

TREATMENT OF SMALL BLADDER CALCULUS IN ADULTS BY EVACUATION WITH METALLIC CANULA

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SUMMARY

We present a study of 60 cases of small stones bladder in adults over a period of two years. These small stones measuring 1 cm x 0.5 cm or less which had migrated from the ureter into the bladder in most of the cases and could not be passed per-urethra.

INTRODUCTION

We are presenting a method of treatment of secondary small bladder stone by evacuation with metallic Canula. The procedure works on the same principle as evacuating the stones debris after crushing with lithosphere.

The procedure was quite successful in a majority of cases. We recommend this procedure under the existing circumstances for removal of small bladder stones in adults where it can not be passed per-urethra spontaneously.

MATERIAL AND METHODS

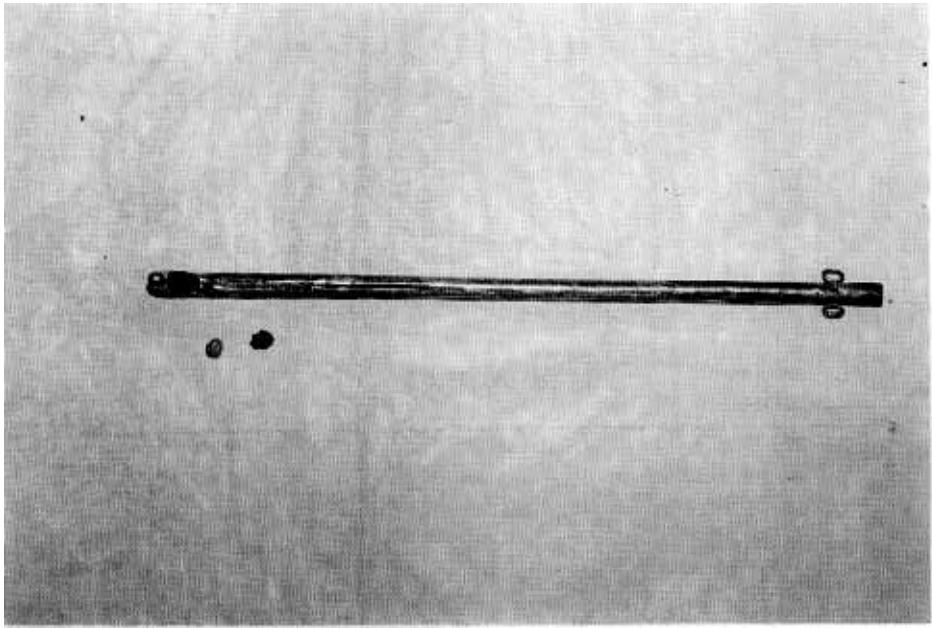
All adult male patients presenting with stone bladder of size less than 1 cm x 0.5 cm, which patient could not pass per urethra and could fit into the opening of the canula, were included in this study.

The study was carried out for a period two years i.e. January 1991 to December.1992. A total of 60 patients were included in this study. Most of these patients had history of renal or ureteric colic. A few patients had also past history of passage of gravel in the urine. Usually more than 80% of the urinary stones are

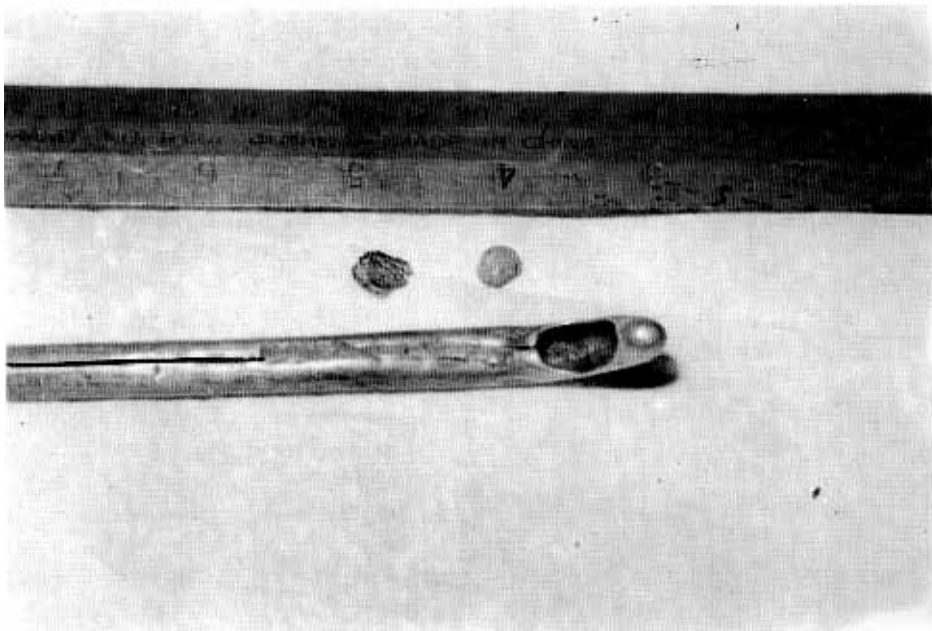
spontaneously passed in the urine.²

It means that most of these stones had migrated from kidney. A majority of patients presented with retention urine due to impaction of stone in the prostatic urethra. They were investigated routinely i.e. urinalysis, blood complete picture, blood urea and blood sugar, intravenous urography and ultrasound study for renal tract. Three patients had simultaneous presence of renal calculi and the rest of them i.e. 57 patients had clear upper urinary tract. The age-wise distribution of 60 cases is shown in Table 1.

