Oxalobacter formigenes: Opening the Door to Probiotic Therapy for the Treatment of Hyperoxaluria

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Objective. The aim of this study was to determine the early effect of the administration of Oxalobacter formigenes on the metabolic pattern of patients with calcium oxalate stones, comparing it with potassium magnesium citrate (KMgCit). Materials and methods. Eighty patients were randomized to receive either 30 mEq of KMgCit or 700 million O. formigenes, both twice a day. Serum creatinine, serum urate, serum calcium and phosphorus, serum intact parathyroid hormone (if serum calcium >10.5 mg/dl) and 24 h urine metabolic evaluation for various metabolites (e.g. oxalate, calcium, phosphorus, citrate, magnesium, urate and creatinine) were evaluated at baseline and 1 month after starting the treatment. Results. In both groups hyperoxaluria was the most common abnormality, followed by hypercalciuria. The incidence of hyperoxaluria decreased at 1 month compared to baseline in both KMgCit (77.5% vs 37.5%, p = 0.0006) and O. formigenes preparation (82.5% vs 15%, p < 0.0001) groups, while other urinary metabolic abnormalities were similar at baseline and 1 month in both groups. Three patients in the KMgCit had mild self-limiting secondary symptoms. Conclusion. Compared with KMgCit, O. formigenes preparation is more effective in decreasing the incidence of hyperoxaluria, opening the door to probiotic therapy as a potential new weapon against hyperoxaluria.