Nov. 27th. He slept well, and had very little pain. Tongue clean; pulse quiet; skin cool. There was not the slightest tinge of redness about the wound. A little pus was oozing from one corner. Two sutures were removed.

Nov. 28th. He was seized with a severe attack of rheumatism, which continued for above a fortnight. There was very considerable discharge from the wound throughout the time that this continued, and for some time afterwards. He still remains under treatment (January 1865).

Original Communications.

FIVE CASES ILLUSTRATING THE ADVANCES OF MR. BARNARD HOLT'S PLAN OF TREATMENT IN STRICTURE OF THE URETHRA.

By WILLIAM NEWMAN, M.D. Lond., St. Martin's, Stamford.

CASE I. F. H., aged 53, had had stricture upwards of thirty years. He had been treated by dilatation up to Nos. 6 and 7 on more than one occasion; but the condition had always returned. For the past four or five years nothing had been done; and the symptoms were daily becoming more urgent. He passed urine in a twisted corkscrew stream, and with a good deal of forcing. He could rarely retain it in the day for more than two hours at a time; and had for years been obliged to rise and pass urine two or three times every night. Always, after micturition, he had the feeling that the bladder was not emptied.

Nov. 16th, 1863, 10 A.M. It was with some difficulty that I passed a No. 2 silver catheter into the bladder. On withdrawing this, I passed Mr. Holt's instrument through one long stricture anterior to the bulb, and then through a second, even more tight, further on in the canal. Urine at once came, *guttatim*, through the hollow guide; and I split both strictures by passing down a No. 9 tube on the guide. This required some very positive force. There was very little bleeding. I introduced a No. 8 silver catheter easily enough, and drew off about six ounces of urine, and then sent the patient to bed.

He was ordered to have every four hours, a draught containing two grains of quinine with ten minims of tincture of opium.

1 P.M. There was a little smarting; no rigor. He had no wish as yet to pass urine.

2 P.M. He passed six ounces of urine with some blood, and two or three small moulded clots; there was some smarting.

8 P.M. He had passed urine twice again, and was quite comfortable.

Nov. 17th. He was very fairly well; was up twice last night. He had no need to pass urine oftener than once in four hours. I passed a No. 8 catheter with some little difficulty; the operation was followed by a little blood.

Nov. 19th. He was very well; had lost the sense of weight and discomfort about the lower part of the abdomen, and felt now that the bladder was emptied by each act of micturition. I passed No. 8 very easily.

Nov. 21st. The patient maintained that the anterior stricture had not been thoroughly split. There was some distinct resistance to the stream of urine about three or four inches from the orifice; so, at his own request, I again passed the dilator and ran down

a No. 10 tube; it was followed by some little bleeding. I drew off six ounces or more of urine at once by No. 8 catheter.

Nov. 23rd. There had been no discomfort or trouble; and the stream of urine was decidedly improved. A No. 10 catheter passed very well. He was told to pass a No. 10 steel sound about twice a week.

Dec. 15th. He was not at all disturbed in the night; passed urine three or four times in the day without straining, and with thorough sensation of relief. He could pass No. 10 without difficulty. There was sometimes a little resistance at the seat of the front stricture.

Four months afterwards, this patient remained quite well.

CASE II. E. W., aged 45, nail-maker, had had stricture for the past ten years, consequent on gonorrhoea. He had been once under surgical care for some months, and a No. 10 catheter was reached after very many introductions; but the condition returned, and he was now as bad as ever. He was obliged to get up three or four times every night, and had much straining to get rid even of a small quantity of urine. He was obliged to make water every two or three hours through the day.

Jan. 5th, 1864. I could not succeed, even after employing the warm bath and giving some opium, in passing No. 2 silver catheter through the stricture. The urethra was riddled with false passages; and into one of these and for some distance, rather on the left side, the point of the catheter constantly slipped.

