

training programs. Herbert et al⁵ reported that in 60% of US Medical Schools, professionalism is taught and many academicians believe if we wish to make the doctors of tomorrow more professional, honest to their patient much needed to be carried out.⁶⁻⁸ Medical profession around the world is engrossed in different national cultures and traditions and academicians in respective countries need to come to the fore and set professional values and impose on the physicians of today and doctors of tomorrow to follow the principles of professionalism with dedication, honesty and integrity to patients and to the society as a whole. We believe that the time has come when academicians, policy makers and professionals in the Kingdom of Saudi Arabia, should come together to formulate guidelines, objectives, self regulations and to set remedy and discipline for the professionals who go astray in their duties.

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Rigid ureteroscopy for treating ureteric stones, Yemen experience - Al Thawra Teaching Hospital, Sana'a University

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Ureteroscopy came to light in our society in late 1989, using the wide caliber rigid ureteroscope (11.5Fr) which should be preceded by dilation of the lower ureter.¹ This was due to the society being poor and the prevalence of a giant ureteric stone which needs open surgery. With miniaturization of ureteroscopes, we restarted ureteroscopy again during 1995 using the 8.5-11.5Fr Wolf rigid one. However, ultrasonic renal scanning (URS) is more invasive than extracorporeal shock wave lithotripsy (ESWL), it became the treatment of choice for stones of one cm or less in the ureter especially its distal part from the points of stone free rate and cost effectiveness.² The basic URS technique has been well standardized through dilation of the lower ureter, stone retrieval and fragmentation using different lithotrites and ending by stenting the ureter for a few days.³

Introduction of fiberoptic imaging bundles within the rigid endoscope has made its downsizing possible and introduction of a flexible ureteroscope, in addition to a skilled hands, led to high success rate up to 90-100%.⁴ The overall complications, for the same reasons, reported in the recent literature⁵ are 5-9% with only one% significant complications like ureteric avulsion and stricture.⁶

Two hundred and forty-eight patients with ureteric stones in different levels who were treated by ureteroscopy over the 4 year period at Al-Thawra Hospital, Sana'a University were retrospectively reviewed. Two hundred and eight patients were males while 40 were females and their age range was between 7-65 years (mean 30-6). The size of the stones ranged between 6-25 mm (mean 11 mm) and 147 cases were in the left while 101 were in the right. As regard to the site in the ureter, 200 cases were in the lower, 38 in the middle and 10 cases were in the upper part. Preoperative follow up including laboratory investigations in the form of bleeding and coagulation time, hemoglobin determination, platelets count, urine analysis, culture and sensitivity, creatinine and blood urea nitrogen. Imaging studies such as abdominal ultrasound, kidney ureter bladder radiography (KUB) and intravenous urography (IVU) was recorded.

Ureteroscopy started by negotiating of 0.038 guide wire through cystoscope followed by ureteric dilation using polyethylene dilators from 6-12Fr down to the level of the stones, then the ureteroscope was introduced. In 10% of the cases, failure to introduce the guide wire necessitated the introduction of the ureteroscope under vision without dilation. If the stone is impacted and the guide wire could not bypass it, disintegration should be carried out until the guide can pass though up to the kidney. Swiss pneumatic lithoclasts was used for fragmentation and to avoid migration of the stone upward, Dormia basket was used to lodge the

Table 1 - Double J-stent result.

	n of cases	Failure n (%)	Success n (%)
Success			
Upper ureter	10	2 (20)	8 (80)
Middle ureter	38	1 (2.6)	37 (97.4)
Lower ureter	200	2 (1)	198 (99)
Complications			
False passage	24-19		(2)
Perforation	4		(1.6)
Mucosal injury	10		(4)
Fever	5		(2)

stone. We gave the patient 20 mg frusemide intravenously, in the beginning of the maneuver which improved the vision, helped in preventing escape of the stones and aided in the clearing of the fragments. To the end of the procedure ureteric catheter number 6 or 7 F was left for 24-48 hours or double J stent in difficult cases. The kidney ureter bladder radiography was carried out on the second post operative day, if the patient is stone free or the size of fragments was too small to pass, the catheter was then removed. Operative time was between 15-80 minutes.

Success to disintegrate the stones from the first session was achieved in 233 cases. In 10 cases, either the guide wire or small ureteric catheter was left due to failure to reach the stone. Retrial was successful in 5 cases but failed in 5 patients. Success rate was approximately 98%. As regard to the stone level, it was unsuccessful in 2 cases in the lower ureter, one in the middle and 2 cases in the upper ureter (**Table 1**).

Intraoperative complications were in the form of false passage of the guide wire in 24 cases and ureteroscope was used to correct its position in 19 cases. Small perforation happened in 4 cases and mucosal injuries in 10 cases. Post operative fever (39°C) was found in 5 patients. There was no serious complications. Double J stent was left in 30 cases as in **Table 1**.

Development of fiberoptic ureteroscope led to its downsizing and shortening of the learning time. Also, as the time passed, the endoscopist became more skilled. All the previous issues reflected themselves on the improvement of the success rate and

made it higher and higher and the complications less and less. The success rate reached 99% in the lower ureter and 98% as a whole which is comparable to others (90-100%).⁴

Serious complications like ureteric avulsion and stricture were near to zero in our study which were approximately 1% by Martin et al⁶ in the recent literature. Certain precautions were followed like giving 20 mg furosemide in the beginning of the procedure. Complications experienced with the present study were of the minor type (9%) and comparable with others (4-9%) especially if false passage of the guide wire were omitted and successively corrected by the ureteroscope at the same time.

In conclusion, improvement in the design of the ureteroscope, accessories and technique have led to a significant increase in the success rate and a decrease of morbidity. This means that with skilled hands the area gained by the new generation ureteroscopes have widened to include proximal as well as distal ureter especially if the stone size is 10 mm or less. In spite of being late to present our experience, we reached a good result that is comparable with earlier investigators with comparable complications.

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