lateral column, though some undoubtedly pass straight into the tip of the posterior horn. In the postero-lateral column the fibres remain only for a short distance of their course; they then pass in one or two directions. They may either pass into the grey matter of the posterior horn at various levels, or else they may pass into the posterior median column. In the grey matter they form connections undoubtedly with the posterior vesicular column, and also with ganglion-cells in the anterior horns. In the posterior median column they run a long course right up to the medulla, where they end in the nucleus gracilis. Physiological experiments point undoubtedly to the probability of a crossing of these fibres in the grey matter to the opposite side. Do they cross in the posterior white columns? In the first of the above experiments, there is an appearance of swollen fibres in the opposite posterior region, but this may be accounted for by an accidental degeneration of one or more of the posterior roots of that side. In the second experiment, the appearances are more difficult to explain, except on the supposition that some of the posterior median fibres cross through the septum. Singer's experiments show nothing of the kind, and in a third experiment (monkey 3), to be described in my next lecture, in which there was section of the lower cervical posterior roots, there was no such affection of the opposite posterior median column. The appearances may be due to the reagents used. At any rate, I draw no definite conclusions from them. Except this experiment, the evidence points to an absence of intercommunication between the posterior median columns. It has yet to be determined by experiment what kind of impressions the fibres of the posterior median column convey. The effect of lesion of the postero-lateral column is better known, but such lesion includes affection of both the sets of fibres above mentioned. It is highly probable, as I shall insist in my next lecture, that most of the fibres of the posterior median column are visceral in function.

In my next lecture I shall study the course of the ascending fibres in the lateral column and their destination in the medulla, and also the course of the visceral fibres in the cord.

THE TREATMENT OF CONFIRMED CATHETER LIFE BY A PERMANENT PERINEAL OPENING.¹

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I AM quite aware that I am treading very closely upon the heels of those who have recently and very ably brought before the notice of this Society matter kindred in character to the subject of my communication, but I intend, so far as the interest of my subject will permit, to avoid going over any of the ground traversed on previous occasions.

My immediate object this evening is to submit for your consideration a plan which I have for some years found to be effectual, and I believe to be novel, in the treatment of men suffering from enlarged prostate who have not only arrived at catheter life, but have advanced to the stage when all prospects of their ever again being able to pass urine in the natural manner have to be abandoned as hopeless.

In these cases, Sir Henry Thompson, the veteran pioneer of all that relates to bladder surgery, advocates one of two plans: either the permanent retention of a tube through an opening established in the bladder above the pubes; or the plan of suspending the action of the bladder from seven to ten days by the temporary maintenance of a drainage-tube through the perineum. By the latter plan, he says, speaking of one case, "the relief was immediate and most remarkable," but he is compelled to admit that in every instance the patients have had sooner or later to resume their original practice of passing the catheter.

From Mr. Reginald Harrison's admirable Lettsomian lectures, I gather that he is in favour of drainage from the perineum. Previously we had those who were successful in many cases in relieving their patients by the constant use of retained catheters. As an alternative plan of treatment, we have also prostaticotomy and prostatectomy, and more recently the suprapubic prostatectomy of Mr. McGill. Each of these plans appears to have fulfilled to a certain extent the purpose for which it was designed, but not one of them embraces the entire condition, or provides all that is

desired in confirmed prostatic obstruction. For instance, the high outlet of a suprapubic opening leaves that particular part of the bladder which most requires drainage more remote than ever from the benefit of treatment. The perpetual presence of a perineal drain-tube is even less tolerable than a retained catheter, and a retained catheter can only be borne by a limited number of those who might otherwise be benefited by its use, and it is questionable whether the presence of these tubes does not as a rule aggravate the mischief and shorten life.

Mr. Harrison is singular, I believe, in the view he entertains that the prostate undergoes a diminution in size owing to the influence of the prolonged retention of a tube, and I am not aware that he claims to have had more than one case where the benefit from this plan has been more than partial and temporary.

Perineal prostatectomy appears to me an operation without any of the advantages of precision. You can neither regulate the amount, nor define the limits, of what you remove, and there is always the possibility that an undue mass may be taken away and permanent incontinence result.

