This treatment should be repeated twice daily, if the case be very severe, and especially in the case of retention, because of the ammoniacal decomposition of the urine; and, as the urine must be drawn off at least twice a day, there will be no additional distress given by passing the catheter.

In regard to the frequency, there is one point to be considered—viz., the irritation to the urethra caused by catheterisation. Of course, it is undesirable that we should pass the instrument more frequently than needful; yet it is to be also noted that frequent micturition itself causes soreness or abrasion of the urethra; so that, if we succeed by our treatment in mitigating the frequency of urination, we shall compensate for this; and this is in accordance with my experience. By the treatment above described, we do very quickly lessen the frequency, and more than entirely compensate for the irritation of catheterisation.

Where the urine has not become markedly alkaline, we may content ourselves by simply injecting the solution of morphia; yet, if we first of all wash out the bladder with warm water or warm solution of permanganate of potash, we shall much expedite the cure. The strength of the lotion should be three times that generally in use, as it is very rapidly decomposed by the urine. When this has been allowed to flow away, we may inject the morphia solution.

After some days of this treatment, I sometimes employ, instead of the permanganate of potash, a solution of chlorate of potash, about three or four grains to the ounce; using plenty, drawing it off after a few minutes, according as it gives pain, and then injecting the morphia.

Regarding the dose of morphia, I may add that, if there be no blood in the urine and the patient feel no constitutional effects from a grain, I increase it to two grains. If blood appear in the urine, it is a sign of some abrasion, in which case the morphia is more likely to be absorbed; yet I have never seen any unpleasant symptoms even from two grains. The more we use, without affecting the system much, the better; locally subduing the nerve-irritation and the tenesmus of the bladder, and the crushing of the mucous membrane which the contraction produces.

As the acute symptoms subside, we may employ more astringent washes; such as two or three grains of tannin in each ounce of warm water, or three or four drops of solution of perchloride of iron, using morphia immediately afterwards, as before mentioned. Our choice depends upon the amount of pain caused, the object being not to cause more than necessary. If the urethra be very tender, and catheterisation seem to produce irritation, I omit all treatment for a day or two, after which we can resume it with much benefit. If after a fortnight the main symptoms be subdued, but the urethra seem very tender, I apply an astringent directly to it. A bougie or catheter, covered with tannin, made very smooth, and dipped in gum-water before introduction, is not very painful, and answers well. A probe, on which a film of nitrate of silver has been fused, may be tried. Of course, pain succeeds; but, on its subsidence, patients have expressed much relief. However, in the more acute stages and forms of cystitis, one should avoid this, unless the urethral irritation be very marked. Later on, this may be freely adopted and other remedies tried, as passing a stick of fused anhydrous sulphate of zinc, or even mopping over the urethra with solution of perchloride of iron, carried up by a probe covered with cotton-wool or similar material. This irritation of the urethra is the cause generally, in cases with frequent micturition, of much additional suffering, and, by its reflex action, keeps up the irritation of the bladder; so that we may say they play into each other's hands. The urethra bears active treatment better than the bladder, and I have even dilated it and mopped it over with solution of perchloride of iron, with great relief the next day.

But, when cystitis has become chronic before we see it, or we have arrived at the same condition, but much earlier, by our treatment, we sometimes find it troublesome to completely cure the complaint. I have found, at this time, the injection of a solution of nitrate of silver of much service—from five to ten grains to the ounce. I have even used it up to fifteen grains to the ounce. This causes some rather severe pain for a short time, but much relief afterwards. Of course, two grains of morphia are left in afterwards. This may be repeated a week later. Or, instead of the nitrate of silver, I have employed perchloride of iron stronger than before mentioned (ten minims to the ounce). Now and then, for a few days together, it is well to leave off treatment in the chronic stage, to see how far the local interference may be rather keeping up irritation. I may be thought rather to be condemning local treatment by thus remarking, but really it is not so; we can, by local treatment, soon make a most distressing malady a bearable one; yet, at the same time, we know that frequent passing of the catheter may cause irritation, but slight only compared with acute severe cystitis. It is only when we come to the end of the case that we have to note the possibility of keeping up a slight irritation by our too frequent action.

