The Incidence of Renal Cyst Formation in Patients with Primary Distal Renal Tubular Acidosis

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Dear Sir,

We reported renal cyst formation as a complication of primary distal renal tubular acidosis (dRTA) [1]. Our study was based on 6 patients with dRTA manifesting renal cyst formation, unilateral or bilateral, single or multiple. At that time, however, due to the small number of cases, it remained unclear whether renal cyst formation is a true complication of the disease. This time, we studied 17 patients with dRTA, 8 women and 9 men (mean age 17.9 years, range 7-29). All patients had hypokalemia, hyperchloremia, low serum bicarbonate, and high urinary pH despite severe systemic metabolic acidosis at presentation. Fractional excretion of HCO₃ was less than 5% while receiving sufficient alkali therapy. Creatinine clearance was within normal range during the follow-up period. Alkali therapy was administered for 4-20 years (mean 14.2). All patients were examined by renal sonography and/or renal CT scans. Renal cysts over 5 mm in diameter were counted. Twelve (70.6%) patients manifested renal cyst formation. Seven patients (58.3%) had bilateral renal cysts, and 5 (41.7%) unilateral. The mean number of renal cysts was 5.0 ± 4.9

(mean $\pm$ 1 SD, range 0-23) in the right kidney and 5.8 ± 5.2 (range 0-22) in the left kidney.

The largest renal cyst was 5 cm in diameter. The number of renal cysts increased with age irrespective of alkali therapy in 3 patients. Our observation clearly shows that renal cyst formation is a common renal complication in patients with dRTA, and we regard dRTA as a cystic kidney disease.

Reference

Igarashi T, Shibuya K, Kamoshita S, Higashi-hara E, Kawato H, Hagishima K, Kosugi T: Renal cyst formation as a complication of primary distal renal tubular acidosis. Nephron 1991;59:75-79.