McGill's suprapubic prostatectomy has, at least, the merit of affording the operator an opportunity of seeing the overgrowths, which project into the bladder, *in situ*, but it affords no facilities for the removal of those growths which are confined to other portions of the prostate. The results of the cases reported by Mr. McGill were most excellent, but the number was small, and the conditions under which they were operated upon were exceptional. The mortality of suprapubic cystotomy in men over 50, it must be remembered, amounts to over 33 per cent., and this mortality is not likely, in the long run, to be lessened by the additional risk which must necessarily attend prostatectomy.

About six years ago I was more than ever impressed with the desirability of avoiding the pain and inconvenience which attend the constant passage of catheters; and I also became more familiar about this time with the facility with which a bladder could be entered for the purpose of digital exploration, and the idea occurred to me that at least three most important desiderata might be attained by a perineal urethrotomy. The bladder could be drained, it could be given necessary rest, and a considerable length of urethra would be relieved from the irritation of repeated catheterism. In consequence of the relapses which almost invariably followed the closure of the perineal wound and the re-establishment of the *status quo*, I further decided to maintain permanently the direct passage through the perineum. In the conception of this operation advantage was taken of the fact, which had been generally overlooked, that an opening in the membranous urethra does not involve, as many suppose, incontinence of urine.

I am aware that there are numerous instances on record where, after perineal cystotomy, the wounds have failed to heal, and a permanent fistula has remained; but in these cases the fistulæ have been accidental, and never, to my knowledge, have they been claimed as the result of a deliberate intention on the part of the operator. And, further, a perineal fistula in itself would afford no advantage; but if the fistula is made, and utilised in the manner I have to propose, then it becomes the key to the difficulty which attends the treatment of prostatic enlargement. I will now proceed, in the first place, to describe to you the operation itself, which differs in no essential detail from an ordinary median urethrotomy. A staff is passed into a previously moderately distended bladder. A lithotomy-knife, with the edge upwards, is plunged directly into the groove of the staff from a point an inch above the anus to a point a little in front of the prostatic apex. I prefer to enlarge the skin incision as I withdraw the knife, leaving the external wound, when finished, about an inch in length, and directed from the raphe towards the centre of the space between the anus and the left tuber ischii. As the staff is withdrawn the finger is passed into the bladder when possible, and the opportunity is taken of making a digital exploration. When nothing is discovered admitting of immediate operation, the tube I have been at some pains in getting made to my satisfaction is introduced and maintained by a T-bandage, which I have found quite as effectual and much more comfortable to the patient than tapes. My preference for enlarging the external wound by one sweep of the knife during its withdrawal, in the place of cutting down on the staff by repeated incisions, is to secure a clean section and thus avoid an irregular wound, which gives greater facilities for the lodgment of discharges. The limited space between the point where the knife first enters the urethra and the rectum does not afford sufficient room for a

¹ Read before the Medical Society of London, March 4th, 1889.

wound which is required to remain permanent unless the incision be made obliquely in the manner described. The original opening in the skin should be made large enough at first, as it will then last for years without the necessity of dilating; but, if made too small, it may require enlargement within a few weeks of the operation. This, though a small matter to the surgeon, is generally a subject of considerable concern to the patient. It is the cicatricial contraction of the skin, and not of the deeper parts, which gives rise to this trouble.

Having obtained a short and wide passage of communication with the bladder, through which we experience no difficulty either in withdrawing the urine or in frequently injecting, with force and volume, large quantities of fluid, our next desire is generally to subdue the cystitis which usually exists, in as expeditious a manner as possible, and for this purpose there is nothing, as a rule, more simple or effectual than hot water. In order that this should be successful, the temperature should be gradually increased up to 120° F. Most patients can be induced by degrees to tolerate such a heat with comfort, and the higher the temperature, the greater the sedative effect.

There is nothing to be gained by using drugs simply for their germicide properties. What we require is something to scour from the tender mucous membrane every drop and particle of irritating matter. I have found creolin to excel every other drug in concealing, if not correcting, the putrid smell of some urines, and if the urine is loaded with tenacious viscid mucus, hot solutions of sea-salt appear to answer best.

