

## Second paper

### **Efficacy and safety of tamsulosin as a medical expulsive therapy for stones in children**

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#### Objectives

To evaluate the efficacy of tamsulosin for promoting ureteric stone expulsion in children, based on the confirmed efficacy of tamsulosin as a medical expulsive therapy in adults.

#### Patients and methods

From February 2010 to July 2013, 67 children presenting with a distal ureteric stone of <1 cm as assessed on unenhanced computed tomography were included in the study. The patients were randomised into two groups, with group 1 (33 patients) receiving tamsulosin 0.4 mg and ibuprofen, and group 2 (34) receiving ibuprofen only. They were followed up for 4 weeks. Endoscopic intervention was indicated for patients with uncontrolled pain, recurrent urinary tract infection, hypersensitivity to tamsulosin and failure of stone passage after 4 weeks of conservative treatment.

#### Results

Sixty-three patients completed the study. There were no statistically significant differences between the groups in patient age, body weight and stone size, the mean (SD) of which was 6.52 (1.8) mm in group 1 vs. 6.47 (1.79) mm in group 2 ( $P = 0.9$ ). The mean (SD) time to stone expulsion in group 1 was 7.7 (1.9) days, vs. 18 (1.73) days in group 2 ( $P < 0.001$ ). The analgesic requirement (mean number of ketorolac injections) in group 1 was significantly less than in group 2, at 0.55 (0.8) vs. 1.8 (1.6) ( $P < 0.001$ ). The stone-free rate was 87% in group 1 and 63% in group 2 ( $P = 0.025$ ).

#### Conclusions

Tamsulosin used as a medical expulsive therapy for children with ureteric stones is safe and effective, as it facilitates spontaneous expulsion of the stone.