morbid action in the kidneys, in the infra-cutaneous areolar tissue, and the external membranes of the internal viscera.

The proofs and illustrations brought forward in this paper will find their application when we treat of the acute albuminuria and the acute anasarca—diseases we oftentimes meet associated together.

ART. XI.—*On Cases of Stricture of the Urethra, in which the use of Perforating or Cutting Instruments is expedient or desirable.* By JOHN HAMILTON, Surgeon to the Richmond Hospital.

AMONG the first of these cases I would place strictures at the orifice of the urethra. The usual cause of the orifice of the urethra becoming contracted is by the hard cicatrization of a bad syphilitic sore. A certain amount of destruction from a phagedænic chancre takes place, which ends in a hard cartilaginous cicatrix, through the centre of which passes the contracted urethra, the contraction generally extending from the orifice a quarter or half an inch down. It constitutes a stricture of a formidable kind, though many from the superficial situation might consider it easily manageable. It becomes daily narrower and narrower, until it is reduced to a mere pin-hole, admitting with difficulty the point of the small lachrymal probe. Before long, the urethra, behind the obstructed orifice, becomes dilated, so as to be, at last, three or four times its ordinary caliber. Now this has a most disagreeable effect, for after the bladder, in the effort to pass water, has been quite emptied, the dilated urethra remaining full, and not being acted on by the *vis a tergo* from the action of the bladder, and only imperfectly and partially affected by the muscles of the urethra, continues dribbling slowly away. In every case of stricture, when there is dilatation of the urethra behind it, there is more or less of this dribbling, constituting, in a minor degree, the well-known symptom in stricture, that after the patient thinks he has passed all the water, some will yet come away. But in these cases of contracted orifice, the dilatation is of the whole urethra, and to such an extent, that the quantity of urine contained in it is very great, while the point of exit is so small as to make an imperfect outlet, and so cause the urine to be constantly dribbling away; the dilated urethra is scarcely emptied before a fresh action of the bladder refills it. This incessant dribbling constitutes one of the most distressing states possible. The patient's clothes and bed are saturated with urine,

while the penis, scrotum, and inside of the thighs are red, irritated, and excoriated by it. In these hard cartilaginous contractions of the orifice of the urethra, dilatation of the stricture will be found a very tedious and unsatisfactory process. It is infinitely better, directly a director can be got in, to pass a narrow, straight, sharp-pointed bistoury on it, and divide the whole length of the stricture. I can speak decidedly in recommending this treatment, as I have had a large number of such cases under my care. It is most gratifying to find how rapidly the after dilatation of the stricture effects a cure.

CASE I.—Richard Hyland, aged 26, was admitted with bubo. He had besides a much more serious complaint, a contraction of the orifice of the urethra, in consequence of a chancre in that situation, got twelve months since. The glans penis presents a small circular excavation around the orifice, showing where the ulcer had been. The opening of the urethra in the centre of this is so contracted, that with great straining and pain, shooting back along the passage, the urine only flows drop by drop, and a small director can barely be got through it.

August 23rd. Mr. Hamilton introduced the small director, and with a curved bistoury divided the stricture, cutting about half an inch of the end of the urethra. A conical bougie was passed, and left in two hours, and this was done daily. On the 28th the report says that he passes water freely, and a No. 12 gum-elastic catheter can be introduced. He was dismissed a short time after, with directions to pass the conical bougie daily.

CASE II.—*Stricture of the Orifice of the Urethra, caused by an extensive Phagedænic Ulcer*.—John M'Keon, aged 26, was admitted January 18, 1851. He has lost half the penis by chronic phagedæna. On the face of the stump appears a nodosity of a dull red colour, and thinly skinned over, being the spongy portion of the urethra, behind which is the puckered orifice of the urethra, small and rather excoriated, and so contracted, that the stream of water is little larger than a needle. As the urine is being passed, it accumulates behind the obstruction, and fills the urethra to distention, and after the bladder has ceased to act, urine continues dribbling away, troubling him very much, and keeping the front of his clothes saturated with wet. After having made out the orifice of the urethra clearly, on a narrow director, I slit it up freely, and at once began the dilatation by conical gum-elastic bougies. At the end of a month I dismissed him, No. 12 catheter passing into the bladder. He was desired to introduce a conical bougie twice a week into the orifice of the urethra, to preserve its patency.

