4. *Cutting off the Gastro-enterostomy, and Restoration of the Natural Channel.*—Where there is no pyloric stenosis, as in Case 2, this is the most satisfactory operation of all. Even where a plastic operation is necessary the ultimate outlook is fairly good. It is essential that the original ulcer, if still present, should be excised, and if this had been done in Case 3 I think that we should have avoided the stenosis which has gradually come on. The reason I did not do this was that the original ulcer was a perforating one, and the adhesions round the pylorus and duodenum were very dense.

Conclusions.

The conclusions one has arrived at are:

1. That operations for gastric and duodenal ulcers are to be regarded only as incidents in the treatment, and that diet, etc., and medical treatment should be persisted in after the operation for a long period.
2. That in addition to care in the technique it is preferable to use an absorbable suture material.
3. That any possible primary cause for the ulceration, such as an inflamed appendix or gall bladder, should be sought for, and if found removed.
4. That it is a mistake to occlude or otherwise deform the pylorus. This is unnecessary for the cure of the ulcer and deprives us of our best line of retreat should secondary ulcers form.
5. That when secondary ulcers have formed it is best to cut off the gastro-enterostomy and restore the natural channel if necessary by a plastic operation. The original ulcer, if still present, should be excised at the same time.
6. Where this is impossible and a fresh anastomosis is necessary operations of the Y type should be avoided.
7. Care is required after the operation for a long time.
8. That when one is operating for a perforated ulcer it is better to avoid gastro-enterostomy if possible, as so many of these cases recover completely without any recurrence of symptoms after suture of the perforation.

I have only touched on the subject of simple uncomplicated secondary ulcer to-night. The consideration of the various complications and their treatment would be much too wide a subject for the time at my disposal, and I have had none of these difficult cases under my care.

PROSTATECTOMY IN A CASE OF DIABETES INSIPIDUS.

BY

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AND

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THE performance of prostatectomy in a case of diabetes insipidus does not appear to have been previously noted, and the presence of giant bladder, without evidence of renal or vesicle failure, is of interest.

Clinical History.

The patient, a grocer, aged 55, has had diabetes insipidus for at least twenty years. Probably he has had the condition longer, for twenty-five years ago he noticed that he was passing an unusually large amount of urine and that he was more thirsty. There is nothing in his past history to indicate the cause of the disease. He has led a very regular life, and his only excess has been bicycling. From the age of 18 to 35 he was accustomed to ride very long distances, often doing one hundred miles in a day, and riding all the test hills.

During the last twenty-five years the amount of urine passed has varied between 9 and 15 pints, the average amount in the twenty-four hours being 11 to 12 pints. He has suffered no discomfort beyond the inconvenience of having to micturate frequently and the excessive thirst. At one time he used to drink beer and whisky, but he found he required such a large amount of fluid that he soon gave up alcohol, and for many years has taken only plain water. In cold weather he drinks it warm, as he finds that this quenches his thirst more readily.

His general health is good, and he leads an energetic life. His weight has not varied for many years. He usually has a furred tongue, and is inclined to constipation. His blood pressure is normal (130 mm. Hg), but his pulse is always

rapid (90 to 100). He has had various spells of treatment, but no drug has had any effect in reducing the amount of urine. After a course of ergot he developed boils. Restriction of fluid merely increases the thirst, so for many years he has taken a glass of water, day and night, whenever he felt the desire; and, as his work is in his own shop, he has been able to carry on in spite of the frequent calls to pass water. He drinks over two gallons a day. The urine has for many years been pale and watery, acid in reaction, and with a specific gravity of 1002 to 1005. Occasionally there has been a faint trace of albumin, but never any sugar.

During the winter 1920-21 he first noticed pain in the suprapubic region, and at the end of the penis, on passing water, with increasing frequency and some hesitation. As the weather got warmer this trouble diminished, but he still had occasional pain in the penis, and felt that he was not emptying his bladder completely. Throughout the summer he was practically free from pain, but in the late autumn of 1921 the difficulty of emptying the bladder returned, with resulting increased frequency and pain. By the end of the winter the trouble had so much increased that he was not getting sufficient sleep, and was becoming quite worn out. The urine had for some time contained staphylococci and coliform bacilli, but as neither drugs nor vaccines improved the condition removal of the prostate was decided on.

Surgical Report.

Mr. Kidd's report is as follows:

"The patient was referred to me by Dr. Alexander on March 1st, 1922. He stated that for the last three months he had had great pain in the bladder region, a constant desire to pass water, which took a long time to come, and then only came in dribbles. He was in pain all the time; he had to get up at least eight times during the night; in fact, his condition was becoming unbearable.

"Abdominal examination showed that he had a giant bladder well up to the umbilicus. Rectal examination revealed considerable enlargement of the prostate gland of an adenomatous type. The urethroscope showed no stricture present. The Wassermann reaction was negative. X-ray examination showed no stone present, but a picture taken of the skull revealed hollowing and excavation of the pituitary fossa, suggesting that there was a cystic enlargement of the pituitary gland. . . . Ten to 12 pints of urine were passed in the twenty-four hours, which was very pale, specific gravity 1001, and contained no pus, albumin, nor sugar.

"I looked upon the giant bladder as the result of the diabetes insipidus, and not as a sign of advanced vesical and renal failure, as there were no clinical signs whatever of renal failure. Abandoning my usual custom in the case of giant bladder, I therefore resolved to pass a catheter for the purpose of renal function tests. Indigo injected into a muscle of the leg came through the kidneys in eight minutes; and in less than half an hour it had stained the urine a deep blue colour. This shows the value of time tests of renal function. The dilute urine made no difference whatever to the indigo test. The blood urea was 10.7 mg. per 100 c.cm. of blood, a very low quantity (the normal being 15 to 40 mg. to 100 c.cm. of blood). The exact significance of this I do not know, but the observation appears to be of interest.

"Urea concentration test = 1st hour—730 c.cm. of urine came through the catheter, specific gravity 1003, urea 0.4 per cent., total urea 2.92 grams; 2nd hour—770 c.cm. urine, specific gravity 1003, urea 0.4 per cent., total urea 2.98 grams.

"Cystoscopy showed a very definite but quite small middle lobe and two small lateral lobes projecting upwards into the bladder, with marked trabeculation of the bladder.

"Operation was performed in one stage on March 10th, 1922. The prostate was enucleated. It consisted of two small lateral lobes and a small valvular middle lobe.

"After the operation the patient made 11 to 13 pints of urine a day, and it had to be collected in two large slop pails. He was passing all his urine naturally on the seventeenth day and went home soundly healed on the twenty-seventh day, passing 11 pints of urine freely with a good stream and without pain."

Five months after the operation the patient's condition is altogether satisfactory; his general health is very good, and he is free from all pain. He passes his urine with a good stream, though he states that towards the end of micturition he feels as if he had to use his abdominal muscles to help. He has, for him, good nights, only having to get up two or three times. In the day he can hold his water two and a half to three hours: he still passes 10 to 12 pints of clear watery urine in the twenty-four hours.