Abstract
Citrate is a powerful inhibitor of the crystallization of calcium salts. Hypocitraturia is a biochemical common alteration in calcium stone formation in adults and especially in children. The acid pH (systemic, tubular and intracellular) is the main determinant of citrate excretion in the urine. While the etiology of hypocitraturia is idiopathic in most patients with kidney stones, there are a number of causes for this abnormality including distal renal tubular acidosis, hypokalemia, diets rich in animal protein and/or diets low in alkali and certain drugs, such as acetazolamide, topiramate, ACE inhibitors and thiazides. Dietary modifications that benefit these patients include high intake of fluids and fruits, especially citrus, sodium and protein restriction, with normal calcium intake. Treatment with potassium citrate is effective in patients with primary or secondary hypocitraturia and acidification disorders, which cause unduly acidic urine pH persistently. Adverse effects are low and are referred to the gastrointestinal tract. While there are various preparations of citrate (potassium citrate, sodium citrate, potassium citrate, magnesium) in our country is available only potassium citrate powder that is useful to correct both the hypocitraturia and the low urinary pH and reduce markedly the recurrence of kidney stones.

KEYWORDS: citrate; renal stones

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