



The study of therapeutic effect of *Cleome dolichostyla* herbal tea on formation and dissolution of calcium oxalate renal stones by electrochemical methods.

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Abstract

Objective: Present study designed to evaluate the effectiveness of an extract obtained from *Cleome dolichostyla* on calcium oxalate crystallization in vitro.

Materials and Methods: In this laboratory research, after taking the aqueous extract of 5 grams of *Cleome dolichostyla* by 100 ml of distilled water at gentle heating, the formation and dissolution of calcium oxalate in the absence and presence of extract was investigated by complexometric and conductometric methods.

Results: The effect of the extracts on the prevention of sediment formation was studied and the results of the conductometric titration curve method for leaves of *Cleome dolichostyla* showed a significant difference (175.0 μmol) between the concentration of calcium in the absence (450.0 μmol) and presence of the extract (625.0 μmol) and for seeds, the difference was (38/0 μmol) in the absence (450/0 μmol) and presence (488/0 μmol) of the extract. In the study of the effect of extract on the stone dissolution, the results of the complexometry method showed that the amount of calcium measured by the dissolution of calcium oxalate crystals for the leaves of *Cleome dolichostyla* in the presence of extract, was 2.5 μmol higher than that in the absence of extract and for seeds was 6.0 μmol higher.

Conclusion: According to this study, *Cleome dolichostyla* aqueous extract dissolves calcium oxalate kidney stone, but can not prevent the formation of them.

Key words: *Cleome dolichostyla*, Calcium oxalate, Complexometry titration, Conductometry, Kidney stone.

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