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NBI in upper urinary tract pathology — Evaluation of 220 cases
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Introduction: Identifying characteristics suggestive for the malignant nature of an upper urothelial lesion could be difficult. The relatively new NBI technology seems to be a promising technique. The aim of our study was to determine the value of digital flexible ureteroscopy combined with NBI in upper urinary tract pathology diagnosis.

Material and Methods: Between January 2010- January 2014, 200 white light and NBI digital flexible ureteroscopic procedures were performed in our department. The patients were divided in two groups. Group I (94 cases) included patients in which, the procedures were performed for upper urinary tract filling defects (36 cases), unilateral hematuria (44 cases), and abnormal urinary cytology (14 cases). The second group (106 procedures) included follow-up cases with conservatively treated upper urinary tract urothelial tumors. An Olympus URF-Vo ureteroscope with NBI capability was used in all cases.

Results: In Group I, flexible ureteroscopy identified upper urinary tract lesions in 96%: malignant tumors in 29 cases and benign lesions in 61 cases. The malignant lesions were identified by both white light and NBI in 18 cases. Only NBI detected the tumors in 4 cases, while in 7 cases, it identified supplementary lesions. In Group II, tumoral recurrence was found in 9 cases, 5 of them visible both in white light and NBI and one only in NBI. In 3 cases, NBI identified supplementary lesions.

Conclusions: Flexible retrograde ureteroscopy with NBI is a useful diagnosis method in upper urinary tract pathology, especially when imaging data are equivocal and malignant lesions are suspected.