

1900, suffering from stone in the bladder for over 30 years and from chronic Bright's disease for an indefinite period. The bladder was in a bad condition. On the 31st August under chloroform I passed a Weiss' A number lithotrite with ease, and at once discovered that the stone was far above the size on which it could get any catch. The patient was immediately put to bed, and a messenger despatched to a neighbouring station for a No. 26 lithotrite with a view to perineal lithotomy. On the 31st he had trouble in passing urine, and his temperature was 102° . On the 1st September temperature was 99° . The instrument arrived on September 2nd, and the patient was found on the morning of the 3rd to have extravasation of urine in the penis and scrotum. I could not ascertain to my own satisfaction if attempts at passing catheters had been made to relieve the difficulty in micturition. I cannot understand the extravasation otherwise as there was no stricture. I made incisions into the cellular tissue freely and got out as much as would readily come of the decomposed material from the extravasation area, washed it with a bichloride solution and wrapped it up in mercury wool. I decided to relieve the extravasation by opening the bladder from the perineum, and at the same time to remove the stone. I therefore made a lateral lithotomy wound which admitted the index finger; passed the No. 26 lithotrite, and without any difficulty made the first three or four fractures in the stone. To get hold of the remaining fragments was not an easy matter as the lithotrite felt as if it were pushed into a heap of stones broken for the road. I extracted the fragments with a small lithotomy forceps. The fragments weighed 22 ounces. The core was uric acid, and the cortical portion about half an inch thick, or rather less was bone earth and looked like white marble in appearance. It was not a soft stone, but certainly not a hard one. I consider it under medium hardness. I screwed home the No. 26 lithotrite with ease.

The same evening the patient had some post operation shock, for which 50 ounces of normal saline solution were infused into the cellular tissues of the breasts. This pulled him together.

On the 4th, temperature 99° morning and evening, otherwise he was getting on well.

On the 5th, temperature 100° in the morning, 102° in the evening, otherwise well.

On the 6th, severe diarrhoea set in, temperature 101° in the morning and evening.

On the 7th, temperature 100.4° morning and evening; diarrhoea severe.

On the 8th, temperature 100° morning and evening; diarrhoea severe. His pulse was getting very weak, and half a gallon of normal saline was infused, which again pulled him together.

On the 9th, temperature 102° morning and evening; diarrhoea continued.

On the 10th, temperature 100° morning and evening; diarrhoea continued; hiccup set in.

On the 11th, temperature 100° morning and evening; diarrhoea and hiccup continued; pulse again weak, so a further half gallon of normal saline was infused.

On the 12th, temperature 100° morning and evening; diarrhoea and hiccup continued.

On the 14th, condition same.

On the 15th, patient died.

I now think I made a mistake in this case in not opening the membranous urethra simply as a step towards the relief of the extravasation, and in not waiting until the extravasation had cleared up before removing the stone. I probably would have done so had I thought the stone was of such gigantic magnitude. I think that but for the Bright's disease and the extravasation or either of them he would have made a good

recovery; as it was, he lived twelve days. The obstinate diarrhoea was, I consider, the cause of death; whether it was due to septic absorption from extravasation, or to the Bright's disease, or both, would be difficult to say. The operation was simple and occupied about half an hour.

As the operation of perineal lithotomy for large stones is but in the evolution stage, a few points might be of interest in the particular case. The No. 26 lithotrite having parallel action jaws grasped the whole stone with ease, and also the large fragments. I found when removing the small fragments that a small lithotomy forceps caught them easily, but many of them had sharp projecting edges which I had to let go and re-insert a small lithotrite to break up further. It struck me that the lithotrite from its power and ease of application was the instrument to put in the first few fractures; after that a really stout small lithotomy forceps made with the proportions of a dental forceps but much longer in the handles and with a row of serrated interlocking cutters round the border of the jaws would crush the fragments and clip off the projecting edges of the fragments above referred to. I had a pair of such forceps made locally, and had occasion to use them to-day in a case in which there were three stones about an ounce each in weight, but in which it was impossible to get instruments passed for a litholapaxy on account of prostatic conditions. The clippers round the borders of the jaws of the forceps acted admirably removing all projecting points. Such a clipping forceps I regard as essential in perineal lithotomy for stones of hard or medium density so as to remove the sharp corners of the fragments which project beyond the margin of an ordinary forceps. Such forceps though quite incapable of dealing with a large hard stone in the whole state would be quite capable of dealing with the fragments once the stone has a few fractures through the body; the keystone of the arch being, so to speak, broken, the remainder is easy.

NOTES ON THE OCCURRENCE OF CALCULI IN THE KIDNEYS AND URETERS.