CASE III.—*Stricture of the Orifice of the Urethra from Chronic Phagedænic Ulceration*.—Patk. Tully, three months discharged from the army, was admitted into No. 5 ward, for difficulty in passing water, the result of former phagedænic ulceration, which has entirely removed the glans penis; the orifice just admits a probe, but considerable cartilaginous induration can be felt for half an inch along the urethra.

He is, moreover, severely affected with bad tertiary symptoms. Patches of pustulo-crustaceous eruption over the trunk and extremities, soft nodes on the tibiæ, pharyngeal sore throat, and tubercular syphilitic sarcocele of both testicles.

He contracted the venereal disease six and a half years ago in India, extensive phagedænic ulceration of the corona glandis and prepuce, which took five months to heal, and not till it had eaten away both glans and prepuce.

Mr. Hamilton ordered hydriodate of potash, five grains morning and midday, in decoction of sarsaparilla, and eight grains of blue pill every night.

October 24th. Mr. Hamilton divided the orifice and constricted portion of the urethra with a small bistoury on a director, and afterwards introduced a conical bougie, to be left in for an hour. The constricted part seemed quite cartilaginous, and offered considerable opposition to the incision, but there was little bleeding.

25th. Mr. Hamilton was not quite satisfied that the incision of yesterday had gone through the entire constricted part of the urethra; he, therefore, enlarged it. A conical bougie went in with the greatest ease, and was left in an hour.

November 7th. His gums were slightly touched by the mercury a few days ago, since when he has taken only one pill. The testicles feel almost healthy, and all the other symptoms are proportionably improved. He now complains of comparatively little difficulty in passing water. Soon after, the testicles got quite well, and the improvement in the man's general health was remarkable. A bougie, No. 11, could be readily got into the bladder. He was dismissed, and desired to pass a conical bougie twice a week three or four inches down.

Somewhat parallel cases, as far as treatment by dilatation goes, are those strictures which are formed at two or three inches from the orifice, in the penis portion of the urethra. They are hard, elastic, and can be felt, when a bougie is passed, like hard rings round it. Every surgeon knows how very difficult they are to treat by simple dilatation; what you gain in the increase of size of the instrument to-day, you are disappointed to find a

corresponding loss a few days after; and at the end of many weeks scarcely any substantial improvement is effected, either in the patient's power of passing water, or the size of the bougie. They are more rapidly treated, and with more persistent improvement, by division, not by an external incision, but by dividing the firm substance which constitutes the constriction, from within. This, I believe, is best accomplished by M. Civiale's instrument.

CASE IV.—Patrick Sisson, aged 32, was admitted into the Richmond Hospital February 10, 1854, with a tight cartilaginous stricture of the urethra, about three inches from the orifice, accompanied by constant stillicidium urinæ, rendering him very miserable. Five years ago he had gonorrhœa and chancre at the same time, and was cured of both in this hospital. A year and a half ago he first began to experience difficulty of micturition, followed by constant dribbling away of his urine. He attended at another hospital, but derived little benefit by the introduction of bougies.

February 14th. With great difficulty No. 3 gum-elastic catheter was passed through the stricture into the bladder. It was fastened in.

15th. He had a severe rigor yesterday, followed by headach and profuse perspiration; and at 4 o'clock this morning the catheter was removed.

This method was tried again on two occasions, and even the period reduced to two hours, during which the catheter was retained, but it was either followed by a rigor or such urethral irritation, that I had to give it up. I then tried the use of conical bougies; and, finally, of metallic instruments—silver catheters. A certain amount of benefit resulted; the stillicidium entirely ceased; I could get No. 4 catheter into the bladder, but the stricture was so excessively tight that much force was required to get through it, and there was the utmost difficulty to withdraw the instrument. The stricture could be felt by the finger outside like a hard ring of cartilage round the catheter.

After he had been in hospital six weeks without decided impression having been made on the stricture, No. 4 silver catheter being still the largest instrument that could be passed, and that with difficulty, I resolved to divide the stricture, which I effected with Civiale's instrument. The operation was painful, but the immediate effects very striking: a No. 8 catheter was introduced immediately after, and secured in the bladder.

