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

After leaving, 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 cystitis. This led me to think 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 12th, 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., and Dr. Frank, of Cannes, were present. The operation was perfectly easy, the access to the bladder being greatly improved; for, on this occasion, the largest staff could be readily passed. I removed a stone, which, with its encrusting shell of friable phosphates, weighed one ounce. A double bladder-drainage-tube was inserted, and retained for a few days. The patient was up on the twenty-third day, and left the infirmary exactly five weeks after the operation, with the wound soundly healed, and all the functions of the bladder entirely restored. He has since reported himself as remaining quite well. There is now no prostatic bar nor residual urine.

I was somewhat puzzled at first to explain satisfactorily the course of events in this case. I have mentioned the various processes employed at 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 viscus was necessarily made, both by the finger and by 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, considering that the wound never entirely closed after the first operation, and that, in the interval, the patient was never free from signs of vesical irritation, it seemed probable that the whole of the stone had not in the first instance been removed. A careful examination of a section of the stone itself further convinced me that this was the case. If the mass of calculous material removed at the second operation be carefully examined, it will be seen to consist, as geologists would say, of two different strata: 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 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, in about equal proportion, with a mortality of four or five per cent., I think I may plead that both experience and care proved unequal on this occasion 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, and 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 urged against the suprapubic operation for stone is, that it prevents anything from being done to improve the condition of the large prostate, when this complication is present, and to obviate recurring symptoms, which may continue, though no stone is left to account for them. Mr. C. Williams, of Norwich, has recently published a case (BRITISH MEDICAL JOURNAL, June 15th, 1878, and November 14th, 1885), 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 led to the bladder again resuming its normal shape and function. I do not think there can be any doubt that, of the various causes which bring about sacculations and changes in the 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 this lesion. The case I have narrated serves to illustrate this point. It may be doubted whether a bladder is capable of becoming so completely sacculated as to conceal a large stone from detection. One of the best specimens, illustrating the possibility of this, I casually met with in the Museum of Queen's College, Birmingham, on a recent visit.

As to the frequency of relapses in cases of stone, Mr. Williams states, in reference to the practice at the Norwich Hospital ("The Relapse of Stone after Lithotomy," *Lancet*, May 18th, 1878): "This makes a total of 28 relapses in 1,015 operations (lithotrities and operations on females included), between 1772 and 1869, a period of ninety-seven years; and gives a proportion of one in 36, or, in 935 lithotomies (lateral 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 similar to the one I have related.

In connection with Mr. Williams's statistics relative to relapses of stone, it must be remembered that they are drawn from a locality where calculous disorders may be said to be endemic; consequently, if a larger area be taken, 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 common 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 attained, that they cease doing so, and continued vesical irritation follows the attack of renal colic. The explanation lies in the fact that their prostates have enlarged; and thus stones, which previously escaped spontaneously, become practically trapped. I frequently remove from the bladder, by crushing, small uric acid calculi 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 continued cystitis and of excessive mucous secretion, which are the invariable preliminaries to the formation of phosphatic stones. In these directions may be often found explanations for the recurrence of stone in instances where there cannot be the least doubt that the primary formations had, on a previous occasion, been completely removed, either by lithotomy or by lithotripsy.

ON REPEATED LITHOTOMY.

By DONALD D. DAY, B.S., F.R.C.S.,
Late House-Surgeon to the Norfolk and Norwich Hospital.

THIS subject has already been discussed by Crosse in his Jacksonian essay on Urinary Calculus, and by C. Williams in a contribution to Holmes' *System of Surgery*, but in neither case has it been thoroughly exhausted. About a year ago, a celebrated operator stated that he had done his last case of lateral lithotomy; and, now that the operation is threatened with extinction, on the one hand by Bigelow's plan of crushing, with immediate extraction, and, on the other, by Petersen's method of the suprapubic operation, it seems desirable to weigh well its merits and demerits.

The question of mortality has been fully gone into by many writers. I now propose to discuss the liability to recurrence of stone afterwards, and to attempt to define its causes. By the kind permission of Mr. T. W. Crosse, curator of the museum of the Norfolk and Norwich Hospital, I have been enabled to compile the annexed table, giving a complete list of all the cases which have occurred in the hospital up to Christmas 1884, giving the museum-catalogue reference in each case. That this method is imperfect I am well aware, as it represents the statistics, not of those who suffered from a recurrence of stone, but of those who could summon up courage to face the operation again, which, in the pre-anæsthetic days, was no light matter. That some of these cases did again have stone without

coming back to the Norfolk and Norwich Hospital is certain, as No. 27 was afterwards cut in a London hospital. But all statistics of operation are liable to the same errors, unless the after-history of the patient can be traced. Besides these cases, I know of others in which recurrence took place; but for purposes of statistics I have confined

Table of Cases of Repeated Lithotomy from the Museum of the Norfolk and Norwich Hospital.