Jan. 6th. After some little time I managed to pass the dilator through one stricture anterior to the bulb; and by this the instrument was so closely gripped that I could not move it onwards, and had difficulty in even partially withdrawing it. Under these circumstances, and guided by a case recorded in Mr. Holt's book *On Immediate Treatment of Stricture of the Urethra* (2nd Edition, Pp. 108-109), I did not hesitate to split the stricture by passing down on the guide No. 9 tube; but not even then could I carry on the dilator in the bladder through a second very evident and tight stricture. I sent the man to bed, and gave him some quinine and opium.

Jan. 7th. He declared himself to be in some measure relieved by the operation. He was not up once in the night to pass urine; this had not been the case before for years.

Jan. 11th. Yesterday and to-day, I was able to pass a No. 2 solid steel sound fairly over the site of the first, and also through the second stricture, into the bladder. The calls to pass urine were not so frequent; and the stream was rather larger than he had lately found it to be. He had had no rigors, nor local suffering.

Jan. 13th. I passed No. 3 catheter, and on its withdrawal, No. 4 steel sound, fairly into the bladder.

Jan. 14th. I introduced Mr. Holt's instrument, and split both strictures thoroughly by running down between the blades a No. 10 tube. I withdrew the dilator, and then passed No. 8 silver catheter; but the eye was soon blocked with clot, and urine would not flow through it. When the catheter was removed, the patient, unable to restrain the desire, passed *immediately* about three ounces of urine with some quantity of blood; and about twenty minutes later (after I had left the room), he passed eight ounces more. He was ordered to take the quinine and opium as usual.

Jan. 15th. He said he was very well; had not had any rigor, and did not pass urine very frequently. He was not disturbed once in the night.

Jan. 16th. I passed readily into the bladder a No. 8 steel sound.

Jan. 19th. He passed urine about three times a

day in very fair stream—clear of his person; and was not disturbed in the night. I passed No. 10 catheter readily enough.

Jan. 23rd. He went home; and was ordered to pass No. 10 catheter twice a week.

Feb. 22nd. I had this report by letter:—"I never was better in my life; make a large stream of water, and can keep it all night without disturbing me at all. I make water three or four times a day, and can pass the instrument as often as I want it."

In August, I heard that he was and had remained thoroughly well.

CASE III. J. C., a shoemaker, aged 42, had gonorrhœa nearly twenty years ago, twice over. For the last six years he had had excessive trouble in micturition; was obliged to get out of bed three or four times every night, and passed urine almost every hour throughout the day. The urine dribbled away in a very small stream. He was a worn, thin, haggard man. No instrument had ever been passed fairly into the bladder.

Jan. 13th, 1864. After some trouble I passed No. 1 solid sound into the bladder, through one long and tight stricture beyond the bulb.

Jan. 15th. A No. 3 solid sound was passed through the stricture.

Jan. 16th. He passed urine an hour before I saw him. I succeeded in passing No. 3 silver catheter into the bladder, and drew off fully twelve ounces of turbid and high coloured urine. Having tied the catheter in, I left him for the night.

Jan. 17th, 4 A.M. The catheter slipped out, and thereupon he passed a quantity of urine in a larger stream than he had done for years.

9 A.M. I introduced the catheter again, and tied it in more securely.

9 P.M. I withdrew the catheter, and passed easily enough Mr. Holt's instrument, splitting the stricture thoroughly with No. 10 tube; there was rather free hæmorrhage afterwards. I emptied the bladder by passing No. 8 catheter. He was ordered to take quinine and opium.

Jan. 19th. He slept without waking from 10 P.M. to 6 A.M. this morning. He had not had so long a sleep for years. There was no pain, and no shivering. On waking, he passed urine in some quantity, and with little smarting.

Jan. 20th. I passed No. 9 steel sound; some little hæmorrhage followed its withdrawal. No subsequent trouble occurred, and on February 25th, I had this report from a surgeon near his home:—"J. C. passes No. 9 easily. He does not need to make water more frequently than other people."