I may add that, in the acute stages, the warm hip-bath, and warm sponge to the genitals, are not to be omitted, together with perfect rest in bed; the bowels must be kept gently relaxed; the dietary should be very simple and light, such as will naturally commend itself to our judgment upon common principles. But on no account should any kind of alcoholic beverage be permitted; and this rule should be observed rigidly during the whole period of the complaint, excepting only in such cases as it is imperatively necessary from other conditions of the patient's health.

I have thus only rather shortly sketched out the plan which I have used and would strongly recommend to your notice. The benefit of such management is very marked in cases of paralysis, where, from retention or the rapid ammoniacal decomposition of the urine, the distress and constitutional irritation are very distressing; and thus we can often lessen the chance of the extension of the irritation to the kidneys. Again, in malignant disease, the simple injection of acidulated warm water gives amazing comfort, removing the phosphates and ammonia, and, when to this is added the morphia, a wonderful comfort is felt. Indeed, so much relief is obtained, that, with a large calculus in the bladder, its presence is almost entirely unfelt if morphia be daily injected.

I would recommend the extension of this treatment to inflammation of the male bladder. The same precautions can be taken regarding the entry of the catheter. I have found that it is not needful to pass the end through the sphincter; but, if an open-ended catheter be employed, the fluid will find its way through readily. If the catheter be only passed about three or four inches, even then the fluid will find its way into the bladder; and this is an advantage for the male, as the area of urethral irritation by catheterisation is thereby lessened.

After cystitis has lasted some time, irritability generally exists for some considerable period afterwards. This is much lessened by occasional morphia injections; but it may very possibly be due to the contracted state of the bladder, which cannot be quite overcome by the will, although the exercise of the power of retaining urine increases the power of the sphincter, and consequently the capacity of the bladder. In this case, we may often succeed with a plan which I have some time ago, and again more recently, advocated, namely, gently distending the bladder with warm water by means of a syringe, which frequently overcomes the difficulty in a few days.

CASE OF ANEURISM, WITH PARALYSIS OF THE LEFT RECURRENT LARYNGEAL NERVE.

By EDWARD T. WILSON, M.B., F.R.C.P.,
Physician to the Cheltenham General Hospital and Dispensary.

A CASE which was recently in the Cheltenham General Hospital so fully bears out the observations of Mr. Norton in the JOURNAL of June 20th, that I think it may be worth recording.

A labourer, T. D., aged 48, was admitted as an in-patient under Dr. Abercrombie early in May last, suffering, as he said, "from a beating in the chest and hoarseness". This man's own account was, that he was carrying a heavy ladder about two years ago, when he felt something tear and give way between the left clavicle and the shoulder-blade of the same side. He was not disabled from work, nor did he suffer much pain; but shortly afterwards he began to feel the pulsation in his chest, which had lately been more troublesome. He had been doing his work, however, and was very anxious to return to it. The general health was good, and he complained chiefly of his hoarseness and an uncomfortable feeling as if something were out of place in his throat. On examination, a pulsating tumour was discovered, deep, but easily defined, behind the inner third of the left clavicle. There was dulness extending upwards to the apex of the lung, but not inferiorly beyond the lower margin of the first rib. A to-and-fro murmur was heard over the tumour, and a soft systolic *bruit* over the apex of the heart. No pulsation could be felt in the left carotid artery, and in the left radial it was barely perceptible. He had suffered from time to time from headache, and, for some time after admission, complained of a numbness in the left leg. No difference, however, could be detected between the right and left femoral arteries.

The origin of the aneurism was somewhat uncertain. This man's own sensations at the time would seem to point to the subclavian. What I wish to notice, however, is the result of pressure upon the recurrent laryngeal nerve.

