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Modified technique of RIRS

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Introduction: RIRS is an established procedure mainly used for removal of upper urinary stones. Currently operating surgeon handles the heavy flexible scope and camera on their own. This makes maneuvering of the scope, targeting the stone & manipulating the stone – all very cumbersome, time consuming and tiring. The scope is kept curved near the handle, which makes high chance of damage to the inner channel. We have established a procedure by which all these disadvantages are resolved.

Methods: Cystoscopy sheath is introduced in the bladder. The rigid ureterorenoscope used to dilate the ureter under vision. Two guide wires are inserted in the ureter. Initial access sheath is inserted. Double channel Flexible ureterorenoscope is inserted. The scope is held straight. Surgeon's Hand 1 - Rotation & deflection movements of the scope. Hand 2 – To & fro movement of scope OR use of laser / basket. Assistant 1 - Holding the scope and maintaining camera alignment. Assistant 2 - Catching the stone by NGage basket.

Results: Cystoscopy sheath keeps the tract aligned. Under vision dilatation facilitates introduction of access sheath. Time from starting the procedure to visualize the stone was on average 10 minutes. Double channel scope facilitated good flow of saline and hence clear visual field. Keeping the scope straight keeps the channel straight and prevents internal damage by equipment. Help of two assistants takes away the strain. Surgeon can easily concentrate on the procedure without getting fatigue or losing the field of vision. Cook NGage basket which catches stones very smoothly. The operating time reduced from average 3 hours, to about 1 hour by this technique. We did more than 115 cases of RIRS. Stone clearance rate was 85%.

Conclusion: This modified technique of RIRS makes the procedure easy, fast and cost effective.

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