ON RECTO-VESICAL LITHOTOMY.

CASE OF RECTO-URETHRAL FISTULA FOLLOWING THAT METHOD, CURED BY PLASTIC OPERATION.

By JAS. R. LANE, F.R.C.S.,

SURGEON TO ST. MARY'S AND THE LOCK HOSPITALS, AND TO ST. MARK'S HOSPITAL FOR DISEASES OF THE RECTUM.

I HAVE read with much interest the remarks of the Parisian correspondent of THE LANCET, published in the number for January 23rd, relating to the plastic operations of Dr. Marion Sims, who it appears is now established in practice in the French capital.

In Dr. Sims' commendation of lithotomy in women by vaginal incision, with immediate closure of the wound by suture, I entirely concur. I have myself performed and strongly advocated the operation (see THE LANCET, January 10th, 1863), believing it to be, in certain cases, the best and safest procedure that can be devised. I should, however, have great hesitation in adopting Dr. Sims' proposition to apply a somewhat similar method to the male subject, by making an incision into the base of the bladder in the median line behind the prostate through the vesical trigone, the wound to be closed by metallic sutures immediately after the extraction of the stone. The case mentioned by your correspondent as having been operated on in this manner by Dr. Bauer, of New York, the sutures being inserted by Dr. Sims, is one of great interest; but, notwithstanding the signal success which was obtained in this instance, I scarcely think the practice is likely to meet with many imitators. An incision of any extent in this situation cannot be made without great risk of wounding the recto-vesical fold of peritoneum—an accident which would be pretty surely followed by fatal results, and on this account incision of this part of the bladder has been condemned by almost every surgical writer. The recto-vesical fold, it must be remembered, is not placed transversely between the points of entrance of the ureters, but projects forwards between them, so as to form a cul-de-sac, which varies in depth in different individuals. In an empty bladder the fold nearly approaches in the median line to the posterior border of the prostate gland, and in most persons the bladder must be greatly distended to carry the line of reflection backwards more than an inch from this point. A longitudinal incision cannot, therefore, be made in this part of the bladder to the extent of an inch without a probability of wounding the peritoneum; and the risk is obviously enhanced in cases where the bladder is irritable, and resents the presence of more than a small quantity of urine, or where it is thickened by chronic inflammation or hypertrophy of the muscular coat, which conditions are not unfrequently present where a stone has been lodged for any length of time in the bladder.

I will not dwell upon the difficulties attending the insertion and fastening of sutures at such a depth within the rectum. I should imagine them to be great, but they are evidently not insuperable, as the result of Dr. Sims' case shows. Indeed, the occasional failure to obtain closure of the whole of the wound by the first operation would be of comparatively little moment were the incision as safe as the vaginal incision in the female.

If, however, there were sufficient reason for believing, with Dr. Sims, that lithotomy by the rectum should supersede other methods more generally approved, and be accepted as the operation for the removal of calculus from the bladder in adults—a conclusion which I, for one, am not yet prepared to adopt,—I would suggest that the incision should not be made so far back as recommended by Dr. Sims, but that the knife should be made to enter (from the rectum) into the membranous part of the urethra just in front of the prostate, and be pushed on, with its edge directed downwards, so as to divide vertically the prostate and neck of the bladder to the requisite extent. Sutures might then be used, after the extraction of the stone, to bring the edges of the wound together. An incision of this kind would be attended with no risk to the peritoneum; being in the median line, it would be less likely to cause hæmorrhage than the lateral operation, and less likely to be attended with urinary infiltration on account of the attachments of the pelvic fascia laterally to the prostate being removed from danger; but it would involve the division of one or other of the seminal ducts, for it would be impossible to carry the incision so exactly in the median line as to pass between them.

Lithotomy by the rectum seems to have been first systematically advocated in 1817 by Sanson, who suggested two modes of performing the operation. His first method consisted in making an incision in the median line of the perineum through the sphincter ani into the rectum. At the bottom of this wound he felt for the groove of the staff, and punctured the urethra in front of the prostate, carrying his incision backwards in the median line through the prostate and neck of the bladder. In his second method, he commenced by a similar incision through the perineum and sphincter, but opened the bladder *behind* the prostate, and carried his incision backwards through the vesical trigone. The recto-vesical operation was afterwards taken up by some of the Italian surgeons, Vacca Berlinghieri, Géri, and others, though strongly condemned by Scarpa. Speaking of recto-vesical lithotomy, Mr. Sam. Cooper observes:—"In the School of Practical Surgery at Turin, out of five operated on through the rectum three died, although eleven other patients cut in the lateral way all recovered in a short time." Again: "Dupuytren, who tried the recto-vesical operation in six instances as performed by Vacca, lost three of his patients of inflammation within the pelvis, while the three others remained with incurable fistulæ."* I presume these patients were operated on according to Sanson's second method, but this is not clearly explained. Velpeau, in summing up the results of 100 cases operated on by the recto-vesical incision (including both methods), counts "about twenty deaths, the same number of fistulæ, and a variety of accidents which placed the life of some of the other patients in danger."†

