

## PP-092

### The efficacy and safety of local infiltration of lidocaine 1% before extracorporeal shock wave lithotripsy

A. Ghadian

*Department of Urology, Baqiyatallah University of Medical Sciences, Tehran, Iran*

**Background and Aims:** Extracorporeal shock wave lithotripsy (ESWL) represents first line therapy for the majority of urinary tract calculi and requires anesthesia. We conduct this study to evaluate the analgesic effects and safety of local infiltration of lidocaine 1% as monotherapy during renal ESWL and ensure stone clearance after the procedure.

**Methods:** 160 with renal stones, aged 18 to 65 years, were randomly allocated into two groups; 80 patients in group 1 received intramuscular injection of 20 mg Ketorolac tromethamine, 20 minutes before start of the procedure and 80 patients in group 2 received Lidocaine 1% by local infiltration (5mg/kg) into the 30 cm<sup>2</sup> area after localizing the stones site, 10 minutes before the session. A visual analog scale, (0 to 100 mm) was used to evaluate pain every 10 minutes.

**Results:** The visual analog scores for group 2 were significantly lower than group 1 at 10, 20, 30 and 40 minutes till end of the procedure. The mean requirements of supplemental fentanyl analgesia ( $\mu$ g) were significantly decreased in group 2 than group 1. All patients in group 2 were discharged earlier, 1 hour after the end of the procedure while 21 patients (26.2%) in group 1 had delayed discharge. No significant difference was detected between the two groups with regards to complete stone clearance after 1 month, no. of shocks, voltage power or duration of procedure. No patient in group 2 reported neurological side effects of local anesthesia.

**Conclusions:** Lidocaine 1% by local infiltration cannot be used alone for pain relief but effectively reduced the analgesic needs and minimized hospital stay after renal ESWL, without affecting stone clearance.

*As published in the Supplement of AFJU, Volume 18 (2012), 1<sup>st</sup> ESD "Experts in Stone Disease" Conference (page 66)*