No. in Series.	Initials.	Museum Number.	Age at 1st Operation.	Interval in months.	Weight.	Composition.	Group
1	N. E.	14	15	10	3ij	Urates and phosphates—3: broken.	D
2	R. H.	25	37	46	3ij	Similar: more phosphates.	D
3	T. W.	27	9	34	3ijss	Urates and triple phosphates.	A
4	R. N.	64	48	12	3ij	Mixed phosphates: broken.	B
5	T. F.	116	54	23	3ij	Phosphates and urates—3 or 4: broken.	C
6	R. C.	159	38	73	3ij	Phosphates.	C
7	J. C.	144	54	23	3ij	Smooth oval uric acid.	B
8	J. C.	158	2	90	3ij	Similar: broken in cutting.	A
9	W. C.	153	24	24	3ij	Soft urates—much broken.	C
10	C. R.	175	3	40	3ij	Oxalates and phosphates—soft.	A
11	S. F.	156	8	39	3ij	Smooth urate—unbroken.	C
12	J. B.	218	63	32	3ij	nucleus of foreign body.	B
13	H. H.	212	2	15	3ij	Smooth flat uric acid—broken in cutting.	A
14	R. L.	220	55	141	3ij	unbroken.	A
15	S. P.	242	3	25	3ij	Long oval urate—phosphates at ends.	A
16	G. S.	336	8	20	3ij	Globular uric acid: centre phosphatic.	D
17	B. B.	328	3	14	3ij	Phosphates and urates—comminuted.	A
18	W. H.	348	7	26	3ij	1 urate & phosphate—1 pure phosphate.	A
19	B. C.	333	18	9	3ij	Uric acid—unbroken.	D
20	J. C.	376	46	12	3ij	Urate—with cap of phosphates.	D
21	E. T.	381	61	13	3ij	Urates and phosphates—broken.	B
22	D. F.	438	58	35	3ij	Similar: more phosphates.	A
23	S. B.	384	43	202	3ij	Flat oval uric acid—unbroken.	A
24	J. B.	432	60	111	3ij	Similar.	A
25	S. B.	440	02	70	3ij	Discoloured pale urates—unbroken.	A
26	J. W.	450	06	29	3ij	Similar.	D
27	D. W.	459	33	103	3ij	Flat oval uric acid.	C
28	R. R.	562	08	7	3ij	Phosphates with a few urates.	B
29	W. S.	579	31	22	3ij	Oval urate—unbroken.	B
30	J. H.	599	00	35	3ij	Two: similar.	A
31	H. H.	630	06	4	3ij	Globular urate centre—oxalate crust.	B
32	J. A.	634	59	94	3ij	Uric acid centre: phosphatic crust.	A
33	J. B.	681	57	33	3ij	Urate centre: crust phosphates—broken.	A
34	J. G.	621	71	28	3ij	Phosphates.	B
35	G. B.	683	63	7	3ij	Smooth oval uric acid & urates: unbroken.	D
36	I. T.	685	61	27	3ij	Phosphates: soft and crumbled.	C
37	R. W.	693	2	68	3ij	Oval urate: broken.	A
38	R. S.	729	65	4	3ij	Alternating urates and phosphates.	B
39	W. R.	799	8	47	3ij	Oval uric acid: crust urates—chipped.	D
		805			3ij	Similar.	
		761			3ij	Urate: slight crust of phosphates.	
		818			3ij	Similar.	
		799			3ij	Oval: Uric acid centre: crust urates.	
		855			3ij	Oxalate centre—dense crust uric acid.	
		849			3ij	Two filbert-shaped urates.	
		831			3ij	Small angular urate and phosphate.	
		943			3ij	3: phosphates and pale urates: 2 broken.	
		832			3ij	Soft phosphates—broken.	
		841			3ij	Uric acid and blood-clot: much broken.	
		845			3ij	Pale urates and phosphates: soft: broken.	
		859			3ij	6 or 7: urate of ammonia—some broken.	
		864			3ij	2 similar—coated with phosphates.	
		914			3ij	Irregular—phosphates: point broken.	
		896			3ij	4 oval—urates and oxalates: unbroken.	
		899			3ij	1 similar but less oxalates.	
		921			3ij	Urate—crust broken.	
		1010			3ij	5 similar—coated with phosphates.	
		951			3ij	2 oval—uric acid: unbroken.	
		985			3ij	Soft phosphatic fragments.	
		953			3ij	5 urates and phosphates: broken.	
		978			3ij	Few similar fragments.	
		989			3ij	3 large: 7 small urates—unbroken.	
		994			3ij	1 large pale urate with uric centre, and 1 small phosphatic.	
		1005			3ij	Oval: uric acid: unbroken.	
		1031			3ij	Soft phosphates: broken.	
		1029			3ij	Three oval urates: much broken.	
		1076			3ij	Oval urate—unbroken.	
					3ij	2 centre uric acid and urate: crust pale urates and phosphates.	
					3ij	2 discoid urates—one chipped.	
					3ij	1 similar: paler.	
					3ij	Mulberry oxalate—unbroken.	
					3ij	2 cylindrical—oxalates and phosphates.	