In the summer I saw him again; he was looking far better; had gained a stone in weight, and had no trouble whatever in making water. The instrument (No. 9) was passed at intervals by himself very easily.

CASE IV. J. L., aged 40, had had stricture for eight or ten years back, but the symptoms had not until lately been very urgent; he had had once or twice almost complete retention of urine, and on these occasions ordinary means with the warm bath, etc., had relieved him. No instrument could then be passed into the bladder.

I first saw him in September 1864, and in some few days succeeded in passing a No. 2 catheter into the bladder, and emptying it of six or eight ounces of residual urine. There was a tight stricture anterior to the bulb, and through this in the first instance, I could only succeed in passing a very fine rather long probe. A very smart attack of stricture-fever and general constitutional disturbance followed the introduction of the catheter, so for some days he was left quite alone.

Oct. 10th. I succeeded in passing No. 2 catheter through the stricture; but, warned by prior disturbance, I did not carry it on into the bladder.

Oct. 12th, 9 A.M. The instrument (Mr. Holt's) was passed after a little trouble through the stricture; urine flowed through the canal of the guide, so I split the stricture at once with No. 10 tube. To do this effectually a good deal of force was needed. Ten ounces of clear urine were withdrawn at once by the No. 8 silver catheter. Quinine was given as usual.

1 P.M. He felt very well; had no shivering. I passed No. 8 catheter; six ounces of urine were withdrawn.

8 P.M. I passed No. 8 catheter. He was very well.

Oct. 13th, 8 A.M. He had slept very fairly well; he had no great desire to pass urine. I passed No. 8 catheter. He passed urine afterwards twice during the day in a very fair stream, and with very little smarting.

Oct. 16th. I passed No. 9 solid steel sound very readily; and he could also pass it for himself. He went home to-day, with full directions as to the use of the sound.

Nov. 4th. He came to see me, and reported himself quite well.

Jan. 7th, 1865. I met him accidentally; he had had no trouble whatever; passed urine as well as ever, and continued to introduce the instrument for himself once a week.

CASE V. *Stricture of Urethra Twenty Years; Absolute Retention; Puncture of Bladder per Rectum; Subsequent Splitting of Stricture.* H. S., aged 40, looking much older, thin and haggard, came to me with great trouble in micturition on October 11th, 1864. He had had stricture for twenty years; it was treated eight years ago, and for a time successfully, by dilatation; but he was now constantly wanting to pass urine. He was often up in the night, and could only void urine in a very irregular small stream or *guttatim*.

For the next week, I made several attempts to introduce an instrument (No. 1) through a very tight stricture in the membranous part of the urethra, and could not succeed. Then suddenly, after two nights of hard work and exposure at a cattle-fair, he found himself quite unable to pass urine.

Nov. 18th. I could not, with or without chloroform, introduce an instrument into the bladder. Opium in full doses and warm baths were of no avail; and the bladder was distended up to the umbilicus.

At 9 P.M., after consultation with a surgical friend, I punctured the bladder *per rectum* with the usual long trocar and cannula. More than three pints of urine were caught, and some escaped into the bed. I then tied the cannula in.

Nov. 19th, 11 A.M. Pulse 84. He was very comfortable; had had some sleep. Urine ran away very well. He had had no pain; there was no constitutional disturbance.

9 P.M. He was very well; was rather cramped from lying on his back, but had no pain. A good quantity of urine had come away. Pulse 70; no feverishness; no headache.

Nov. 20th. He complained sadly of being wet; and the skin of the back and hips was beginning to look red from soaking with urine; I therefore contrived this plan. I plugged the cannula with a piece of a No. 8 gum-elastic catheter, and on this drew the end of some small bore (one-sixth of an inch) India-rubber tubing, so that through the tubing, two feet or more long, all the urine was carried into a basin placed on the floor at the side of the bed; then, to prevent the flattening of the tube as it ran under the left thigh, I got a common brick circular drain-tile, wrapped this in flannel, and placed it under the left thigh,

which was just slightly bent. Through the canal of the drain-tile, I then carried the piece of India-rubber tubing to the receptacle on the floor.

