

According to the above table the mortality occurring actually in hospital amongst 2,592 lithotomy cases was about 1 in 9, or 11 per cent. There were, however, 51 cases discharged as 'otherwise' than 'cured,' 'relieved' or 'died'; and it may be presumed that these, or the great majority of them, were taken away by their friends in a moribund condition to die at home. If these be added to those dying in hospital, the total mortality will be about 13 per cent. or one in eight nearly.

I regret I am unable to give the statistics of mortality according to age. As the mortality from lithotomy increases in proportion with the age of the patients operated on, these would have the effect of bringing out more clearly the great diminution in mortality from litholapaxy as compared with lithotomy. The only Administration Report which gives the statistics of mortality according to age is that for the N.-W. Provinces and Oudh. Taking the latest statistics for these Provinces (as being the most likely to be correct), those for 1883, we find that, amongst 987 cases of lithotomy performed in that year, the mortality up to the age of 20 was 5.1 per cent., or nearly 1 in 20; between the ages of 20 and 40 years, 10.7 per cent., or about 1 in 9.5; and above 40 years, 31.9 per cent., or nearly 1 in 3.

I may here refer to an impression which seems to prevail both in this country and at home, to the effect that lithotomy amongst natives of India is a much more successful operation than amongst Europeans. This impression is erroneous. The mortality above recorded amongst 2,592 cases of lithotomy of all ages, of 13 per cent., is, practically, the same as that recorded in Erichsen's Surgery as occurring amongst Europeans.

In my own practice, at the end of the period to which this report has reference, I had performed 309 operations for stone in the bladder. Amongst these there were 161 adult males, 142 male and 6 female children. Litholapaxy was performed on 115 adult males, with 4 deaths; and on 3 female children, with no death. In 3 female children the calculi were successfully removed by rapid dilatation of the urethra: this was before the introduction of litholapaxy in my practice. There were 46 adult males treated by lithotomy with 9 deaths. In the 142 cases of stone in male children, lateral lithotomy was the operation performed in all; and amongst these no death occurred.

There were, therefore, 115 adult males treated by litholapaxy with 4 deaths, against 46 adult males treated by lithotomy with 9 deaths. This is, however, not a fair comparison, as, since the introduction of litholapaxy in my practice, only cases unsuitable for this operation were treated by lithotomy. Previously to my practising litholapaxy, I had 33 cases of lithotomy in the adult male, with 6 deaths, or a mortality of

over 18 per cent. Since then, I have operated on 128 adult males with 7 deaths—115 litholapaxies with 4 deaths, and 13 lithotomies with 3 deaths, or 5.5 per cent. This is the proper mode of comparing the results of the two operations; and it will be seen that the introduction of litholapaxy in my practice has been attended by a vast diminution in mortality.

Though litholapaxy should be the rule in the treatment of stone in the adult, there must always be a small number of cases in which the operation will be inapplicable, as when the calculus is extremely large, or narrow stricture of the urethra exists; and such cases will still have to be dealt with by lithotomy. As the operator gains experience, however, and with further improvements in the instruments used, the number of cases in which litholapaxy will be unsuitable will gradually diminish in number. Some of the cases treated by me by lithotomy, after I first employed litholapaxy, I would now treat by the latter operation. During the last nine months of 1884, 36 cases of stone in the adult came under my observation, and these were, one and all, treated by litholapaxy.

In conclusion, I have to apologize for the length of this report, which has been drawn out to a much longer extent than I anticipated when commencing it. The importance of the subject must, however, be my excuse. I am convinced that litholapaxy is destined to play an important part in the Surgery of the future in this country, where unrivalled opportunities abound for its practice, in reducing by a large percentage the mortality, as well as the suffering, attendant on operations for stone. The operation can no longer be said to be on its trial. The prejudice against the operation that existed (and still exists) in the minds of many Surgeons, and which is, in great part, due to the association of litholapaxy with the old operation of lithotomy, from which it is radically different, must gradually vanish before the stern reality of facts, such as those recorded in this report. The Surgeon who would give his patients suffering from stone the best prospect of recovery must practice litholapaxy. I have no hesitation in saying that, in the course of a few years, there will be few hospitals in India that will not be provided with litholapaxy instruments.

Mussoorie.

THIRTY-FOUR CASES OF LITHOLAPAXY WITH ONE DEATH.*

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DURING the year 1884, ninety-six cases of stone in the bladder were operated on in the

* These notes extracted from the Moradabad Dispensary Report for the year 1884, have been kindly placed at our disposal by Surgeon-General J. Walker, N. W. Provinces and Oudh.

Moradabad Hospital, 45 stones being removed by litholapaxy, and 51 by lateral lithotomy. Of the litholapaxy cases, 11 were operated on, and that successfully in the early part of the year, by my predecessor Dr. Freyer.

Litholapaxy was adopted in all adult male patients, with the exception of a few cases in which the presence of a bad stricture rendered the repeated introduction of large instrument dangerous. As regards the advantages of this operation, the facts speak for themselves.