Note.—30, 31, and 32, were cases of median lithotomy.

No. of Series.	Initials.	Museum Number.	Age at 1st Operation.	Interval in months.	Weight.	Composition.	Group
40	G. S.	1107	68	5	3vij	Oval: uric acid and urates—unbroken.	B
		1112			3v gr. xv	Similar—slight crust of phosphates.	
41	W. H.	801	7	17	3ij	2 oval: urates—unbroken.	D
		807		10	3ij	Oval: phosphates.	
42	J. H.	817			3ij	Numerous: urates.	D
		830	69	132	3ij gr. xxxvij	Phosphates—broken.	
		840			gr. lvi	Phosphatic debris.	
43	W. P.	874	50	58	3ij gr. xvij	Oval: uric acid—unbroken.	A
		839			3ij	Similar.	
44	J. S.	900	58	78	3ij gr. vi	5 oval: urates—unbroken.	A
		920		111	3ij gr. xlvj	Urate centre: crust phosphates—broken.	
		885			3ij gr. vi	Urate: with similar debris.	
45	G. R.	970	77	9	3ij gr. xxxij	Uric acid and oxalates: unbroken.	D
		1084			3ij gr. lv	Very soft phosphates—broken.	
		1096		8	3ij gr. l		

* Interval between first and second operations.

† Interval between second and third.

myself to the specimens actually in the museum, which can be consulted by all.

In that series of 1,125, there were 51 females with no recurrence, leaving 1,074 males. Of these, 50 were repeated operations, thus leaving 1,024 individuals. To the first operation 140 patients succumbed, an average of 1 in 7.31, or 13.67 per 100. Thus we have 884 individuals in which recurrence might occur; it occurred in 45, an average of 1 in 19.64, or 5.09 per cent., and in 5 patients it recurred a second time. Seven of the 45 cases of second operation proved fatal, Nos. 6, 14, 20, 24, 25, 33, 39. All of the third series, recovered; 12 individuals were children, 23 of the rest being upwards of 50 years old. In this there is a point of interest to be noted, that in the pre-anæsthetic group (previous to No. 800), 9 of the 12 children occur against 16 adults, the proportion afterwards, 3 to 17, being very different. I think we may infer from this, that other recurrences took place in the earlier adults, who, however, not only had the will, but also the power, which children had not, to refuse to submit to the torture of operation a second time.

Causation.—These cases seem to me to fall naturally into the four following groups, though several cases form intermediate links between, and mask the sharp outline of the various groups.

Group A.—Stones formed quite independently of the previous ones (Nos. 3, 8, 10, 12, 14, 15, 17, 18, 22, 23, 24, 25, 30, 32, 33, 37, 43 (A. and B.), 44 (A. and B.)). These are by far the most numerous, 20 cases out of 50; the interval between the operations varying from 11 to 202 months, with an average of 64 months. That, however, is a point of little consequence, as the stones have no connection with each other. This group of cases ought not to be charged to the lateral operation, as they would have occurred after any operation, however perfect.

Group B.—Stones undetected at the first operation (Nos. 4, 7, 21, 28, 29, 31, 34, 38, 40; 9 out of 50 cases). The interval between the operations varied from 4 to 28 months, the average interval being 13 months.

