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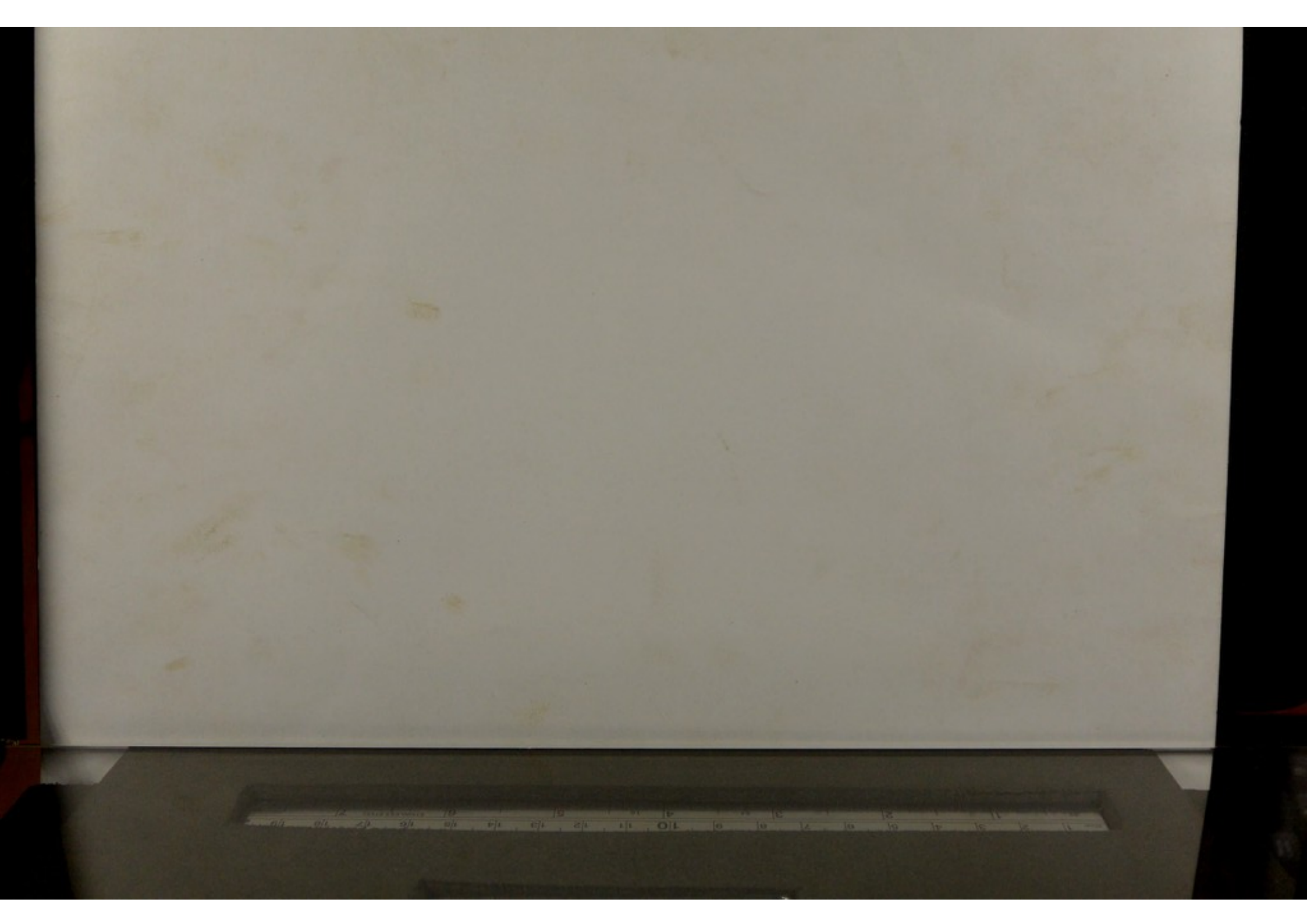

A Case where Lithotomy was twice Performed within Fourteen Months, with Remarks on the Recurrence of Stone in the Bladder. By REGINALD HARRISON, F.R.C.S., Surgeon to the Liverpool Royal Infirmary, and Lecturer on Clinical Surgery in the Victoria University.

