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## Genetic polymorphisms of human transcription factor-7 like 2 (TCF7L2), $\beta$ -defensin (DEFB1) and CD14 genes in nephrolithiasis patients (Article)

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### Abstract

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Background: It is assumed that genetic factors play crucial role in nephrolithiasis. The present study was conducted to explore the role of Human Transcription Factor-7 like-2 (TCF7L2)  $\beta$ -defensin (DEFB1) and CD14 gene polymorphism in development and progression of nephrolithiasis. Methods: The genotypes of TCF7L2, DEFB1 and CD14 polymorphism were determined in 240 nephrolithiasis patients and 240 healthy controls by restriction digestion method of PCR. The levels of serum TCF7L2, DEFB1, CD14, uric acid and other biochemical parameters were measured both in nephrolithiasis patients and healthy control. Results: The patients and control groups showed 30% and 50% 1654 AA DEFB1 genotype respectively. The Allele frequency in case of patient's group was 63.67% while in control group it was 36.33%. The mean serum DEFB1 levels of the patients and control groups attained were 115.66 and 239.43 pg/mL respectively. The allele frequency of TCF7L2 in patients and controls were 44.17% and 70.0% for C-allele, 55.83% and 30.00% for T-allele respectively. The mean of serum TCF7L2 levels were significantly decreased in patients compared to control group. Conclusions: The present findings are first of its class that validates a considerable connection of DEFB1 and TCF7L2 gene polymorphisms with nephrolithiasis and could probably act as indicators to estimate the risk associated to nephrolithiasis. © 2018 Elsevier B.V.

### Author keywords

[CD14](#) [TCF7L2](#)  [\$\beta\$ -Defensin](#)

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