Group C.—Stones formed on a fragment left behind at first operation (Nos. 5, 6, 9, 27, 36; or 5 out of 50 cases). The interval between the operations varied from 23 to 103 months; average 48 months. No. 6 is formed on a curious nucleus, like a tiny fragment of leather, probably left in the bladder during the operation. No. 27 is a doubtful one, and perhaps should have been relegated to the next group, though, from the excessive fragmentation of the first stone, it seems right to class it in this group. As one would expect, the interval in this group is longer than that of the preceding one, since the stone would require longer time to arrive at the same size; though I do not assert that the size of the stone always is proportionate to the pain produced by it. Knowing the extreme difficulty of absolutely clearing an empty bladder of fragments of stone, I was surprised to find that this group was smaller than Group B.; and I can only explain it thus. When the surgeon finds that he has a broken stone to deal with, he takes extra care to thoroughly evacuate the bladder; but, when he has extracted the calculus entire, he generally looks for a faceted surface, and finding none, is apt to conclude too hastily that it was a single stone. Now this is a most misleading idea, for out of all the cases in Group B., only one, No. 34, was faceted; that really was a narrow point of attachment

to an encysted stone, which was removed subsequently. In looking over the cases of multiple stone, I was surprised to find how few present facets, and I believe it may almost be laid down as an axiom that facets only occur when one or more of the stones is to some extent fixed. The moral to be drawn is: Always search the bladder thoroughly as a matter of routine.

Group D.—Stones of bladder formation due to chronic cystitis (Nos. 1, 2, 11, 13, 16, 19, 20, 26, 35, 41 A. and B., 42 A. and B., 45 A. and B.; 16 out of 50 cases). The intervals varied from 7 to 47 months; average 19½ months. This group may fairly be divided into two subgroups. In subgroup *a*, the cystitis was present before the operation (Nos. 1, 2, 11, 13, 19, 26, 41 B., 42 B., 45 B). In these cases the operation of cystotomy, with drainage, might fairly have been expected to cure the cystitis, by removing the irritating stone and allowing escape of the decomposing mucus. In Subgroup *b*, the cystitis was directly caused by the operation (Nos. 16, 20, 35, 39, 41 A., 42 A., 45 A.). In this group, the calculi are composed of soft phosphates with mucus, and would be more correctly termed agglomerations than concretions. These cases are frequently complicated by fistula, perineal or rectal; and these two conditions mutually interact; the cystitis predisposing to fistula, and the fistula prolonging the cystitis.

These views are in the main those held by the late J. G. Crosse, and it does credit to his surgical acuteness that, from the meagre amount of twelve cases, he should have drawn such accurate conclusions. I cannot conclude this better than by quoting his words (page 164). "So far as recurrence of the disease is connected with the first operation, a large stone leaves little subsequent danger; the most likely cases for a relapse being those where the stone is small, and breaks in the extraction, the wound healing quickly afterwards, so as to prevent the escape of fragments. Next to fragments left in the bladder, an imperfect cure after the first operation from rectal or perineal fistula remaining may be regarded as almost certain to cause a relapse. Without such circumstances being present, a second stone may form unavoidably from small calculi, previously occupying the cavities of the kidneys, descending into the bladder and remaining there, or from continuance or fresh occurrence of any deranged condition of the urinary organs capable of giving rise to a calcareous deposit. When a second concretion forms, the symptoms rarely become so severe as to induce submission to a second operation within twelve months; and where several years of health elapse, the return of the disease is independent of the first operation, and of any morbid condition of the bladder then present."

A CASE OF EXTRA-UTERINE PREGNANCY:

DEATH OF THE FÆTUS AT FOUR MONTHS: INTESTINAL OBSTRUCTION FROM PRESSURE: REMOVAL OF THE FÆTUS BY PERINEAL SECTION: RECOVERY.

By GEORGE J. ROBERTSON, M.B.,
Surgeon to the Oldham Infirmary.

I was called to see Lavinia B., on May 29th, 1885, when she was in a state of well-marked but not profound collapse, very sick, and sweating profusely. She was 33 years of age, and the mother of two children, aged four and two years. Previously regular, she missed her period ten weeks ago, and from her symptoms believed herself to be pregnant.

On May 22nd, she was suddenly seized with severe pain in the lower part of the abdomen, followed by faintness and sickness. The present attack was ushered in by pain in the same region, but far more agonising. With the greatest difficulty, she was able to cross the room to summon assistance. At this time, the abdomen was quite flaccid, and free from tenderness; the uterus was somewhat enlarged; in the left fornix was a tumour, the characters of which will be presently described. In the course of a few days, the condition of collapse passed off; while the abdomen became slightly distended and tender on pressure, especially in the hypogastric region, where she suffered from sharp stabbing pains.

