(6) Flavine appears to have given better results than any other form of local treatment used here.

(7) It is advisable to administer diphtheria antitoxin in cases of diphtheria in wounds; here the importance of giving a sensitizing dose in cases of war wounds due to their having received previous injections of serum is emphasized. If this rule is not followed severe anaphylactic reactions will occur in some cases.

A FEW UROLOGICAL CASES ILLUSTRATING WHAT CAN BE DONE WITH SPECIAL APPLIANCES.

By G. S. Gordon, M.D., C.M.McGill, F.A.C.S., Captain, C.A.M.C., Officer-in-Charge G.U. Surgery, XI Canadian General Hospital.

Exploratory operation is now seldom warranted in urological surgery. Such mutilation is not often necessary, for diagnosis can be made much more accurately in other ways. Moreover, quite a number of minor operative procedures can be carried out with appropriate armamentarium and will give better results, as curative measures, than corresponding major operations.

The following case reports, culled from the urological data of the XI Canadian General Hospital, are illustrative of these broad statements.

Janet's Filiforms and Followers.

Very few cases of stricture of the urethra are sent to this clinic unless the ordinary type of sound will not pass. Yet we have found urethrotomy seldom required, and gradual dilatation is the procedure of choice. The difficulty is to get started. One of the most useful instruments we have is Janet's filiform, in which is a wire, bendable at the tip, and at the other end a screw to attach it to metal followers of all calibres. Once such a filiform is passed, the follower takes on the dilatation with assurance against old or new false passages.

Lieutenant X, 43 years old, R.A.M.C., had V.D.G. twenty-one years ago. Ten years later the stream was notably smaller than normal. In September, 1915, he had chills, fever, and his water could be passed only as a dribble. In January, 1916, suprapubic cystotomy and internal urethrotomy were done, followed in five days by external urethrotomy for secondary hæmorrhage. The suprapubic wound closed, but the perineal remained open. In September, 1916, under chloroform, sounds were passed. Double epididymitis followed, and the perineal fistula remained the same. April 6, 1917, he was sent by M.B. to this department. About one-third of his urine passed through his fistula. A Lister sound would not track all the way into the bladder; the filiform passed, however, and gradual dilatation began. On April 16, 1917, a 30 French follower passed. This calibre was maintained by passing the follower every third day, and on May 1, 1917, the fistula ceased to leak. It stayed closed till October, 1917, with dilatation once a fortnight, but then broke open again and a funnel-shaped diverticulum from the posterior urethra, lined with urethral epithelium and surrounded by dense scar tissue, was dissected out. Convalescence was uneventful, and the perinæum is now solid, but the calibre of his stricture still has to be maintained by an occasional full-sized sound; and, as the roof of the posterior urethra has been cut and furnishes no guide to the internal sphincter, the only safe dilator is the Janet follower.

Cystoscopic Diagnosis—Young's Punch.

Almost all our patients are young men, and so Young's punch comes in useful, only for fibrous median bars resulting from inflammation about the outlet of the bladder. In certain cases it is useful not only to remove obstructing tissue, but also to open up what remains of such tissue to drainage—as if one cut off a slice instead of incised.

Private G., 39 years old, has had attacks of marked frequency of urination, hypogastric pain on over-holding urine, and increased pain during the act. The stream required forcing, and was small and dribbly. For two years he had been thus afflicted. He enlisted a year ago, and in France in May, 1917, during an acute exacerbation, bilateral ache across the kidneys with intimate copious hæmaturia supervened, which kept him four days at Rouen. His M.H.S. says he arrived at St. Bartholomew's suffering from "great frequency of urination and hæmaturia—staphylococci present, cystoscopy showed no growth or stones—not improved with treatment." He was in various hospitals from May, 1917, to October 19, 1917. His notes say "No improvement." He was transferred to this hospital on the later date when his urine was cloudy amber, acid of a specific gravity of 1024, and contained albumin ++, polymorphonuclears +, red blood cells +, G.U. system negative to inspection, and palpation throughout, except that both vasa deferentia seemed larger and denser than normal near either epididymis; the prostate seemed slightly adherent to the left side of the pelvis, and there was marked fulness of the median sulcus at the base of the prostate. To cystoscopy there was four ounces of residual urine. The bladder was coarsely and deeply trabeculated. Under the trigone, more marked to the left, were some large tortuous veins. The vesical outlet was raised by a distinct median bar. Wassermann, Schwarz (complement fixation), and O.T. tests were negative, and there was no suggestive history. On November 16, 1917, the median bar was removed under chloroform with an imperfect Young's punch through the unopened urethra. Laboratory report on the specimen removed. "Prostatic tissue not definitely adenomatous. Round cell foci of inflammation under epithelium. Numerous blood spaces almost amounting to hæmangioma."

December 6, 1917, cystoscopy; vesical outlet almost level with bladder floor. Some lumpiness of sphincter to the left. He felt so well he would like to be discharged to lines. Sent to convalescent home with good stream, but pollakiuria still.

February 12, 1918, pollakiuria still. Stream is smaller, he says, but not markedly so. Sent to Canada for further care.

Diagnosis of Stone by Wax-tipped Catheter. Ureteral Meatotomy.

Captain M. had painless hæmaturia in 1915. In October, 1916, after five weeks of pleurisy at Etaples, he was invalided to Moore Barracks Hospital for pleurisy. There the urinary tract seems to have become suspect. The urine contained microscopic blood and occasionally hyaline casts. Pulse, temperature, and respirations were normal. The X-ray revealed a normal alimentary tract with bismuth, but failed to show any opacity suggestive of urinary calculus.

Over a year later, in January, 1918, he was seized with his first attack of frank renal colic. There was pain in the left groin, which, however, did not radiate in any direction, tenderness in left scrotal sac, vomiting, sweating, undue frequency of urination, and intimate hæmaturia. This passed, and he felt "fit" for a week or so, when a second attack, similar in all respects, except that the pain was located lower in the groin, but also in the left posterior renal area as well. He was in the middle of his third attack when sent to this clinic March 1, 1918. This differed in no way from the two previous, except for the location of his pain, which for the third time changed position, and was in the left posterior renal region only. His family and personal history suggested nothing pertinent. His urine contained a few red blood cells, but also a few polymorphonuclear cells. He gave no reaction (local, focal, temperature, or general) to O.T. 1/10 mg. The X-ray report was negative to suggestive opacities. On March 20, 1918, cystoscopy was done. The bladder was found normal, ureteral spurts normal. A wax-tipped catheter, however, went up the left ureter only 3 cm., and on withdrawal (after rotating it on its axis) well-defined scratches were found. The old X-ray plates, on second study, were suggestive, and another plate, taken with a very small diaphragm, quite definitely revealed an opacity at the site indicated.

March 30, 1918.—Through a cystoscope the left ureteral orifice was examined again; the stone was seen bulging the ureter, and a specialist's scissors passed through the cystoscope was used to do a ureteral meatotomy. Next day, without further symptoms, an irregularly oval, brittle, crystalline, pure oxalate stone passed per urethram, and the patient was discharged to convalescent hospital.