One of the few drugs I have found of undoubted benefit in cystitis is the oxy-muriate of bismuth. I was induced to try it from its well-known sedative influence upon the inflamed urethra. The plan of using it is to introduce a drachm, well agitated in four ounces of hot water, after the bladder has been thoroughly washed out. The ponderous character of the bismuth causes that which does not adhere to the mucous membrane to precipitate behind the prostate. Patients invariably express their satisfaction at the comfort they derive from this treatment. They state that the desire to micturate is not so frequent, and that the reflex pain along the urethra is diminished. It is necessary to remove the whole of the bismuth by irrigation before administering a second dose, as the bismuth undergoes chemical changes in the bladder, being most probably converted into a sulphide possessing no known therapeutic advantages.

I will now very briefly mention the particulars of three cases I have treated in this manner. I could supplement them with others were it desirable, some in which the results have been equally satisfactory, and others where the benefits have been limited to giving relief in hopeless cases during the last few weeks preceding death.

One of my earliest cases was a merchant, J. S., now 70 years old. I operated upon him in November, 1884, after he had been suffering for ten years from enlarged prostate and cystitis. He had all the usual symptoms in an aggravated form, and was compelled to abandon his business. The operation was perfectly successful, and he made a rapid convalescence. I lost sight of him for a number of years owing to his removing out of town to reside in one of the suburbs. Within the last month I was successful in again finding him, and he reports himself as being quite cured, free from all discomfort, can retain his urine four hours, and attend to business and the Exchange regularly. He continues to withdraw his urine through his perineal aperture; and the urine is normal in every respect.

The next case I wish to mention is a very typical one, and will, I think, clearly illustrate all the features and advantages of the operation. Last June I was consulted by a gentleman, aged 63, who had suffered from symptoms of enlarged prostate for eight years. He was passing muco-purulent urine almost every quarter of an hour, night and day, and his general health was rapidly giving way under the constant suffering and loss of sleep. Being averse to any operation, he struggled against fate for five months, hoping against hope, and washing out his bladder with every possible solution until the climax came and he had to surrender. The catheterism became intolerable, and the urine, in addition to the pus, was rarely free from blood, and had a putrid odour.

In November I performed perineal urethrotomy, and introduced a full sized india-rubber tube, which was removed at the end of three weeks. I may here remark that when the tube was removed a globular phosphatic concretion, the size of a marble, had formed at the end of it, and caused considerable laceration of the passage in its removal, showing the desirability in highly phos-

phatic urines of removing the tube at short intervals. From the day of the operation the bladder was washed out with a hot solution of boroglyceride every four hours, night and day, and after the tube was removed the same practice was continued through a No. 12 soft india-rubber catheter passed every four hours through the perineal wound. The effect of the operation was immediate and really magical. The pain disappeared, sleep returned, and in six weeks he could retain his water for five hours. Now he can go about and visit his friends, having perfect confidence in the capacity of his bladder and the integrity of his sphincter. His urine is clear and free from albumen.

The last case I shall refer to is interesting, as it illustrates the application of the treatment in a somewhat different condition of the bladder.

In September of 1885 I saw with Mr. White, of Warrington, a young gentleman, aged 22, suffering from what at first appeared to be an acute attack of cystitis, but which subsequently was supposed to be an instance of periprostatic abscess, bursting in the bladder. For twelve months he was treated on a regular system of bladder-irrigation through a catheter, but after a few months the urethra became so tender that smaller and smaller catheters had to be substituted, until eventually he expressed his inability any longer to stand the suffering the catheters caused him. In August, 1887, I performed perineal urethrotomy, and, at the same time, took the opportunity of exploring the bladder. The supposed condition was confirmed, a large abscess cavity opening into the base of the bladder on the left hand side being discovered. From this time (upwards of two years ago) the bladder has been regularly washed out every four hours through the perineal wound by means of a Bigelow's No. 17 catheter, and a twenty-ounce brass syringe. In the intervals of the washing, the patient can retain his urine without the slightest inconvenience, and he is now in the habit of driving about, and capable of attending to business. The quantity of pus is slowly but certainly diminishing, and there still remains reasonable prospect of the abscess cavity eventually closing.

I may also mention that I have also adopted the operation with success in some cases of persistent hæmaturia of obscure origin.