The man's throat was a peculiarly favourable one for observation, and tolerant of the instrument, so that the most perfect and prolonged views were obtained by artificial illumination and by sunlight—the

bifurcation of the trachea being easily seen by the latter. On examination, the left vocal cord was seen to be *tense and absolutely motionless*. During ordinary respiration, the right cord showed very slight movement; but, on forced inspiration, it moved freely from the mesial line; and at the same time the aryepiglottic folds, with their contained cartilages, were drawn over to the right, giving the upper opening of the larynx an unsymmetrical outline. In phonation, the right cord approximated to the left, but did not appear to cross the median line. The left cord under all circumstances remained absolutely rigid; its surface was slightly congested. Otherwise the mucous membrane of the larynx was perfectly healthy. The voice was slightly husky and uncertain, a high note being occasionally produced involuntarily.

In this case, as Mr. Norton observes, paralysis of all the intrinsic muscles of the left side left the crico-thyroid free to act, with the result of a combined tension of the left cord. At the same time, the right crico-arytenoideus posticus was enabled to disturb the symmetry of the arytenoid folds, in the absence of any counteracting force from the muscles of the left side.

The position of the left cord during forcible inspiration was not far removed from the median line; and it seems certain that suffocation would follow, were the right cord to be affected and to a like extent. In a case of aneurism very similar to this, given by Dr. Morell Mackenzie in his work on *Hoarseness, Loss of Voice*, etc., both cords are described as having been affected to a limited extent, although one recurrent nerve only was involved. "Neither of the vocal cords," he says, "is so much drawn aside in inspiration as is commonly the case." The left, however lay nearer to the median line than the right; and the left capitulum Santorini was nearer the median line, and on a rather higher level than its fellow. In the present case, sluggishness of the right cord during ordinary respiration was remarked; but its free movement during a forced inspiration makes it plain that the action of the muscles on the right side was not really impaired. The man will probably come under observation again, and it will be interesting to see if the muscles of the right side do become affected in a case where the pressure is so decidedly limited to the right recurrent nerve.

ANEURISM IN THE GROIN AND HAM OF THE SAME SIDE; LIGATURE OF THE EXTERNAL ILIAC ARTERY; GANGRENE; AMPUTATION OF THIGH: RECOVERY.*

By THOMAS DIVER, M.D., Southsea.

It has so happened that the honour of being the first to address you upon a case of interest since the formation of the South Hants Branch of the British Medical Association has fallen upon me, and, before proceeding to do so, allow me to congratulate you—first, on the very great success which has attended the efforts of Dr. J. Ward Cousins to unite us in a body, meeting on occasions to discuss matters of professional interest tending to our advancement and improvement in the practice of our profession, and, secondly, on your having secured as your President a gentleman so highly respected, I might even say beloved, by every one of his professional brethren for many miles round the spot where he has practised his profession with so much honour and credit to himself for now, I believe, nearly half a century. I am sure that it is considered by you all a honour to have him at your head, and that it augurs well for the success of this Branch as a district medical society. The case which I am about to introduce to your notice is, on account of its rarity, of peculiar interest.

Aneurisms are not rare in hospital practice, but I think that very few surgeons can say that they have seen a femoral aneurism necessitating the ligature of the external iliac for its cure; and still a less number, that a case of double aneurism affecting the same side has come under their observation. It is not my intention, in bringing this case before the Society, to give you a clinical lecture, or to presume that it is in my power to add to your knowledge on the subject of aneurism generally, but merely to report a case which, by the force of many circumstances, has turned out successful, and which possesses so many points of interest as to warrant my doing so.

A fine-looking, well nourished man, named George Hammond, aged 35, was admitted into the Portsea Island Union Workhouse Hospital some time in January last. I believe that he was advised to seek admission by Mr. Bentham, one of your members, to whom he related from what he was suffering, when that gentleman was visiting a patient in whose house this man was. He complained of pain and swelling behind the right knee. I saw sufficient to warrant my immediately

placing him in bed. Upon examination, I discovered a large pulsating tumour occupying the whole popliteal space of the right side. Taking into consideration the size of the space and the projection of the tumour, it appeared to me to be as large as a child's head at birth. On the same side, just below Poupart's ligament, I found another tumour of a like character about as large as a good-sized walnut. There was no difficulty in diagnosing his case; the only difficulty was as to the means to be employed for his benefit. I now confess that I felt a very serious responsibility devolved upon me. Here was a man apparently in robust health, yet suffering from a disease liable at any moment to result in mischief, which, in a very short time, would end in death, demanding an operation of great danger to his life for his relief. I kept the man in bed, and allowed some days to elapse for the opinion of many of my friends, and I am deeply indebted to them for enabling me to come to a right conclusion as to the course I should adopt.