Facts such as these caused recto-vesical lithotomy to be almost entirely abandoned. Sanson's second method, unquestionably the more dangerous of the two, has, I believe, no advocate amongst modern surgeons; and with respect to his first plan, the only surgeon who has practised it at all recently is the late Mr. Lloyd, of St. Bartholomew's Hospital. I am not acquainted with the details of Mr. Lloyd's mode of proceeding; but I know that he commenced with the median incision of the perineum, sphincter ani, and lower extremity of the rectum. He then entered the membranous part of the urethra, and reached the bladder through the prostate; but I am not aware whether he made a free incision of the gland, or a limited incision combined with dilatation. In any future operations through the rectum, with a view to unite the wound by suture, I need hardly say that the median incision of the perineum and sphincter should be carefully avoided, as being both unnecessary and objectionable. It is sure to be slow in healing, and it interferes with all the muscles which converge to the central point of the perineum. If room were required at any stage of the operation, it could be readily obtained, without any risk of future inconvenience, by lateral division of the integuments and sphincter muscle.

I have lately had a patient under my care in St. Mary's Hospital with a recto-urethral fistula following a recto-vesical operation, whose case is of interest in relation to the question under discussion.

A. B—, aged nineteen, had suffered from stone in the bladder from a very early age. Two years and a half ago, a calculus the size of a walnut was removed by Mr. Lloyd in St. Bartholomew's Hospital. The cicatrix showed that an incision had been made in the raphé of the perineum through the sphincter into the rectum. Externally this wound was soundly healed, but on examining the interior of the rectum an opening was discovered behind the sphincter, leading into the urethra immediately in front of the prostate. The aperture was of such a size as to admit the end of a director. The urethra was otherwise healthy, and a full sized catheter readily passed into the bladder. A probe introduced from the rectum through the fistulous opening at once came in contact with the catheter in the urethra. The incision, in healing, had not left the anal aperture of the usual circular appearance, but had caused it to be prolonged forwards in a grooved or angular form. He had good retentive power over his fæces; but when he passed urine a considerable portion, after escaping through the fistula, flowed along this groove down his thighs. He stated that his urine was voided in about equal quantities in this way and by the penis; the annoyance therefore was very great, for his clothing was continually saturated with it. The escape of course was not constant, as in the case of a fistula leading into the bladder, but only took place periodically and during the act of micturition. Repeated applications of nitrate of silver and of the actual cautery having proved ineffectual, I determined to pare the edges and bring them together with sutures.

Operation, Jan. 13th.—The large end of Bozeman's speculum

* Dict. of Prac. Surg., 7th ed., p. 932.

† Op. Surg., Mott's translation, vol. ii., p. 941.

was introduced into the rectum, and, to afford increased facility for getting at the aperture, I made a slight incision through the skin and superficial fibres of the sphincter on each side. The edges of the fistula were then carefully denuded, and four silver-wire sutures passed. The ends of the sutures were brought through the apertures in a narrow leaden plate, after Bozeman's method, and fastened with perforated shot. The silver catheter which had been held in the urethra and bladder during the operation was then tied in, and the patient sent to bed.

The catheter was retained for two days, but being found to cause a good deal of pain and irritation, it was then dispensed with, and the patient was allowed to pass his urine by his own efforts along the urethra, which he did without pain and without any leakage through the wound. The leaden plate and the sutures were removed eight days after the operation, when the edges of the wound were found to be in good apposition and well united. There has been no escape of urine by the rectum since the operation, and at the date of this report, sixteen days afterwards, he passes the whole of his urine readily, and in a good stream, by the urethra.

I am aware that Dr. Marion Sims, Mr. Baker Brown, and other experienced operators, have for some time dispensed with the use of the leaden plate recommended by Bozeman, or any of its modifications, in plastic operations of this kind, and attain very constant success by simply twisting the ends of the wire sutures. I, however, still adhere to the use of the plate, the only disadvantage of which is the somewhat greater length of time required for its application. I believe it increases the chance of success by protecting the wound from the contact of foreign substances, which is especially advantageous in the interior of the rectum; and by maintaining the sutures at a uniform distance from each other, thus keeping the edges of the wound on the stretch, and preventing them from gaping apart in the intervals between the sutures.

Grosvenor-place, Feb. 1864.

A Mirror

OF THE PRACTICE OF MEDICINE AND SURGERY IN THE HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum, et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

CLINICAL REMARKS ON THREE CASES OF VESICO-VAGINAL FISTULA, SUCCESSFULLY TREATED.

(Under the care of Mr. POLLOCK.)