The advantages of the operation are, in the first place, to enable the bladder to be completely relieved of its contents whenever desirable, and by this means to derive all the benefits of physiological rest. Secondly, it provides a channel through which we can substitute a thorough for an imperfect system of washing out the bladder, the elasticity of the membranous urethra permitting the introduction of a larger catheter than the penile urethra will admit. The size of the catheter admits a greater and more forcible volume of fluid to be used for irrigation purposes, by which means we can more effectually dislodge the adherent mucus, and remove pus and any particles of calcareous matter lodged behind the prostate, or in the cavities of any sacculi, should they exist. This reduces and economises time, and lessens the risks to the patient due to prolonged exposure. At each washing, six inches of the most sensitive part of the urethra escape the irritation produced by the passage of a catheter.

By the maintenance of the permanent opening we avoid the relapse which almost invariably takes place when the opening is allowed to close. It affords a speedy means of converting a putrid into a pure urine, and finally, from the cases I have operated upon, it would appear that all the inconveniences attending enlarged prostate are permanently arrested without incurring the risks of a really serious operation, and that nothing then remains in respect of that condition to curtail the length of an average life. In all my cases there has been perfect control over the urine after the operation.

Although the title of my subject implies the inference that I restrict this plan of treatment to confirmed and otherwise hopeless cases, this by no means represents my opinion. I have determined only to recommend what I have tried and found successful, but I think it logically follows that if the operation is successful in advanced cases, we may reasonably conjecture that it would be all the more successful if adopted earlier, as the advanced cases are undoubtedly the result of neglect in the earlier stages. So far I have been deterred from operating earlier by the reluctance of patients to undergo any operation until the intensity of their sufferings has compelled them to submit.

I further venture to claim that the advantages of this method have been extended to other conditions of the bladder. For instance, in malignant growths with periodic attacks of hæmorrhage,

the retention of a perineal opening generally renders the surgeon master of the situation, as he can at any moment place the patient in a condition of collapse, and by this means arrest the hæmorrhage.

From what I have stated, it may be gathered that, although what I advocate is only, perhaps, a small advance in the direction of what has been practised before, nevertheless, small as it is, it is sufficient to secure advantages which have never been hitherto within the resource of surgery, as it affords freedom from pain and irritation, immunity from relapses, and an escape from the miseries of an incontinent bladder in cases of enlarged prostate.

In conclusion, I wish to emphasise the chief features of this treatment: First, that the operation is undertaken with the design to establish and permanently maintain a fistula, in the closest possible proximity to the bladder, but in front of the prostate. Secondly, that the fistula can be utilised at pleasure for the dual purpose of removing the contents of the bladder, and of minimising the inconveniences attending regular, systematic, and thorough irrigation.

I am under the impression that the cases I have cited are the first on record where the bladder has been approached through the perineum with the deliberate intention of keeping the opening permanent for the purpose of relieving the pain and misery of an enlarged prostate.

HISTORICAL NOTE ON OVARIOTOMY IN SPAIN.

By SIR SPENCER WELLS, BART.,

Surgeon to Her Majesty's Household.

In the chapter, in successive editions of my books on *Ovarian and Abdominal Tumours*, on the History and Progress of Ovariectomy, I could not give any details as to the number of cases of the operation in Spain, nor of the results. I am now able, through the kindness of Dr. Kispert, a German surgeon who has practised in Madrid during the last fifteen years, and is physician to the English Embassy there, to supply all the information he has been able to obtain up to the end of 1855.

On my return from a short spring holiday in the South of Spain I passed through Madrid, and had the pleasure of renewing my acquaintance with Dr. Kispert, who had followed my practice at the Samaritan Hospital about twenty years ago, and has since had six cases of ovariectomy in Madrid, all successful. The operator who has had the largest number of cases is Dr. Rubio, of Madrid, formerly of Seville, who, up to 1855, had had sixteen cases, with seven recoveries and nine deaths. Dr. Cardenal, of Barcelona, has had seven cases, with five recoveries and two deaths. No other operator has had more than five cases. One of these surgeons lost all five patients; another had two recoveries and three deaths. In all there were sixty-one cases among twenty-eight operators, with a total result of thirty-one recoveries to thirty-eight deaths—a mortality of 55 per cent. Such a death-rate now appears enormous, but it is smaller than it was in England thirty years ago, and probably not much larger than it would be anywhere if operations were done by men of very small experience, some of them, as in Spain, not having operated more than once or twice.