Nov. 21st. The arrangement answered admirably. The man was very well; he slept, took food, and had no complaint.

Nov. 22nd, 4 p.m. He complained to-day of soreness about the abdomen. There was resonance down to the upper edge of the os pubis, but pressure made him flinch; so I thought it best to withdraw the cannula (it had been in the bladder now four days less five hours), and left him without attempting to pass any instrument *per urethram*.

Nov. 23rd. I failed in an attempt to pass a Thompson's probe-pointed catheter through the stricture. About eight ounces of urine had run away in drops, or in a small stream, *per urethram*; and there was more than a suspicion, almost a certainty, of some leakage *per rectum*. The bladder was slightly distended; there was a line of dulness above the pubes. He felt very well in health.

Through the next week, he remained much in the same condition. Most of the urine, I feel sure, escaped through the fistulous opening into the rectum, there collecting until he was obliged to empty the bowel. Some urine, however, ran through the urethra; but, whether from actual paralysis of the bladder, or from the feeling that it would escape *per rectum* if any effort was made, he was not able to use any force in passing urine.

Dec. 1st. I succeeded in passing a probe-pointed catheter (No. 1) fairly into the bladder, and tied it in for the night.

Dec. 2nd, 4 p.m. I removed the catheter, and substituted Mr. Holt's instrument, splitting the stricture thoroughly with No. 10 tube. I emptied the bladder with a No. 8 silver catheter. Four ounces of urine were contained therein.

9.30 p.m. I drew off sixteen ounces of urine with a No. 8 catheter.

Dec. 3rd. I emptied the bladder twice in the day; there was no escape *per rectum* as yet. He had no shivering; no trouble.

Dec. 4th, 7.30 a.m. He tried to pass urine *per urethram*, and could not do so; but more than ten ounces at once escaped *per rectum* (this I verified by personal observation of the urine passed). Some hours afterwards, therefore, I emptied the bladder by a gum-elastic catheter, and tied it in; and, so as to ensure, if possible, the thorough healing of the recto-vesical fistula, I directed him to empty the bladder every two or three hours.

It is not necessary to weary the reader with further daily reports. The gum-elastic catheter was retained in the bladder (daily changed and washed) for eight or ten days. The man remained quite comfortable; but the loss of power over the muscular coat of the bladder was made evident by his complete inability to influence or accelerate the stream through the catheter.

I then taught him to pass the catheter three times daily for himself; and found that to ensure his doing this easily, it was only necessary to give the catheter rather a large curve, so as to keep it along the smooth and newly formed bottom of the canal, instead of allowing the point to catch on some still existing roughnesses on the upper part or roof of the urethra. I had personally no trouble in passing No. 10 or No. 11 steel sound; the passage was not perfectly smooth or normal, but still the instrument travelled very well.

An attack of orchitis (left side), due apparently to exposure, delayed the patient's discharge; but he recovered from this, and will soon go to work.

Jan. 24th. I saw him to-day. He was very com-

fortable and very grateful; said that he was slowly regaining a little power over the bladder; and that three times each day, morning, noon, and night, he was able to pass unaided from three to four ounces of urine. Then, also, three times a day, and directly after his own effort, he passed a catheter and emptied the bladder thoroughly. There was no leakage *per rectum*; and no discomfort whatever. The man looked well, and had gained weight.

REMARKS. I have thus given the salient points in the successful treatment of five cases of urethral stricture by the use of Mr. Holt's instrument; and shall be very glad if the publication may conduce in the slightest degree to a more extended employment of means at once so simple and so satisfactory.

