



#### FP04

##### **Meta-analysis of randomized controlled trials on adjunctive medical expulsive therapy for kidney and ureteral stone fragments following shock wave lithotripsy**

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**Objectives:** To study effects of adjunctive medical expulsive therapy for stone fragments after SWL.

**Methods:** We searched various databases [up to 7 July 2014] using relevant search terms. Inclusion criteria for our review were: all age groups and gender, adjunctive medical expulsive therapy given post SWL. Exclusion criteria were: Studies on medical therapy for primary expulsion of stones, and study designs other than RCTs and quasi-RCTs. Data extraction and risk of bias assessment was carried out independently by two authors. Disagreements were resolved by consensus. Data analysis was done with the aid of Revman 5.3 software, while the summary of findings table and grading quality of evidence was done with the aid of GRADEprofiler 3.6 software.

**Results:** We found 36 eligible studies, comprising 4,304 participants. There was moderate quality evidence of the benefit of alpha blockers in terms of time to stone-free state (RR 1.19, 95% CI of 1.01 to 1.40), stone free rate (RR 1.20, with 95% CI of 1.1 to 1.40), pain scores (MD -6.52 and 95% CI of -9.66 to -3.39), and need for auxiliary procedures (RR 0.58, 95% CI of 0.41 to 0.81), while there was low quality evidence of medication side effects (RR 3.82, 95% CI of 1.45 to 10.6). There was no evidence of benefit of calcium channel blockers in terms of all outcomes, with evidence of harm from side effects. There are few trials on therapies such as rowatinex, *phyllanthus niruri*, and diuretics, and their meta-analyses show no significant benefits.

**Conclusions:** There is moderate quality evidence that alpha blockers are beneficial as adjunctive medical expulsive therapy for stone fragments after lithotripsy. There is no evidence of benefits of calcium channel blockers. There are few trials on other therapies, and their meta-analyses show no significant benefit of their use.