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My experience in Hyderabad (Sinde) confirms that of other surgeons as to the rarity of renal calculi in India. During my stay in Sind, amongst the numerous cases of stone which came under my observation, I can, on referring to my notes, only find records of two cases, one of renal and one of ureteral calculi. In the renal case the presence of the stone was of long standing. There was a history of continued deep-seated pain radiating to the testicle

and thigh, haematuria followed by turbidity of the urine, which on examination contained pus. On admission over the right loin, there was a large fluctuating tumour. The operation was simplicity itself. I cut down and opened the pyonephrosis and discovered in the cavity a beautifully shaped calculus which had evidently occupied the pelvis and calyces of the kidney for a very considerable time. The cavity was irrigated, closed and drained. The patient who was difficult to convince that the stone was not from the bladder, made an excellent recovery.

The next case was that of an Amil Government official, who had for some weeks been complaining of pain over the loins, radiating to the right testicle and thigh. One night he sent for me as he was in great agony, when I found him suffering from renal colic. All his symptoms pointed to a calculus having entered his ureter. The attack passed off, but I could discover no calculus in the bladder or procure any evidence of one having been passed by the urethra. After a few days there was a second attack with frequent recurrences. Learning at this time from Murray's "Rough Notes on Remedies" of the efficacy of belladonna in such cases, I determined to prescribe this drug before resorting to an operation. This treatment was eminently satisfactory. At the commencement of the next attack he began to take this medicine with the result that the stone passed down the ureter and was found in the bladder the following morning, warm baths, fomentations, and the drug considerably lessening his pain. As the calculus appeared to be of considerable size, I determined to crush it as soon as possible. The patient, contrary to my advice, continued the medicine and passed the stone, weighing about thirty grains, resembling a date stone in shape by the urethra after an exceedingly *mauvais quart d'heure*.

These two cases are my sole experience during a period of four years in a district where vesical calculus is notoriously prevalent.

With reference to the question as to where bladder calculi have their origin, I was much impressed while in Sinde with the frequency with which they appeared to take form in the bladder itself. In an article of mine which was published in the July number of the *Indian Medical Gazette* for the year 1898 I drew attention to this. On several occasions patients, specially children, have been admitted to the Hyderabad Hospital with all the symptoms of stone and in whom the sound has confirmed the diagnosis. But the concretion has been attached to the bladder wall and has therefore been left alone. The patient at some future time has returned with a calculus free in the bladder.

I think this formation of calculi, other than the purely phosphatic, is more common in this situation than is generally supposed.

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CASE OF SNAKE-BITE TREATED WITH CALMETTE'S ANTIVENINE, RECOVERY.

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TOWARDS the end of 1899 I caused all the Government hospitals and dispensaries (branch as well as main) in the Central Provinces to be provided with a supply of Calmette's antivenine and a suitable syringe for injecting it, issuing at the same time full instructions as to how the remedy was to be used, and a notice in the vernacular to the Police requesting them to inform the people that a new cure for snake-bite had been discovered, and urging the necessity of having persons bitten taken for treatment to the nearest dispensary, with the least possible delay after the part had been ligatured where this was practicable. Civil Surgeons were further asked to be good enough to report to my office any instances which came to their notice in which the antivenine had been used, with the result. Up to date I have received the report of only one such case, and although it is incomplete in one important particular, viz., the verified identification of the snake, perhaps you may consider the details, as observed and furnished by Mr. Hogan, Civil Surgeon of Mandla, in which district the patient resided, worthy of a place in your columns. They are as follows :

Dhanoo Lohar, aged 35, a resident of Deori-Dadar village, who had been sleeping in the verandah of his hut, awakened his wife at about 1 A.M. of the 10th August 1900 by calling out that he had been bitten on the shoulder by a snake, which he had seized and thrown down, and which he afterwards said was about three feet long, and, in his opinion, a Krait, judging from its appearance as it glided away. Difficulty of speech and breathing is said to have set in immediately, on which the woman sent for Mr. Fryer, one of the Patpara Missionaries, who arrived about 6.30 A.M. of the same date, or 5½ hours after the alleged occurrence. That gentleman then found two small punctures, scarcely half an inch apart, which he incised deeply, causing blood, the colour of which he described as more brick-coloured than natural, to flow freely for about 25 minutes. At this time the patient was not unconscious, but spoke very indistinctly. He was then, after the administration of ammoniac carbonas, ordered to be sent to the main dispensary at Mandla, which however he did not reach until 6.45 P.M. of the 11th August, or 41 hours 45 minutes after being bitten.

Condition on admission to hospital.—No pulse at wrist unconscious, respiration stertorous, irregular and spasmodic—great difficulty in swallowing, pupils widely dilated, double ptosis. The treatment adopted was to wash the incisions which had been made by Mr. Fryer with a solution of chloride of lime—1 in 60—while the surrounding skin was cleansed with soap and water, followed by boric acid lotion. Then, at 7.20 P.M. 10 C. Cs. of antivenine were injected into the subcutaneous cellular tissue about an inch below the site of puncture.