

Clinical Investigation of Severe Upper Urinary Tract Infection (Excluding Acute Obstructive Pyelonephritis due to Urolithiasis)

Introduction and Objectives: Renal abscess, pyonephrosis and emphysematous pyelonephritis are severe infections of the upper urinary tract. These can often become fatal infectious diseases; therefore, timely diagnosis and the initiation of treatment are important. We herein report our experience management of these diseases.

Material and Methods: We retrospectively reviewed the record of 13 patients 4 men and 9 women aged 19 - 82 years (mean 61.2) whose diagnosis was patients with severe upper urinary tract infection (Renal abscess: 4 cases, pyonephrosis: 2 cases, emphysematous pyelonephritis: 4 cases, infected renal cyst: 3 cases) from January 2005 to August 2011.

Results: The complications are diabetes mellitus (6 cases), renal cyst (3 cases), chronic renal failure (2 cases), fulminant alcoholic hepatitis (1 case). Urine cultures revealed *E.coli* (3 cases), *K.pneumoniae* (1 case), *P.mirabilis* (ESBL) (1 case), *α-streptococcus* (1 case), *S. epidermidis* (1 case), *S.mitellie spp.* (1 case), *Candida albicans* (1 case), coagulase negative Staphyrococcus (2 cases). In eight cases, the management such as nephrectomy, catheterization, nephrostomy and cyst aspiration was performed. The mortality was 15.3% (emphysematous pyelonephritis 2 cases with poorly-controlled diabetes mellitus).

Conclusions: Severe infection of upper urinary tract is a life-threatening infection especially seen in patients with poorly-controlled diabetes mellitus.