

sitive and stoutly objected to any operative interference at first, I merely prescribed a mixture of acetate of potash and hyosciamus, and advised her to drink barley water frequently. After a time she allowed me to try dilatation of the urethra, which I had preceded by injections of warm water about twice a day. After some futile attempts at crushing with dressing, and polypus forceps, and as the hopes of the patient were not realized in the expulsion of the stone; although position, the filling of the bladder with tepid water, etc., had all been tried, with no other effect than the apparent dislodgement of the stone from its first position, as I now found it in the bas-fond, and could detect no stone in any other part of the bladder I then, with the final consent of the patient, resolved to try lithotripsy before resorting to lithotomy, as my patient was a very stout and plethoric subject with an apoplectic family history. On the 7th of May, after injecting nearly a pint of warm water into the bladder, I first heated and oiled a very large sound, nearly as large and of the same curve as my lithotrite, and after locating the stone, had not much difficulty in grasping it with the lithotrite and found that the diameter was one inch and a quarter by the graduated scale. On putting on pressure by turning the screw, I found that the stone appeared to shoot out of the blades, and as the patient was nervous I did not make any further attempt to catch it then, and merely washed out the bladder with some more warm water, after which I found a few fragments of stone and some sand in the urine. After this was passed I injected 6 or 8 oz. of linseed oil, and ordered the patient to remain quiet until I should have another sitting. At the end of three days I had another sitting, when the patient assured me that she could turn in bed better and much easier after the former imperfect crushing, due, perhaps, to the rough edges of the stone being somewhat ground off. I followed the same routine as before, but this time was more successful as I crushed it through with a great deal of difficulty, and after the washing found several larger pieces and more sand. I followed these sittings at various intervals according to the state of patient, until I had operated 14 times in all, when on the 3rd of June I had the satisfaction of crushing the last fragment, which was most difficult to catch. After this I had the bladder washed out once a day for a few weeks with tepid water, and some linseed or sweet oil in-

jected occasionally. My patient was, in a few days after the last crushing, able to resume her household duties, and she says she has not felt as well for years, and is taking no medicine now only a dose of bicarbonate of potash in a bitter infusion once a day.

In regard to this stone which I have no doubt had been a long time in forming, the general symptoms had no doubt been overlooked, as a case of stone in the female bladder is so rare that few medical men look for or expect it, and surgical literature gives us next to nothing on its treatment. Even Poulet in his admirable work on foreign bodies in the female bladder scarcely says anything of stone, only as a casual formation around other foreign bodies. This stone had no foreign body for a nucleus that I could detect and was a triplephosphate throughout, although somewhat harder than a phosphate should be in the centre.

In reference to crushing in general. Civiale, one of the first writers on lithotripsy, and one who had great success, says: "it is a most important precept to make the sittings very short and to operate *very slowly and gently*." I followed this precept religiously in this case, which, although requiring a great deal of time and patience, terminated most satisfactorily. Now as to the use of the crusher, I used Thompson's lithotrite, made by Mr. Stevens, which is much smaller in calibre than the lithotrites in use some years ago, and is in my opinion a model instrument. Nearly every author has his own method of handling a lithotrite. Gross advised a wriggling motion of the wrist, and some advise you to get the female blade under the stone, etc. I found that all these movements generally cause the stone to float out of the reach of the lithotrite, causing another search with the sound, and on this occasion I used a lead sound that I could bend to get the stone out of any cul-de-sac into which it might stray, which I found very convenient. I found after a few crushings that the easiest and safest way to catch the stone was to place the point of the lithotrite on it after getting it into the centre of the bladder with the sound, and then holding the lithotrite firmly with the left hand, left elbow supported, in order to prevent the lithotrite (which is much heavier than a sound) from gliding past the stone, reserving your right hand, of course, for the manipulation of the screw. After having once grasped the stone it is very easy to turn it upwards,