Dr. Kispert believes that ovarian disease must be very much rarer in Spain than in Germany or England. In a large clinic he does not see more than two cases in a year. But he thinks that since 1885 ovariectomy has been performed more frequently, more generally, and with better results than before that year; and he hopes to be able to collect reliable statistics of the results during the past three years. My own case in 1887 in Tenerife will appear among the successful cases in Spain in the later tables.

I should like to refer those specially interested in the diagnosis and treatment of abdominal tumours to one case of extirpation of a floating kidney, published by Dr. Kispert in the volume of the *Deutsche Medicinische Wochenschrift* for 1886; and to a case of wandering liver—hepar migrans—which may be found with illustrative diagrams in the volume of the *Berliner Klinische Wochenschrift* for 1884.

PRESENTATION.—Dr. R. G. Loverock has been presented with an illuminated address accompanied by a cheque on the occasion of his leaving Ballyjamesduff.

CLINICAL MEMORANDA.

RATIONAL TREATMENT OF PERICARDIAL ADHESIONS.

I LATELY met with a patient who gave the following history. A man, 28 years of age, when a boy of 15 suffered in England from an attack of rheumatic fever. He had a contemporaneous attack of pericarditis. After the acute symptoms subsided he was taken by his medical adviser to a well-known physician. The result of this consultation was that a very grave prognosis was arrived at, and the boy's parents were informed that his only chance of life was extreme care. He was sent to France to school, the conditions obtaining there being believed to be more favourable to the maintenance of health than by his staying in England. Being away from parental supervision, he, boy-like, neglected care and went in for gymnastics and sports of all kinds, commencing immediately upon his arrival—that is, within five months after his attack. He returned to England, and, after medical inspection, was pronounced much better. He was again cautioned to conserve his energy, but he disobeyed instruction in the most reckless manner, going in for running, cricket, football, and volunteering enthusiastically. He afterwards became an engineer and went to China, where I met him. He told me his history, and—not because he was ill—I examined his heart. No valvular disease was present, and the only condition found to be abnormal was a slight increase in the pericardial area of dulness. The case has set me thinking as to the rational treatment of pericardial lesions generally. If adhesions the result of inflammation take place in a joint, early movement of it is the A B C of treatment; if neglected, a stiff joint is the result. When recently-formed pericardial adhesions take place, why should the opposite condition be insisted on? Prolonged rest will allow of the adhesions firming up into fibrous patches of adhesion, rendering it impossible for the heart to execute more than a limited amount of movement; whereas early cardiac excitation will bring more movement to bear on the recently-formed adhesion tissue, and pull it out into strands of tissue, in place of allowing it to heal as it chooses in patches. In fact, a filamentous in place of a membranous adhesion will be more likely to be induced, thereby allowing more freedom of cardiac movement. When valvular trouble is present in conjunction with pericardial adhesion, encouragement to take exercise will, no doubt, cause trouble; but with pericardial adhesions pure and simple it seems only rational that benefit may ensue from gradually increased exertion at a reasonably early period during convalescence.

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SURGICAL MEMORANDA.

THE TREATMENT OF INGROWING TOE-NAIL.

INGROWING toe-nail is, no doubt, most rapidly and effectually cured by avulsion of the nail. The operation demands general or local anaesthesia, and is not lightly undertaken in private practice. I venture to suggest a plan of treatment which is rational though not rapid, free from risk, and almost painless. In my hands the results have been excellent, and the cure, so far as I have been able to ascertain, permanent.

Removal of the offending nail, entirely or in part, from the raw flesh or tender granulations is the essence of the radical, and the chief aim in all treatment. In the following method of treatment the aim is rather to remove the granulations from the nail.

Supposing the patient's left great toe is affected, and on its inner side. I first wash and dry the parts, and then thoroughly rub the granulations with solid nitrate of silver. Since the introduction of cocaine this proceeding can be rendered practically painless. I next cut small pieces of fine Turkey sponge, and press them well down between the nail and the granulations, inserting a small piece beneath the inner free edge of the nail. Pressing this sponge pad downwards and inwards, I fix it in place by winding a long narrow strip of plaster round and round the toe, commencing from the outer side, my aim being to compress the granulations, and draw them as far as possible from the nail. Turkey sponge is by far the best material for this purpose, being soft, absorbent, and elastic. A soft easy shoe should now be worn, and patients can pursue their ordinary avocations without risk. Some aching pain often follows, but this is soon succeeded by a considerable feeling of relief.