I herewith forward a table, which shows the results obtained in this hospital during the past year. Forty-five cases, with only one death, leave

little to be desired. The operation has now passed through its probationary phase, and its superiority over Lithotomy and the old system of Lithotrity is so patent, that any one cutting for stone in a case suitable for litholapaxy may almost be considered guilty of a criminal act. The instruments used were those recommended by Sir H. Thompson. The after-treatment was practically that adopted by the same authority. I have lately got out an Aspirator of the most recent pattern, which is a great improvement on the one first introduced. It is fitted with a tube, which is very convenient for washing out the bladder.

No.	NAMES.	Age.	Sex.	Caste.	Date of operation.	No. of sittings.	Time in Hospital.	Weight of debris.	Variety.	RESULT.	
1	Allah Deen Khan	...	50	M.	M.	7-5-84	At one sitting.	17 days	gr. 88	Phosphate	Cured.
2	Pirana	...	40	M.	H.	12-5-84	"	3 "	" 69	"	"
3	Beehwah	...	80	M.	H.	12-5-84	"	14 "	" 30	Uric	Died.
4	Chait Ram	...	30	M.	H.	27-5-84	"	4 "	" 64	"	Cured.
5	Nain Sukh	...	60	M.	H.	16-5-84	"	15 "	" 530	Phosphate	"
6	Chand Khan	...	35	M.	M.	27-5-84	"	4 "	" 33	"	"
7	Choonia	...	50	F.	H.	1-6-84	"	7 "	" 274	"	"
8	Dya	...	40	M.	H.	2-6-84	"	9 "	" 80	"	"
9	Mithoo	...	25	M.	M.	4-7-84	"	17 "	" 150	"	"
10	Ram Dyal	...	34	M.	H.	10-7-84	"	4 "	" 35	"	"
11	Chidda	...	32	M.	H.	16-7-84	"	5 "	dr. 7	Uric	"
12	Paim Singh	...	66	M.	H.	28-7-84	"	5 "	gr. 30	Phosphate	"
13	Pultoo	...	36	M.	H.	1-8-84	"	4 "	" 13	"	"
14	Hussain Bux	...	32	M.	M.	2-8-84	"	5 "	" 80	"	"
15	Chutri	...	55	M.	H.	10-8-84	"	11 "	" 30	"	"
16	Chidda	...	40	M.	H.	12-8-84	"	4 "	" 10	"	"
17	Bhujjoo	...	36	M.	H.	19-8-84	"	6 "	" 75	"	"
18	Johoree	...	60	M.	H.	16-9-84	"	9 "	" 275	"	"
19	Ram Dyal	...	18	M.	H.	16-9-84	"	9 "	" 35	"	"
20	Luckhun	...	34	M.	M.	19-9-84	"	6 "	"	"	"
21	Sheo Singh	...	25	M.	H.	19-9-84	"	9 "	" 120	Uric	"
22	Kulloo	...	70	M.	M.	19-9-84	"	9 "	" 150	"	"
23	Umrao Singh	...	40	M.	H.	26-10-84	"	3 "	" 47	Phosphate	"
24	Purma Nund	...	30	M.	H.	5-11-84	"	3 "	" 425	"	"
25	Nubhoo	...	35	M.	M.	8-11-84	"	3 "	" 30	"	"
26	Dabi	...	20	M.	H.	10-11-84	"	3 "	" 60	"	"
27	Rutton	...	40	M.	H.	12-11-84	"	10 "	" 280	Uric	"
28	Khoda Bux	...	45	M.	M.	13-11-84	"	8 "	" 260	"	"
29	Holassee	...	60	M.	H.	19-11-84	"	4 "	" 50	Phosphate	"
30	Dalel	...	60	M.	M.	21-11-84	"	14 "	" 50	"	"
31	Moneer Bux	...	36	M.	M.	24-11-84	"	3 "	" 20	"	"
32	Buldeo	...	19	M.	H.	9-12-84	"	7 "	" 60	Uric	"
33	Chujjoo	...	10	M.	M.	19-12-84	"	11 "	" 168	Phosphate	"
<i>By Dr. Moran:</i>											
34	Chainia	...	50	F.	H.	31-8-84	"	3 "	" 23	Uric	"

Up to date I have performed litholapaxy ninety times, with five deaths. One of these was, however, due to pneumonia, and in no way connected with the operation. In another the patient was admitted to the hospital in a dying condition. The three remaining cases all died from the same cause, viz., extravasation of urine caused by rupture of the urethra. The most important lesson I have learned from a considerable experience of litholapaxy is, that the calibre and healthiness of the urethral canal are the most important points in determining the suitability of cases for operation.