He appeared in every respect a very healthy man. His family history was exceedingly good. He himself had never been sick, but he suffered from syphilis eleven years ago. He stated that, for twelve years, he served in the Royal Marine Artillery as a private soldier, and left the service twelve months ago. A year before he was discharged, he suffered much when on duty with pain in his right leg, so much so that, to relieve himself, he had taken off his neckerchief and tied it round the calf of his leg. He had also a swelling of the foot, and had on many occasions fallen out of the ranks in consequence. He stated that he was afraid to mention the matter to the surgeon of his regiment, lest he should be sent to hospital, and thus have his pay stopped, which would have deprived his wife of bread; but, his twelve years' service having expired, he applied for and obtained his discharge. He then worked as a labourer. Five months before I saw him, when at his work, he felt something snap, and a swelling came behind his knee. He also felt, when he put his right hand into his trousers-pocket previously to this, that something was pulsating in his groin. After mature deliberation, it occurred to me and my friends in consultation that it would be as well to put on the tourniquet and compress the femoral artery, more especially as it appeared to us that nature had already attempted a cure of the popliteal aneurism by fibrinous deposit.

Compression of the artery was accordingly applied at the upper part of the middle of the thigh with great care; but, after forty-eight hours, it was discontinued, in consequence of great œdema taking place and apparently little or no benefit occurring. There were then two courses open to me; either to compress the vessel above Poupart's ligament, or to tie it. Had I had a staff of medical students to assist me, who would have understood the importance of the work they had to do, digital pressure would have, no doubt, been the best course to adopt, more especially as compression of the artery entirely stopped pulsation in both tumours; but, considering the means at my disposal in a workhouse hospital, I did not feel justified in trying it. The only course open to me, then, was the ligature, which I determined upon applying. The operation was performed on January 27th. An incision was made after the modified method of Abernethy, semilunar, and extending from the inner side of the middle of Poupart's ligament upwards and outwards, four inches long, to the inner side of the anterior superior spine of the ilium. The different parts were divided on a director, and the vessel exposed and tied with strong ligature of silk. During the operation, a number of vessels of more than ordinary size had to be tied or twisted. All pulsation in both tumours immediately ceased, and for ever.

The limb was carefully enveloped in cotton-wool, the patient's bed placed near the fire, and bags of hot sand, repeatedly changed day and night, kept on each side, a short distance from the leg and thigh. His diet was regulated, and his pulse and temperature carefully watched. I shall not trouble you with their variations.

Forty-eight hours after the operation, symptoms of gangrene appeared in the toes, and very slowly extended, until a line of demarcation was well formed at the upper part of the lower third of the leg. During all this time, extending to February 19th, twenty days after the operation, hardly any constitutional disturbance existed, and what did was easily subdued by appropriate treatment, when suddenly the pulse rose to 144 and the temperature 105.2. Under treatment, this was reduced in two days to temperature 103.2 and pulse 120. After a consultation with Dr. Cousins, it was considered that further delay was not desirable, and that amputation of the thigh was necessary. This operation was performed on February 19th, and by the 22nd his pulse was 100 and his temperature the same. On the 25th, the ligature from the external iliac came away, and the wound was quite healed twenty-eight days after the first operation. During the amputation, hæmorrhage was prevented by the strap of the tourniquet being tightened round the thigh; the femoral artery was found plugged, but was tied as a precaution; the stump healed kindly, and the man is now well.

I have brought the patient, that the members of the Society may see

* Read before the Southern Branch, April 14th, 1874.