The first four cases speak for themselves. Not one manifested any unfavourable symptom; and the relief in all has been so far complete. Rigors were not noted in any one instance—not even in Case iv, where, from the first, the patient passed urine *sponte* over the freshly torn surfaces. Still I believe that plan to be the best, which has dictated the removal of the urine by the catheter for the first twelve hours after the operation. All contact of urine with the recent wound is thus for a certain time prevented; and the surfaces will probably have acquired an efficient coating of plastic material before the highly irritating fluid can pass over them.

It may not, wilfully to misapply the term, be very far from the truth to assert that the absence of ill results, after the splitting has been fairly accomplished, is due to the operation being *practically subcutaneous*. To the wounded tissues no access of external air is possible. Their ordinary distance, at least some inches from the external outlet; the penile condition of the organ; and the constant apposition of the walls of the urethral canal—all favour this condition, and lend some reason to a proffered explanation.

I believe it a manifest advantage, that the dilator should not be employed to examine the canal in the first instance. It would seem better that solid steel sounds up to No. 3 or No. 4 should be employed to open up a channel through the strictured part, and so to pave the way for the larger instrument. They are to be preferred, I think, on several grounds, to hollow catheters, though rather more time is needed in the preparatory treatment when solid instruments are used.

Not improbably, however, it may be found, as experienced in Case v, that Mr. Thompson's probe-pointed catheter will aid in the earlier stages. It may be used where No. 2, and often where No. 1, ordinary catheter can pass; and, once introduced, some twelve hours' retention will so far dilate the strictured part as to favour the easier passage of Mr. Holt's instrument.

Case v is exceptional in several points. It affords a fair illustration of the ease with which the bladder may be punctured *per rectum*, and of the relief so to be obtained. Very probably some of my readers may believe that a catheter ought to have been passed into the bladder; and I willingly concede that, in abler hands, this might have been successfully done yet.

"Non cuius homini contingit adire Corinthum."

And the puncture of his bladder certainly saved the patient from an impending and not very distant death. The cannula was retained between three or four days with no local discomfort worth mention, and with not more than the suspicion of vesical irritation. The subsequent escape of urine *per rectum* was decided; but the expedient of keeping the bladder as most empty allowed thorough rest, and consequent

repair of the punctured wound. In any similar case, I believe that the adoption of my plan of conducting the urine away from the person would add materially to the comfort of the patient.

I have suggested to Mr. Coxeter of Grafton Street that, for this purpose, it would be well to prolong the cannula one-half or three-quarters of an inch beyond the shield; and upon this projecting part, clear of all possible interference with tapes or fastenings, the India-rubber tubing might readily be slipped after the cannula has been secured in the bladder.

It would seem very doubtful if this poor fellow will ever recover power over his bladder so as to dispense with his catheter. The stretching of the viscus from excessive distension must have been very great. He has taken, as yet with little absolute good, muriate of iron, strychnine, etc. Yet, with reference especially to the heading of my paper, I may be allowed to compare this man's present condition with the state in which he was three or four months ago. He has now, it is true, to pass a catheter three times a day; but this is a small evil, compared with his continual and painful attempts at micturition, disturbed nights, constant abdominal discomfort, and the chance of absolute retention daily hanging over him—to say nothing of the ultimate organic changes which would almost certainly have followed in the bladder and kidneys.

The operation of splitting urethral stricture is even yet *sub judice*; but as a simple and facile mode of ensuring a permanent benefit, at a minimum risk to the patient, I believe it deserving of more extended trial.

The instrument would, in my opinion, be made even more useful, if its stem were graduated in inches and half-inches. Valuable information as to the seat and length of the strictured part might thus be readily obtained by the operating surgeon.

REMARKS ON VENESECTION IN INFLAMMATION.

By WILLIAM MARSHALL, M.D., Mortlake.

IN the JOURNAL of February 4th, is a report of a most excellent clinical lecture by Dr. Markham, shewing the great and immediate beneficial effects of venesection in two cases of inflammatory diseases of the lungs. In my hands, in two or three similar cases, the same unmistakable and immediate benefit has resulted from it; and I am satisfied that this benefit is due in a great measure “to the freedom of action; the relief given by it to the play of the other (the uninfamed) parts of the lungs and the engorged heart; of the organs or parts, in fact, which have become secondarily engorged—i.e., impeded in action in consequence of the inflammation.”

