

by hematuria ; so it was safe to conclude that the stone was at least two years old. It did not appear to be large, and being of slow formation it was probably not phosphatic in character. I had then to deal with a hard calculus in a young patient, both of which circumstances rendered it unadvisable to perform the less serious operation of lithotrity ; and to choose between supra-pubic and perineal section was a difficult matter, until I obtained access to the pamphlet of Dr. Dulles, already referred to. In consideration of the good results shown in his table, and to avert the possibility of hemorrhage or urethral laceration, the supra-pubic method was adopted. In the operation I was assisted by Drs. W. T. Aikins and J. L. Davison. After chloroforming and sounding the patient, the bladder was thoroughly irrigated with a warm borated lotion and then injected with carbolyzed water ; and percussion showing that the bladder was well up in the hypogastrium, rectal dilatation was dispensed with. The ordinary incision through the abdominal walls was made and attended with only slight hemorrhage from small branches of the epigastric, which were easily secured. Instead of catching up the bladder with a tenaculum, two strong threads of silk were passed through its coats, one on each side of the proposed incision and well held up by an assistant, which materially assisted in exposing the anterior surface. The bladder incision was made as close as possible to the pubes, and only sufficiently large to admit the little finger for the purpose of exploring the interior and locating the stone which was lying loosely in the fundus. Having ascertained that it was not too large to admit of extraction through so small an opening, a straight, pair of forceps was introduced, and a mulberry calculus slightly larger than a peach stone, was easily removed. After a further digital examination to preclude the possibility of leaving a second calculus, and as the incisions were made with antiseptic precautions, and the structures appeared to be in a healthy condition, it was determined to aim at primary union. Accordingly, the bladder wound was united by interrupted fine catgut sutures that did not penetrate the mucous coat and at short intervals, in order to render it watertight. The external wound was closed also after the suspensory ligatures had been withdrawn and dressed with iodoform. The metallic catheter which had been

used as an aid in elevating the bladder, and a guide down upon which to cut, was now withdrawn and a flexible one substituted.

The subsequent history of the case is interesting, chiefly in the fact that nature will often surmount apparently insuperable obstacles to counteract the effects of bad nursing. Strict injunctions were given that the catheter be watched night and day lest it become impervious. For three days the case progressed satisfactorily, the patient having no pain and the temperature having risen no more than one might expect in urethral fever, when on November 28th, I was summoned to relieve the patient, who was reported to have been in pain for some hours. On my arrival I found the catheter as dry as a bone, and on removing the dressings, the wound, which hitherto had been uniting rapidly, showed signs of oozing. I cut one suture and removed the catheter, when urine not only flowed *per urethram*, but also shot up in a stream from the wound. I endeavored to pass a soft catheter through the wound for the purpose of drainage, but unsuccessfully ; evidently the vesical opening was smaller than the external one, and, lest further exploration prove disastrous, I trusted to free exit through the urethra. I ordered the wound to be frequently washed antiseptically, and dressed with carbolyzed ointment, re-introduced the catheter, and, instead of allowing the urine to drop into a sponge as most works direct, a small vessel was now used which the nurse was instructed to empty every hour, so that any clogging up of the catheter might be detected before damage could ensue from over-accumulation. The catheter was removed each day, washed out and re-introduced.

Whether the escape of urine occurred from the needle punctures made in introducing the suspensory ligatures or from the incision itself, I do not know ; but I feel quite confident that had the accumulation of urine been prevented, which ordinary watchfulness would have done, the patient would have been well in a week ; as it was, he went on rapidly towards recovery ; only once was there slight oozing of urine from the granulating wound, which was on December 13th, being the first occasion of natural urination ; up to this date the catheter having been retained. On December 21st, being twenty-six days after the operation, he was quite well.

So little has been written on this subject, and,