During June and July, the patient suffered frequently from colicky pains in the bowels, which were always induced when she sat up in bed for any length of time or attempted to walk. She had two attacks similar to the one described, but less severe, and followed, like it, by slight abdominal distension and tenderness. There was no regular menstruation. On June 24th, and again on the 30th, she had a slight discharge of blood, but neither then nor at any time was a membrane or solid substance of any kind expelled.

The tumour, when first observed, was about the size and shape

of an orange, situated to the left of the uterus, and quite separate from it; it was also painful on pressure, but the tenderness passed off in the course of a few days, to be present again after the other attacks mentioned above. It was neither so smooth nor so hard as a fibroid, yielding to the pressure of the finger, but giving no sensation of fluidity. It seemed to be firmly fixed in the pelvis. It slowly but steadily increased in size till it bulged above the brim. Stethoscopic examination gave no result. The uterus remained unaltered in size, but was displaced upwards and forwards, so that the fundus could be felt on placing the hand on the hypogastrium.

Toward the end of July, I thought the tumour was becoming smaller, an opinion which further observation confirmed.

On August 12th, she complained of pain in the epigastrium, suffered from sickness, and vomited slightly; she also had intermittent attacks of pain in the bowels; the abdomen was becoming distended.

August 13th. She had sickness, hiccup, and vomiting; the vomited matters were bilious and in small quantity. The abdomen was more distended, and pains were more severe, though still intermittent. There was no action of the bowels.

August 14th. She had incessant vomiting of stercoraceous matter during the night. There was dulness on percussion over the ascending colon; the transverse and descending colon were tense and tympanitic; the outline of three coils of distended small intestine was observed on the left of the umbilicus. The patient exhibited the usual symptoms of intestinal obstruction. Though greatly exhausted, and with a pulse scarcely perceptible, she was quite conscious, and remarked that the pains were like "labour pains." The tumour was quite immovable, and bulged more prominently in the pelvis than before the present attack. Enemata were ineffective.

Diagnosis and Treatment.—When the case was first seen, the previous history, the tumour, and the characters of the attack gave rise to strong suspicion of tubal pregnancy that had undergone rupture. During the following two months the development of the external signs of pregnancy, and the continued absence of menstruation without increase in the size of the uterus, together with the colicky pains in the bowels, and the steady rate of increase of the tumour, gave additional strength to this view; nor, on the supposition of the death of the fœtus, was it weakened by the gradual diminution of the tumour. It must be confessed, however, that the occurrence of this symptom shook my confidence in the opinion I had formed, without suggesting a probable alternative.

There could be little doubt that the intestinal obstruction arose from the pressure of the tumour upon the large bowel. Whatever was the structure of the tumour, it was, and had been ever since it was first examined, pressing upon the pelvic floor, to which there were good reasons for believing it was adherent. Immediate interference was required to relieve the obstruction. In preference to colotomy, treatment was directed to attain the double object of relieving the obstruction, and of dealing with the tumour.

The operation to be described seemed to offer a reasonable chance of success if it were an extra-uterine pregnancy, an abscess, or a hæmatocele; and, if none of these, it would not prevent recourse to other methods of treatment, and might assist in the diagnosis.

Operation.—On August 14th, at 6 p.m., the patient was chloroformed, and placed in the lithotomy position. A straight incision from before backwards, two inches in length, was made through the skin and fascia of the perineum, commencing a little in front of the anus, and being about an inch and a half to the left of the middle line. The left index-finger was now pressed along the left vaginal wall, with the tip resting upon the tumour in order to serve as a guide; and by digital dissection, aided by the knife, to divide a few fibres of the levator ani, the most prominent part of the tumour was reached. Into it I passed a bladder-trocar, which, after it penetrated the sac, was pushed onward without encountering any solid resistance. On withdrawing the trocar, there escaped from the cannula a few drops of dark brown fluid, which had neither the colour nor the consistence of freshly shed blood. I then enlarged the opening in the sac, withdrew the cannula, and introduced my finger. It passed through a very friable substance, a small portion of which was removed for inspection. It looked like partially decolourised blood-clot. Not quite satisfied, I brought down a second portion, the structure of which was distinctly placental. The fœtus was next discovered; a foot being drawn into the wound was seized with a long polypus-forceps, and the whole removed by gentle traction. The umbilical cord was divided, and replaced in the cavity after removal of a small quantity of old blood-clot; so far, there had been no hæmorrhage. For the purpose of draining and irrigating by the method described in the *Medical Chronicle*, October, November, and December, 1884, two rubber tubes, without side holes, were tied together; the one for drainage having a