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CASES of recurring stone in the bladder requiring removal by lithotomy are sufficiently rare as to need no apology for their narration. The particulars of this instance are as follows.

Thomas S., æt. 62, was admitted into the Royal Infirmary in July 1884, suffering from symptoms of stone. On examination it was found that the bladder contained more than one calculus. The prostate was large, and considerably impeded the introduction of the necessary instruments for sounding and exploring the bladder. Under these circumstances I selected lithotomy, with the view not only of removing the stone but of improving the condition of the prostatic urethra by the method I have already brought under notice.[1]

On July 25, 1884, I performed lateral lithotomy, and made a free section of the prostate, which, by the elevation of its floor from hypertrophy, rendered access to the bladder difficult. With the forceps I removed two ounces and a quarter of stone, which broke in removal. Allowing for portions that were lost during this piece-meal extraction, the stones must have weighed about three ounces. The calculi were chiefly phosphatic, as will be seen, but with some urates. The bladder was carefully explored both with straight and curved forceps, with the finger, and finally was well washed out from the wound with a Higginson's syringe. The section of the prostate referred to rendered these various manipulations quite easy. One of my bladder drainage tubes was introduced. There was some free oozing after the operation, which necessitated a plug of lint soaked in turpentine being inserted by the side of the tube. The patient made a good recovery; the bladder drainage tube,

[1] "On the Treatment of certain Cases of Prostatic Obstruction by a Section of the Gland," *Transactions International Medical Congress*, Copenhagen, 1884.

which was used for rendering the section of the prostate permanent, was changed several times, and was not finally removed until six weeks after the operation. The patient left the Infirmary shortly afterwards apparently well, with a sinus through which urine passed in small quantities. Considering the time the drainage tube had been retained for improving the prostatic urethra, I did not attach any importance to this, and guided by other experiences assured the patient that the wound would soon heal.

After he left the Infirmary, though he returned to his work, his bladder never quite recovered itself; the wound did not entirely close, and he suffered more or less at times from chronic cystitis. These circumstances led me to believe that the bladder was sacculated, but I could detect nothing more. In August 1885, my house surgeon, Dr Bristow, sounded him and thought he felt another stone. On a subsequent examination I confirmed this diagnosis, and on September 12, 1885, I again performed lateral lithotomy for him on the old line, in the course of which there was a small sinus remaining from the previous operation. Surgeon-General Mackinnon, C.B., of the Army Medical Department, and Dr Frank, of Cannes, were present. The operation was perfectly easy, the access to the bladder through the prostate being much improved, for on this occasion the largest sized staff was readily passed. I removed a stone which, with its encrusting shell of friable phosphates, weighed one ounce. A double bladder tube was introduced for drainage and retained for a few days, when it was removed; the patient was up on the twenty-third day, and he left the Infirmary exactly five weeks after the operation, with the wound soundly healed and the functions of the bladder completely restored. He has since been to report himself, when he was found to continue quite well. No prostatic bar remains. I was somewhat puzzled at first to explain satisfactorily the course of events in this case. I have mentioned the various processes employed in the first operation, so far as improving the entrance into the bladder was concerned, for the purpose of showing how thorough an examination of the interior of the viscus was

necessarily made, both by the finger and different kinds of instruments. It seemed almost impossible that a stone, however sacculated, could, under these circumstances, have escaped detection. Still, on the other hand, when I considered that the wound never completely closed after the first operation, and that in the interval the patient was never free from signs of vesical irritation, it seemed to be probable that the whole of the stone had not in the first instance been removed. A careful examination of the stone itself further convinced me that this was the true explanation. If the mass of calculous material removed at the second operation is carefully examined, it will be seen to consist of two different strata, as geologists would say. The inner portion or nucleus—of the size of a flattened French prune—evidently belongs to the same period and formation as the calculi removed at the first operation, the outer friable crust of phosphate being clearly of recent production. I have no hesitation in concluding that a stone of considerable size escaped detection and removal at the time of the first operation, even in spite of all the precautions which the state of the prostate prompted. As I have now performed lithotomy close upon one hundred times in children and adults, with a mortality of 4 or 5 per cent., I think I may plead that both experience and care proved unequal in this instance in avoiding a contingency which, had death happened after the first operation, might have exposed one less accustomed to operate for stone than myself to unjust obloquy and criticism. Hence my desire, apart from the general interest of the case, to record it. One circumstance afforded me considerable satisfaction, that was my being able to ascertain beyond all reasonable doubt how feasible it is permanently to improve the condition of the large prostate by its section, as already referred to in cases uncomplicated with stone.

