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A new dietary therapy for chronic renal failure

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The use of new dietary therapies to lower urea levels simulating dialysis procedures has been recently described and has been sometimes called intestinal or dietary dialysis. In the commonest form of this new dietary approach, the patient consumes relatively a large amount of soluble fiber. The most commonly used soluble fiber acacia gum is digested by colonic flora, thereby increasing the amount of nitrogen that is eliminated as fecal waste. When acacia fibers gum are added to a low protein diet in patients with advanced Chronic Kidney Disease (CKD) who do not have access to dialysis, their serum BUN levels can be lowered and they experienced a decrease in uremic symptoms. In a series of 80 patients with Chronic Renal Failure (CRF), 14(16.5%) patients were treated with a new therapeutic dietary regimen. This new dietary regimen consists of using acacia gum as dietary supplement in addition to the traditional conservative measures used in the management of CRF. The use of this novel technology resulted in amelioration of the uremic symptoms and lowering of blood urea levels and delaying the need for dialysis. In this sample of 80 patients the longest survival of 5 years was achieved in 2 patients, both treated initially with IPD. One of them was transplanted and the other was treated with new dietary technology.

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Comprehensive genetic screening of *VDR, CaSR and CLDN14* among patients having kidney stone disease in eastern part of India

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Growing incidence of Kidney Stone Disease (KSD) poses an increasing threat for global economy and healthcare. Insufficient understanding of molecular and genetic basis of pathogenic mechanisms underlying KSD remains a crucial barrier to its early detection and treatment. The diversity of genes and genetic loci implicated in KSD defines the complexity of the genetic basis of stone formation. In spite of this large heterogeneity, polymorphisms in the genes *VDR*, *CaSR* and *CLDN14* are major contributors. The mutation/polymorphism spectrum of these genes varies among different ethnic groups. Few studies have focused on the northern regions of India related to KSD; however, no such data is available from eastern part of our country. Polymorphisms in *VDR*, *CaSR* and *CLDN14* genes were screened by bidirectional sequencing from 200 consecutive kidney stone patients. Four non-synonymous (rs1801725, rs1042636, rs1801726 and rs2228570), one synonymous (rs219780) and three intronic single nucleotide polymorphisms (SNPs) (rs731236, rs219777, rs219778) were identified. Genotype and allele frequency analysis of these SNPs revealed that, rs1801725 (Ala986Ser), rs1042636 (Arg990Gly) of *CaSR* gene and rs219778, rs219780 (Thr229Thr) of *CLDN14* gene were significantly associated with KSD. Serum calcium levels and calcium excretion were significantly higher in subjects carrying 986Ser allele and 990Gly allele respectively. The lack of association of *VDR* polymorphisms suggest that additional genetic factors such as complexity of disease etiology, genetic heterogeneity, ethnicity, differences in population characteristics, including interaction with environmental factors may also contribute to this disease. In conclusion, rs1801725, rs1042636, rs219778 and rs219780 SNPs were associated with kidney stone risk in patients from the eastern part of India.

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