

The Role of NBI Re-TURB in the Evaluation of T1HG: Preliminary Experience

Introduction and Objective: High grade bladder neoplasia (T1HG TCC) represents a true therapeutic challenge because of a 20-30% risk of progression. Sometimes a restaging TURBt better predicts early stage progression. Small or flat cancerous lesions on the bladder surface could be missed during white light imaging (WLI) cystoscopy. Different optical imaging techniques have been developed in an effort to minimize this failure. We investigate whether narrow band imaging (NBI) improves the detection in the follow-up of high-grade disease recurrence and progression rate (T1HG bladder neoplasm).

Materials and Methods; From 06/2010 to 6/2011 a cohort of 276 patients presenting primary bladder neoplasms underwent TURBt with Bipolar Surgimaster Scalpel in saline (TURis); out of this number 72 (26,1%) were T1HG. After a month HG cancer patients underwent re-TURBT of the previously resected area using NBI light to better characterize the “bottom of resection” and surgical margins: the aim was to evaluate, more precisely, recurrence and progression free survival time. The subsequent follow-up consisted of NBI cystoscopy with multiple biopsies, (randomly and in the previous zone of resection) each 3 months, urinary oncocytopology on 3 specimens and kidney/bladder ultrasound each 6 months. The average follow-up was 12 (6-18) months.

Results: The T1HG cancer group showed a 40,2% (29/72 pts) free of disease, a relapse rate of 59,7% (43/72 pts) and a progression rate of 13,8% (10/72 pts). After NBI re-TURB we find an overall persistence of TCC in 31 (43,1%) cases: 23 (31,9%) high grade (HG) non muscle invasive disease and 8 (11,1%) high grade (HG) muscle invasive bladder cancer (T2HG). In the recurrence group (31 pts) 21 pts (29,1%) underwent WLI TURBt, while the remaining 10 (13,8%) NBI resection (located in the bed of resection in 2 cases (2,7%) and in surgical margins in 5 (6,9%)). Patients with a high grade (HG) muscle invasion disease (T2HG) were 6 (8,3%): 2 recurrences in the bed and 4 in the surgical margins related to NBI re-TURBt but only 2 (2,7%) in WL re-TURBT. We observed disease progression in 2 patients after 6 and 12 months, respectively. In the group of 41 (56,9%) patients T0, the NBI and WL re-TURB showed a recurrence in 12 pts (16,6%) and a progression in just 2 (2,7%) who presented a recurrence after 3 months, associated with CIS. The multivariate analysis showed that the most important variable of early progression was the histopathological findings at re-TURBt ($p=0,01$) followed by the results of the NBI re-TURBt ($p=0,001$), presence of CIS ($p=0,02$) and absence of recurrence within 3 months ($p=0,02$).

Conclusion: NBI re-TURBt in T1HG patients identifies subjects with high risk of early progression disease who need an immediate radical surgical treatment (early cystectomy).