The best lithotrite is one made on Weiss's "A" pattern, with the male blade passing right through the female blade. I formerly used a lithotrite in which the blades were not con-

structed on this principle, and, as a consequence, the instrument often passed easily into the bladder, but, owing to the collection of debris between the blades, could not be withdrawn without the use of considerable force, and proportionate risk of injury to the mucous membrane of the urethra. If a stricture exists, I now invariably cut it with a urethrotome, and use the smaller sized instruments. The average time in hospital after the operation was about a week; most of the patients might have been discharged sooner, but I have found that, in some cases which have been going on well, a little sub-acute cystitis often appears about the 4th or 5th day. This, as a rule, subsides rapidly under treatment. I generally wash the bladder out first with a weak solution of carbolic acid

(gr. i, oz. iv), and afterwards with a lead lotion of the same strength. As regards the employment of litholapaxy in children, I am about to give it a trial. The urethra of the child up to 7 or 8 years is exceedingly small, but in those above that age, I see no reason why the operation should not be undertaken when the stones are very small. One of my last cases (No. 44) was in a boy about 10 years old. I was surprised at the facility with which I was able to pass the instruments and remove the stone. The patient made a rapid and perfect recovery. It is true that the cutting operation in children is a much less formidable proceeding than in the adult, but it is also a fact that natives would much prefer seeing their children relieved without having resort to the knife. During the past year, I have removed quite a dozen stones not larger than a pea, and I am fully convinced that, in every one of these cases, it might have been done by the crushing operation. A small lithotrite skilfully handled does not produce much more disturbance than the passing of an ordinary sound.

I quite agree with the suggestion made in the last Dispensary Report, that stone in the bladder is much more common than we are apt to suppose. I satisfied myself on this point while in charge of the Bijnor district. During my last term of office there, although the number of stone cases was six times the average for twenty years, I found that there were still many sufferers unrelieved. The natives believe thoroughly in the new method, and in proportion as we extend it, and so rob the operation of its terrors, we shall gain the confidence of the people and attract them to our hospital.

Lateral lithotomy was performed in fifty-one cases, with four deaths. Considering the weakly state of many of the patients, this may be considered a satisfactory result.

A CASE OF ENTERIC FEVER IN A NATIVE.

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SOME time ago a request was made in the *Indian Medical Gazette* for short records of cases of Enteric Fever amongst natives, hence the following brief notes of the only case of this disease which I have seen and verified by *post-mortem* examination amongst natives in six years. During this period I have only seen about 25 to 30 cases of undoubted enteric fever amongst Europeans and Eurasians, and by far the greater number of these in the ward of the General Hospital. The subject of the present notes was a prisoner in the Presidency Jail, who, up to the date of his admission to hospital, had enjoyed good health. During the ten years (1874—1883), amongst a total of 316 deaths from various causes in the native population of the Presidency Jail, there is not one noted of enteric fever.

S. M., Bengali Hindu, æt. 24, admitted to hospital on the 23rd August, 1884, suffering from fever, from which he thought he had been suffering for about five to six days previous to coming to hospital; previous health good.

On admission.—Temperature 100° F., and in the evening rose to 103·4. (The accompanying chart shows the daily variations of temperature.) The bowels were constipated, and he was ordered a purgative, which operated freely, causing five motions; the only other medicine ordered was a simple diaphoretic mixture.

On the 28th, the fever continued unabated, and it was noted that the stools were scanty, thin like peasoup, and of a yellow colour. There was general abdominal pain and tenderness and gurgling in the right iliac region. The spleen was not enlarged, and there were no rose spots to be seen on the chest or abdomen. I ordered the temperature to be taken every two hours to notice whether any marked remission took place.

29th August.—Urine tested with picric acid, and found to contain albumen. Neither yesterday nor to-day has the temperature been found to go below 102° F. Has been on milk diet since his admission to hospital.

31st August.—Fever distinctly abating, and the patient states that he feels better.

1st September.—Temperature 100·2; the case looked as if it was going to terminate in speedy recovery. I thought that, as the man had got well so rapidly, the original diagnosis of typhoid fever was wrong, and the case was one of mild remittent fever. He was ordered 10 grs. of Quinine Sulphate.

4th.—Temperature 99·2.

5th.—Urine still albuminous.

6th.—Temperature nearly normal, being 98·8, and there was no diarrhœa, and he was getting 5 grs. of Quinine daily.

On the 9th morning he asked me for some more to eat, and I allowed him some stewed fowl and rice, which he got on the 10th. On the 11th, as the temperature remained high, I put him back on 'slop' diet, and on this diet he continued until his death.

From the 9th the temperature continued high and the symptoms of exhaustion increased, and he sank and died on the 19th September, at the end having developed pneumonia of the left lung. I made a *post-mortem* examination the following morning, and found the following appearances:—*Left lung.*—The posterior lobes in a condition of red hepatisation and airless, and small portions sank in water. *Right lung.*—Anæmic, but crepitant. *Spleen,* 9 oz.—Tissue firm, and of a dark red colour. *Liver,* 3 lbs, 6 oz.—On section pale and fatty. *Kidneys.*—Normal. *Heart.*—Contracted, some excess of superficial fat. *S. intestines.*—Recent ulcers of Peyer's patches in the ileum. The ulcers were irregularly oval in shape, and with raised margins and surfaces. They were mostly of recent origin, with sloughy