March 23rd. He suffered no pain since, and was able to bear

the catheter in the bladder for twenty-four hours without any inconvenience. It was again introduced and secured in.

24th. He kept the instrument in since yesterday; it was withdrawn this morning, and not introduced. He is able to pass his water in a full stream. There is some swelling about the seat of the stricture.

27th. Greatly improved; says he feels as well as ever he did; passes water freely, and in a good stream. No. 8 catheter passed easily. He remained in till April 1st. I could then pass in No. 11 silver catheter readily, and he passed water in a full stream. He was dismissed, and directed to pass a conical gum-elastic catheter, about No. 9, occasionally.

The instrument used in this case was M. Civiale's, which is admirably adapted for the purpose of dividing those elastic, ring-like strictures most commonly met with at the penis portion of the urethra, and which so obstinately resist dilatation. There are two sizes—the smallest I think the most useful, as in performing the operation the instrument must be passed through the stricture, cutting as it is withdrawn from behind forwards; the depth of the incision can be regulated with great nicety. It is manufactured and sold by M. Charrière.

In the following cases the stricture was perforated.

CASE V.—John Shortall^a, aged 42, was admitted into No. 5 ward, with cartilaginous stricture of the bulbous portion of the urethra. He could only pass water drop by drop; but a far more distressing thing was a constant dribbling away of the urine, keeping him in a wretched condition, the bed-clothes saturated with wet, and the prepuce and inside of the thighs all excoriated. The stricture was so tight that it would not admit the point of the smallest instrument.

Twenty years ago he had gonorrhœa, which was cured without injections. He first suffered from symptoms of stricture ten years since. He has been in different hospitals, and several times was nearly cured, but when instruments were left off he soon became as bad as ever again.

After having passed bougies down to the stricture for several days, Mr. Hamilton perforated the stricture with Stafford's instrument; a No. 3 silver catheter was then passed into the stricture, but not through it. There was a little hemorrhage after the operation, and retention of urine for a few hours, relieved by a hip-bath. Dilatation of the anterior part of the stricture was effected by the daily passage of conical bougies,

^a Reported by Mr. Lloyd.

but no complete way was made through it till after the third use of Stafford's instrument, when No. 4 gum-elastic bougie went readily into the bladder. He was desired to keep it in two hours.

The next day after the passage of the gum-elastic bougie Mr. Hamilton passed in No. 6 gum-elastic catheter, which was directed to be kept in. There was no further trouble after this. Either a gum-elastic or a silver catheter was passed every second or third day; and two months after admission he left the hospital, passing water in a full stream, and a No. 11 catheter going easily through the constriction.

In this case the stricture was of some extent, and so close that I found, on making the first attempts at introducing an instrument, its point resting against the cartilaginous obstruction, without entering any way into it. In such a case, therefore, of impermeable stricture, it appeared fair to use Stafford's perforator. I might, no doubt, by steady, persevering efforts, have finally reached the bladder without having to resort to this not always safe means of treatment; but it would be necessarily uncertain, and very tedious. The state of the patient, from the constant stillicidium, was most distressing; nor should it be forgotten that in similar cases, during the long interval before we succeed, a mischievous action is going on in the part of the urethra behind the stricture, which may lead to inflammation, ulceration, and abscess; the urine thus making its way to the perineum or scrotum, and urinary fistula be the result.

In another case, where the symptoms were less urgent, I did give a long trial to other means before resorting to perforation.

CASE VI.—A healthy-looking man, aged 40, was admitted into No. 9 ward, July, 1850, with the usual symptoms of stricture of many years' duration. I detected one of cartilaginous hardness at the bulbous part of the urethra, impassable to any instrument. During five weeks I made no impression on this stricture; the stream of water continued remarkably small, with some frequency, in spite of the use of every variety of instrument, catgut bougies, gum-elastic and silver catheters, &c. Being therefore fully practised in the seat and nature of the obstruction, I resolved to try Stafford's perforator. With it I pierced the stricture, and *immediately* after passed a No. 6 silver catheter into the bladder. It was at once succeeded by improvement, particularly as to the frequent desire to pass water. The further progress of the case was most satisfactory. The constricted portion of the urethra was in this case, no doubt, of small extent.

