band and phimosis would be aggravated and this is the reason why so many can not see what they accomplish by this dilating process. When you succeed in relieving this constriction in a dilated state, the prepuce will gradually shorten until it is in the normal position. To complete this operation it takes from twelve to fourteen days. I have used very successfully in the after-treatment, or when the adhesions are broken up, campho-phenique with equal parts of olive oil. I inject this under the prepuce with a common rubber ear syringe, lubricating and distending prepuce, at the same time allaying irritation and preventing a return of the adhesions.

This constricted band was brought to my notice in the treatment of a young man for the ordinary specific urethritis. After making the first prescription for him he passed from under my observation for about three weeks on his summer vacation. On his return instead of prepuce showing one-third of glans penis (which I noted when he applied for first treatment) it had elongated almost an inch. On attempting to retract the prepuce I found this constricted band at the juncture of the mucous membrane with true skin, and retraction was a physical impossibility. After waiting for the inflammation to subside I practiced this dilating process until band was broken up, and in a few days prepuce had retracted and, instead of showing one-third of glans penis, it showed fully two-thirds, convincing me that when we have an abnormally long phimosed prepuce there is an abnormal cause and this can be removed by a very simple operation. By relieving this condition without the knife you save the patient from mutilation, besides you protect a gland for which nature has provided a covering. I saw an article in the *New York Medical Journal* a few years ago advancing this theory: That instead of having a congenital stricture of meatus it was caused from an exposed gland robbing it of its natural moisture that the gland secreted and, thereby atrophying the tissue, also contracting the caliber of meatus.

The following are a few of the fifty successful cases treated within the last two years:

Case 1.—A boy aged 10 years, long prepuce with adhesions. Commenced treatment July 3, 1894; broke up adhesions after inflammatory symptoms had subsided; practiced dilating process every second day. On the 14th day constricted band was completely broken up with no inflammatory action and could notice a perceptible shortening of prepuce. Saw patient twelve months after operation, prepuce had shortened to normal length.

Case 2.—A boy 4 years of age, long prepuce with adhesions with the usual nervous symptoms; broke up adhesions with considerable inflammation to prepuce, used distention of prepuce with carbolized oil for six days, commenced dilating six days after adhesions were broken up; dismissed patient eighteen days after first treatment without any noticeable shortening of prepuce. Saw patient at intervals from one to three months; at the expiration of one year prepuce was shortened to normal length. This patient, however, had one convulsion two months after operation.

Case 3.—A boy aged 5 years, long prepuce. Commenced treatment Aug. 2, 1894; broke up adhesions; removed considerable amount of smegma; commenced dilation second day after first operation; dilated every second day for fourteen treatments. Constricted band relieved. Saw patient one year afterward, prepuce normal length.

This operation will not at all apply to that class of