But has bleeding no other action upon inflammation? Does it never “arrest, nor directly alter, the condition of the inflammatory process? I think it does; and would submit the following cases as evidence in favour of such an action.

CASE I. J. S., a strong, robust man, aged 59, a night watchman at a railway-station, was found, at 2 o'clock A.M., insensible, lying on the railway below a bridge, from which he had evidently fallen, and alighted on his head. His head and face were swollen and bruised to a great extent; so much so, that it was impossible to ascertain accurately whether the skull were fractured or not. He was semi-comatose. About 10 A.M., he became restless, throwing himself about and muttering. Ice was applied to the scalp, and active purgatives administered. Towards the afternoon, phrenitis had unmistakeably set in. He

was violently delirious; the pupils were contracted; the eyes were intolerant of light and the ears of sound; the skin was hot; and the pulse was rapid, full, and bounding. Leeches were applied to the scalp, and he was bled from the arm; to what extent I cannot say, as the violence of his struggles rendered it impossible to measure the quantity; blood, however, was allowed to flow until he showed symptoms of fainting. The change for the better was most marked and immediate. He became comparatively quiet; the intolerance of light and sound were greatly diminished; and the pulse, though still rapid, was soft. Towards evening, the delirium returned, and the pulse rose. I removed the bandages from the arm, and allowed eight ounces of blood to flow away, with the same happy result. Next day, he was greatly better; the heat of the skin and the intolerance of light and sound were gone; the pulse was but little affected; and there was scarcely any delirium. From this time, the patient gradually recovered; but was for months subject to hallucinations. As the swelling went down, an extensive fracture of the skull was found, extending from the outer angle of the right eye obliquely across the top of the head, ending about three inches behind the left ear. One edge of the fracture could be distinctly felt and even seen to be raised above the other; and his head had a curiously twisted appearance.

CASE II. A. M., a strong healthy woman, aged 24, was struck violently with a hoe over the junction of the left parietal and frontal bones; the result was a compound depressed fracture. The depressed bone was raised. The membranes seemed uninjured. Everything apparently went on well for forty-eight hours. Symptoms of phrenitis then showed themselves, and rapidly increased in intensity. The skin became hot, the pulse full and bounding; delirium was constant and violent; intolerance of light and sound were most marked. Leeches were applied to the head, and twenty-five ounces of blood abstracted, within even more marked benefit than in the previous case; for within an hour the bad symptoms diminished, and rapidly disappeared. The patient recovered.

Here, then, are two cases in which “I think a man must be sceptical indeed, beyond all bounds of reason and common sense (if we may invoke that sense here), who refuses to connect effect with causation, the consequence with the antecedent, the cure of the disease with the venesection.” And to go on quoting from Dr. Markham's lecture, “What other remedy do we know of under the sun which is capable of producing off-hand, then and there, such great results in such formidable disease.” And yet phrenitis is not an inflammatory disease, “in the course of, or out of which, arise impediments to the play of the heart and lungs.” I think we must admit, that the bleeding had an immediate, and probably a direct, effect on the inflammation in these two cases. What, then, is probably this direct effect?

Dr. Markham writes: “If venesection be of service in internal, it should equally be of service in external inflammations—i.e., in those inflammations whose progress we can see with our eyes. But in what records of ‘bleeding’ times will you find any satisfactory proof that it ever was of service in such inflammations?” I would, however, direct attention to what we can see of the beneficial effects of local bleeding in external inflammations.

Now, to an eye affected with strumous ophthalmia, apply two leeches, and watch the effect. As the blood is withdrawn, it will be seen that the redness diminishes—becomes paler. Repeat the leeching at subsequent periods, and the same result always follows: the redness—this visible sign of inflammation