CASE 1.—E. D., aged thirty-nine, married, was admitted on December 16th, 1862, suffering from the effects of a vesico-vaginal fistula. She stated that some ten years previously, while in Ireland, she was confined with her first and only child, and that she had been attended by a midwife, who allowed the labour to continue eight days and nights, when delivery took place. The child was dead. During the whole of this time no medical aid was procured. Delirium came on during the latter stages of the labour, so that the patient did not recollect any particulars of what subsequently took place until after the child was born. For about a fortnight after delivery she continued to pass urine naturally, and without difficulty or pain, and she had perfect command over the bladder; but at the expiration of that time she found that her urine passed from her involuntarily. Subsequently she came to England, and some four years previous to the date of her present admission she became an in-patient of this hospital. On that occasion she declined to submit to an operation then proposed to her, and she quitted in a few weeks without any relief.

On examination, the external parts were found very con-

siderably excoriated from the incessant contact of the escaping urine. The urine ran away as freely in the recumbent as in the upright posture. The orifice of the vagina was rather larger than natural, in consequence of a partial rupture of the perineum. Upon the introduction of Bozeman's speculum into the vagina, and upon very slight depression of its rectal surface, an orifice, the size of a two-shilling piece, passing from the vagina into the cavity of the bladder, was readily exposed. The fistula was within half an inch of the anterior lip of the os uteri; the edges of the fistula were cicatrized and healthy; the mucous surface of the vagina was healthy, and free from cicatrices. A large portion of the mucous membrane of the bladder, now red, vascular, and somewhat thickened, prolapsed readily through the fistula, and presented a round, florid nodule of membrane, prominent, and projecting into the vagina at its anterior wall. On the surface of a portion of this mucous membrane, the orifice of one of the ureters could be seen distinctly ejecting every now and then a few drops of urine. The os uteri was natural; but there was a general tendency to prolapse both of uterus and rectum into the vaginal cavity. In consequence of the reduced state of the patient's condition, she was placed on a liberal diet, and ordered to take a mixture of steel and ammonia three times daily; also to have a warm hip-bath night and morning to relieve the irritation caused by the excoriation of the external parts.

Jan. 7th.—As her health had much improved and the menstrual period had just passed off, the operation was decided on for the following day; and she was ordered to take a dose of castor oil at bedtime, and to have an enema in the morning.

8th.—The bowels were freely relieved, and the rectum well emptied by the enema. When fully under the influence of chloroform, the patient was placed in the position of one about to undergo the operation of lithotomy. The introduction of Bozeman's speculum at once exposed the fistula. A silver female catheter introduced into the urethra was readily passed through the fistula into the vagina, but no urine escaped through the instrument; the bladder was quite empty and contracted; it prolapsed freely into the vagina, and required some small pieces of sponge to be introduced to keep it back out of the way of the knife. Without any difficulty, with a thin narrow knife on a long handle, and a pair of long fine-biting forceps, a circular piece of mucous membrane, half an inch in breadth, was carefully dissected off from around the vaginal surface of the fistula. Care was taken that the margin of the fistula should be rendered perfectly raw in its whole circumference, and, at the same time, that neither the muscular wall nor the mucous surface of the bladder should be implicated, beyond the exposure of the muscular tissue of the latter by the removal of the vaginal mucous membrane from its outer surface to the extent of the half inch round the fistula. Thus the raw surface was made entirely at the expense of the vaginal wall proper. The pieces of sponge were now removed from the interior of the bladder. Five sutures (metallic wire, silvered) were subsequently introduced from before backwards, through the margins of the wound, at equally distant intervals. The middle suture was passed through the anterior lip of the os uteri, as very little mucous membrane remained on its outer surface after the edges of the fistula had been pared. The sutures were introduced half an inch beyond the edge of the cut surface, then carefully passed between the walls of the vagina and the bladder and across the fistula, on through the opposite surface, so as to emerge half an inch from the margin of the wound on the further side. Especial care was taken that the sutures should not pass deeper than the cellular tissue between the vagina and bladder, in order that the coats of the bladder should in no way be included in the sutures. Five sutures were sufficient to completely approximate the entire extent of the margins of the freshly pared surfaces. One by one, each suture was drawn tight; and when the edges of the wound were sufficiently opposed, each wire was secured by twice twisting its ends together. Care was taken that the first twist should be made while each half of a wire was closely in contact with the subjacent mucous membrane across which it ran. Their ends were cut off close to the twist. The wound thus brought together presented a mere line running across the anterior vaginal wall, in the middle very nearly touching the anterior lip of the uterus. All clots were removed from the vagina, and this cavity was carefully sponged out, so as to be left quite dry. No dressing or application of any kind was placed over the wound, or in the cavity of the vagina.

The patient was placed in bed on her side. A gum male catheter (armed with an india-rubber tube and waterproof bag) was introduced into the bladder, but not tied in; the support of a pillow between the knees, and a napkin folded