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## **Recurrent cyst infection in patients with autosomal dominant polycystic kidney disease**

**Jin Hyuk Paek**, Yaerim Kim, Woo Yeong Park, Kyubok Jin, Sung Bae Park, Seungyeup Han  
Department of Internal Medicine-Nephrology, Keimyung University Dongsan Medical Center, Korea, Republic of

**Objectives:** Autosomal dominant polycystic kidney disease (ADPKD) is the most common inherited kidney disease. Cyst infection is a frequent and serious complication of ADPKD. Cyst infection is often difficult to treat and known as a risk factor for poor renal outcome. However, much is still unknown about cyst infection in ADPKD and little is known about recurrent cyst infection.

**Methods:** Between January 1989 and August 2018, we retrospectively reviewed medical records of 288 patients with ADPKD at Keimyung university Dongsan medical center. Recurrent cyst infection was considered as more than one episode of infection and frequently recurrent cyst infection was defined as 3 or more times a year.

**Results:** Among 288 ADPKD patients, 28 patients (9.7%) had cyst infection. Females were 18 (64.3%) and the mean age at episode was  $55.1 \pm 13.1$  years. A positive blood culture was identified in 10 patients (35.7%) and a positive urine culture was reported in 7 patients (25%). *Klebsiella pneumoniae* was the most common organism grown in blood culture (50%), followed by *Escherichia coli* (40%). All positive urine cultures were identified as *E. coli*. Fluoroquinolone based regimens were most often used for initial management (92.8%). In recurrent group, cyst aspiration was significantly higher than non-recurrent group ( $p = 0.044$ ). A positive urine culture was significantly more reported in frequently recurrent group compared with non-frequently recurrent group ( $p = 0.009$ ). Longer hospital duration was significantly associated with recurrent cyst infection (OR, 6.187; 95% CI, 1.198-31.967;  $p = 0.030$ ).

**Conclusions:** Among the microbiological documentations, *E. coli* was the most common bacterial strains and a positive urine culture was significantly more identified in frequently recurrent group. To reduce recurrent cyst infection, early diagnosis and adequate treatment is important to shorten hospital duration.