A still more striking result from the use of the perforator is, when we have to deal with an impassable stricture with retention of urine. Whatever objection might be fairly made to its use in other cases, few surgeons would refuse its aid in relieving an urgent case of retention.

CASE VII.—A man of the name of Townshend came to the hospital, March 19, 1850, with retention of urine of two days' standing. He was small and thin; and the outline of the distended bladder, as high as the umbilicus, was very remarkable. He had stricture for fourteen years, caused by a blow of a turnip on the perineum.

I passed first a gum-elastic catheter, and afterwards one of German silver, No. 4, but could not get through the obstruction, which felt of cartilaginous hardness, just behind the bulbous portion of the urethra. Examined with the forefinger in the rectum and the thumb at the perineum, the hard strictured portion felt small, about a quarter of an inch. The catgut bougie and silver wire were tried, and afterwards the hip-bath, and the small silver catheter again, but the only result was that he passed a tablespoonful of bloody urine in drops, with great straining.

The case was urgent: ordinary means had failed; in consultation, therefore, it was decided that after a trial of the perforator, should it fail, puncture above the pubes should be resorted to.

I passed the straight instrument of Stafford down to the stricture, and, guiding with the finger of my left hand in the rectum, I perforated for about one-third of an inch; I then tried the silver catheter, and it went through the stricture readily. Three pints of bloody ammoniacal urine were drawn off, containing also a little curdy pus. The silver catheter was withdrawn, and a No. 8 gum-elastic one introduced and fastened in, but the irritability of the bladder and urethra was too great to bear it longer than a few hours; indeed, it soon became apparent that the stricture was the least of his ailments, and though the immediate danger of the retention was removed by the use of Stafford's instrument, yet deeper-seated organic disease of the bladder and kidneys would baffle the resources of art. He lived for six weeks, and died worn out by frequent rigors, diarrhœa, and frequency of passing urine, which was bloody, purulent, and alkaline.

A post-mortem examination of the body showed extensive organic disease: the prostate was converted into a membranous bag containing turbid urine; the bladder intensely inflamed, the walls thickened, and a large pouch at the lower fundus;

the kidneys both presenting specimens of the yellow granular degeneration of Bright; the left enlarged to more than twice its usual size, with dark-purple spots of congestion, filled with pustules. One of these spots was so dark and livid that gangrene seemed impending.

The only good effect of the operation in such a case as this was to prolong life.

I am one of those who think where we can accomplish the cure of stricture by dilatation with catheters or bougies, metallic or gum-elastic, we should be very slow indeed in resorting to perforating instruments; the only plea for their use being cases where time is of great moment, or the symptoms requiring relief are distressing, as in the first of these cases (Shortall's), or urgent and dangerous, as in the last (Townshend's). When the stricture is in the penis portion of the urethra, and can be felt and fixed by the fingers, so that the point of the instrument is certainly in the centre of the obstruction, perforation is easy enough; but not so when in the perineal portion, as in both these cases: in such, the finger in the rectum will be found a valuable guide to the instrument. The operation is not always innocent, smart hemorrhage sometimes following the puncture; and I remember, when a student, seeing a case in which inflammation and suppuration of one of the testicles ensued after the perforation of a stricture about three inches down. We should therefore be slow in resorting to this treatment, but yet not reject it altogether, as certain cases will from time to time present themselves when it will be found very valuable. A thoughtful experience in the use of catheters will lead to such an amount of manual dexterity that few strictures will present themselves through which an instrument cannot be got, sooner or later, into the bladder, and a resort to Stafford's perforator will rarely be required.

ART. XII.—*On a Peculiar Black Discoloration of the Skin of the Face*^a. By J. MOORE NELIGAN, M. D., M. R. I. A.,
Fellow of the College of Physicians of Ireland, &c.

If the interest of a disease is to be judged of by its rarity, that which I am about to describe is assuredly among the most interesting; for but very few examples of it have been recorded in the annals of medical literature; and this must be ascribed to

^a Read at a meeting of the King and Queen's College of Physicians in Ireland.