The procedure was carried out under general anaesthesia and complete aseptic conditions. Preliminary dilation and introduction of canula into bladder was followed by filling of the bladder with normal saline. The stone with help of sounding and movement of the canula to right and left and posteriorly towards the trigone and suction of fluid with a sucker resulted in impaction of the calculus in the opening of the canula which was then withdrawn while gentral suction is maintained. Most of the time with few attempts in 5-10 minutes one is successful in removing the stone. Few patients had



1.



2.

Showing the EVACUATING METALIC CANULA and the relative size of stone removed.

little haematuria which cleared by itself. Catheter was required in all cases for less than 24 hours. Patient was discharged next day without any complication. They were given 5 days course of urinary antiseptic.

RESULTS

The study was carried out in Surgical A unit over a period of two years. Sixty patients were included in this study, all adults, in the age group of 21-70 years. The majority of patients were aged 31-50 years i.e. 40 patients (67%); the next age group was 21-30 years which included 15 patients (25%). The rest of the patients were above 50 years (8%). The procedure was successful in 55 cases (91.6%). In five cases (8.3%), the procedure was converted to open vesicolithotomy. The post procedure recovery was uneventful in all the cases undergoing this method. The patients were discharged home after 24 hours.

DISCUSSION

Urolithiasis is a disease centuries old. There is history of bladder stone removal by a lithotomist transperineally with ordinary bread knife.¹

Later on with advancement of surgical technique the standard vesicolithotomy operation was devised which is in practice even now. The more sophisticated procedures of removal of stone from the bladder like cystolitholapaxy, Dormia extraction of the stone,^{4,7} electrohydraulic endoscopic lithotripsy,^{3,8} rongeur cystoscopic removal of stone¹ and disintegration of stone with lasers⁵ are not available to us. Most of these patients presented with retention urine due to impaction of stone in prostatic or proximal urethra which was pushed up into the bladder by catheter or dilator. This is also quite a common site for

impaction mentioned in other series.⁸ The procedure of removal of calculus by an evacuating cannula works on the same principles as the second stage of litholapaxy. In most of our cases the stones have traveled down from upper urinary tract and three cases in our series had simultaneous presences of stones (5%) in kidney which is quite low as compared to Sharfi AR.⁶ We have been using this procedure for such stones for the last two years. The study of 60 cases spread from January 1991 to December 1992 and the success rate was 91.6%. Failure to retrieve a stone was only in five cases i.e. 8.3% where routine suprapubic cystolithotomy was performed. This procedure of cannula evacuation of stone is mentioned in the literature.¹ The procedure is acceptable to patients as they have the stone removed without any operation scar and almost no post operative problem except catheterization which is required for no more than 24

Table - 1
AGE DISTRIBUTION IN 60
PATIENTS

21 - 30	Years	15
31 - 40	Years	20
41 - 50	Years	20
51 - 60	Years	02
1 - 70	Years	03
Total:		60

hours. Our procedure resembles litholapaxy but without crushing the stone. We hope that with more practice and passage of time our success rate will become much better.

REFERENCES

1. Raine AJH and Ritchie HD. The Urinary Bladder. Baileys & Loves Short Practice of Surgery London, HK Lewis & Co. Ltd. 1981; 1238.

2. Peacock M and Robertson WG. Renal Calculi. Medicine. 1978; 830.

3. William RD, Donovan JF and Tanagho EA. Urology, Current Surgical Diagnosis & Treatment, Lawrence W.Way, USA Lange Medical Books. 1988; 825.

4. Paulson DF. The Urinary System, Sasbiston Text Book of Surgery, 13th Ed, Saunder

Int Edition: 1653.

5. Reijke TM, Zeijlemaker BY and Sternborg HJ, et al. The use of Lasers in the Treatment of Urolithiasis, Ned-Tijdschr Geneesk. 1991; 135(50): 2391.

6. Sharfi AR. Presentation & Management of Urethral Calculi. Br J Urol. 1991; 68(3): 271.

7. Haddad FS and Chinichian A. Post Prostatectomy Lithiasis, Urol-Int. 1991; 46(2): 221.

8. Kogas, Arakeli Y and Matsuoka M, et al. Urethral Calculi. Br J Urology. 1990 Mar; 65(3): 288.