
RE: The Evaluation of the Result of Warm Normal Saline Irrigation in Ureteral Endoscopic Surgeries: A Randomized Clinical Trial

The authors have presented an interesting study on the results and complications of transureteral lithotripsy with ambient air temperature and with 40 °C irrigation fluid⁽¹⁾. Interestingly the success rate has been higher with a lower profile of complications in the 40 °C irrigation fluid group. They have concluded that using 40 °C irrigation fluid would lessen ureteral spasm and ensue in easier ureteroscopy and less complications. I was very happy to read this article as failure to progress in semi-rigid ureteroscopy is a relatively common problem. This report may provide first evidence based basis to illuminate strategies to tackle with problems of ureteroscope impaction and ureteral spasm during ureteroscopy. Nevertheless, the following points should be clarified by the authors. The success rate reported by the authors in the 40 °C irrigation fluid group is 96% versus 76% for patients in the ambient air temperature group. Their success rate in the control group is lower than most contemporary series for upper ureteral stones with success rates over 80%⁽²⁾ while 65% of stones in the control group were in lower ureter in which success rates over 90% are expectable. Median success rate for lower ureteral stones were 90% in 1990's⁽³⁾ and has been improving since. The authors compared their success with other reported studies, but the studies they used for comparison were focused on treating ureteral stones with basketing⁽⁴⁾ that is different from their method or were impacted ureteral stones⁽⁵⁾ with naturally lower success rates in comparison with non-impacted stones. The authors ascribed the reason for improved performance in the 40 °C irrigation fluid group to less ureteral spasm in this group but provided no solid evidence to back their hypothesis in their study or in review of the literature.

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Success rate in ureteroscopic lithotripsy depends on many different variables, such as available instruments, type and size of ureteroscope, type of energy source, number of intervention sessions, auxiliary procedures and experience of surgical team.⁽¹⁾

In our study we used semirigid ureteroscope and pneumatic lithotripsy for all patients. Flexible ureteroscope, laser lithotripter and stone retrieval devices such as N-trap or stone cone were not available. Some studies have reported their success rate with flexible ureteroscopy and laser lithotripter⁽²⁾. We also reported our results after only one session of TULP however some other studies have reported their results after more than one session⁽³⁾. Another important variable is time point in which stone free rate (SFR) is measured. We used two weeks and some other studies used four weeks, six weeks or even 3 months⁽³⁻⁵⁾. Heterogeneity in many of these variables in different studies can affect the success rate and metanalysis of the results is not possible⁽¹⁾.

In our study the only available instrument for comparison was basket. Although we didn't use basketing in our study but we used similar studies for comparison⁽⁶⁾.

Our hypothesis is that warmed 40 c normal saline results in lower ureteral spasm, ease of access to stone, lower ureteroscope impaction and easier TULP. However in our knowledge there was no similar study for citation.

Finally we think this study can provide a strategy to solve some problems during TULP such as ureteral spasm and ureteroscope impaction. However more studies with higher sample size are needed.

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