

Effect of potassium citrate therapy on stone recurrence and residual fragments after shockwave lithotripsy in lower caliceal calcium oxalate urolithiasis: a randomized controlled trial., Soygür T1, Akbay A, Küpeli S. ,J Endourol. 2002 Apr;16(3):149-52.

Abstract

BACKGROUND AND PURPOSE:

- ❖ To evaluate the efficacy of potassium citrate treatment in preventing stone recurrences and residual fragments after shockwave lithotripsy (SWL) for lower pole calcium oxalate urolithiasis.

PATIENTS AND METHODS:

- ❖ One hundred ten patients who underwent SWL because of lower caliceal stones and who were stone free or who had residual stone 4 weeks later were enrolled in the study. The average patient age was 41.7 years. All patients had documented simple calcium oxalate lithiasis without urinary tract infection and with normal renal morphology and function. Four weeks after SWL, patients who were stone free (N = 56) and patients who had residual stones (N = 34) were independently randomized into two subgroups that were matched for sex, age, and urinary values of citrate, calcium, and uric acid. One group was given oral potassium citrate 60 mEq per day, and the other group served as controls.

RESULTS:

- ❖ In patients who were stone free after SWL and receiving medical treatment, the stone recurrence rate at 12 months was 0 whereas untreated patients showed a 28.5% stone recurrence rate (P < 0.05). Similarly, in the residual fragment group, the medically treated patients had a significantly greater remission rate than the untreated patients (44.5 v 12.5%; P < 0.05).

CONCLUSION:

- ❖ Potassium citrate therapy significantly alleviated calcium oxalate stone activity after SWL for lower pole stones in patients who were stone free. An important observation was the beneficial effect of medical treatment on stone activity after SWL among patients with residual calculi.