One great objection I have had to the suprapubic operation for stone is, that it prevents us, in cases where there is the additional complication of a large prostate, doing anything to improve the condition of the latter, and of permanently removing symptoms which may remain, though no stone is left to account for them.

Mr C. Williams,[1] of Norwich, has recently published a case which adds importantly to our knowledge relative to operative procedures on the large prostate. It was an instance where he operated twice for stone in a patient over seventy years of age. On the first occasion the whole of the middle lobe of an enlarged prostate was removed, and subsequently another stone by lateral lithotomy. Referring to what had previously been done, Mr Williams remarks:—"The next point is the condition of the floor of the bladder. Two years and a half had elapsed since the part was removed, and no further growth from the prostate had taken place. The wound made by such removal had healed, and the floor of the bladder was soft, even, and natural."

Reverting to my own case; in the improved state of the outlet from the bladder may be found the explanation as to how it happened that the sacculus or depression, which concealed the stone and rendered a second operation necessary, got rid of its occupant, and thus led to the bladder once again resuming its normal shape. I do not think there can be any doubt that of the various causes which bring about sacculation and changes in shape of the bladder, anything which permanently obstructs micturition is the most fertile, and in the recognition of this explanation we have the best indication for the correction of the lesion. The case I have narrated, I think, may serve to illustrate this point. It may be doubted whether a bladder is capable of becoming so completely sacculated as to conceal a considerable sized stone from detection. One of the best illustrations of the possibility of this I casually met with in the Museum of Queen's College, Birmingham.

As to the frequency of stone relapses, Mr Charles Williams states in reference to the practice at the Norfolk and Norwich Hospital[2]:—"This makes a total of 28 relapses in 1015 operations (lithotrities and operations on females are included in this number), between 1772 and 1869, a period of 97 years, and gives a proportion of one in 36, or in 935 lithotomies (lateral

[1] *British Medical Journal*, June 15, 1878, and Nov. 14, 1885.

[2] "The Relapse of Stone in the Bladder after Lithotomy," *Lancet*, May 18, 1878.

and median), one in 33. All the patients were males, no instance of recurrence having shown itself in the female. In one case a sacculated calculus was left undetected in the bladder, and removed with a loose one at a second operation." The case referred to in the last paragraph seems to be very similar to the one I have thought proper to bring under notice this evening. In connection with Mr Williams's statistics relative to stone relapses, it must be remembered that they are drawn from a locality where calculous disorders may be said to be endemic, consequently, taking a larger area, we may conclude that the proportion of recurrences is still less, a conclusion which my own experience would warrant.

Amongst the causes favouring the reproduction of stone, I believe the large prostate is a very prominent one, and it seems to bring this about, so far as my observation has gone, in two ways. In the first place, persons who may have been in the habit of voiding for a considerable number of years renal calculi, find, after a certain age has been reached, that they no longer do so, and continued vesical irritation follows an attack of renal colic. The explanation lies in the fact that their prostates have commenced to enlarge, and thus stones, which previously escaped spontaneously, are practically trapped. I am frequently in the habit of removing small uric acid calculi by crushing, formed under these circumstances. In the second place, the large prostate, by permanently altering the shape of the outlet from the bladder, and thus causing urine to be constantly retained, engenders a state of chronic cystitis and excessive mucus excretion, which are the invariable preliminaries to the formation of phosphatic stones.

In these directions, I think, may be found an explanation for the recurrence of stone in instances where there cannot be the least doubt that the primary formation had at all events been completely removed.