Indications for Ureteropyeloscopy in Detection of Upper Urinary Tract Carcinoma

Introduction and Objectives: Recently, ureteroscopy has become an essential step for diagnosis in patients with upper urinary tract carcinoma. However, the certain consensus for indications of ureteroscopy has not been clarified yet. Furthermore, several limitations and potential adverse events have been suggested, such as the dissemination of malignant cells, adhesion of the ureter to the surrounding tissues, ureteral stricture, and ureteral perforation. For considering when or in which cases we should perform ureteroscopy in detection of upper urinary tract carcinoma, we investigated into the indication for ureteroscopy based on urine cytology and radiographic findings.
Materials and Methods: In a retrospective, 92 patients (62 men and 30 women) with a mean age of 66.4 years (range, 15～87 years) undergoing diagnostic ureteroscopy were evaluated, in the past 10 years in our institution. All patients were divided into six subgroups based on voided urine cytology and preoperative radiographic findings, group A1 (n=18) / A2 (n=2); positive cytology (positive split renal urine cytology / negative split urine cytology) and positive image, group B (n=19); positive cytology and negative image, group C1 (n=30) / C2 (n=10); negative cytology and positive image (upper urinary tract carcinoma s/o / other abnormal findings, group C3 (n=13); negative cytology and negative image. Ureteroscopic findings including histology were compared with urine cytology and radiographic findings.
Results: For voided urine cytology, sensitivity was 60.4%, and specificity was high in 77.3%. All patients of group A1 and A2 had been revealed to be carcinoma. In group B, nine patients (47.4%) revealed carcinoma; however, the remaining ten had not been detected to be carcinoma. All of the ten patients had a history of bladder cancer. On the contrary, five of the nine people with carcinoma had history of bladder tumor, four had no history. In group C1, 14 patients (46.7%) had been detected to be carcinoma. Therefore, it might be suggested that ureteroscopy was recommended for such patients with negative cytology.
Conclusions: Ureteroscopy is essential for detecting upper urinary tract carcinoma with negative voiding cytology and positive radiographic findings; however, ureteroscopy is redundant for patients with positive cytology and positive radiographic findings.