



Editorial

En Bloc Resection of Bladder Tumor May be the best choice?

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Bladder cancer has an estimated 429,793 new diagnoses resulting in 165,084 deaths per year globally [1]. Transurethral Resection Of Bladder Tumors (TURBT) represents the cornerstone in diagnosis and treatment of bladder cancer since the 1940s. TURBT relieves symptoms, and clears histological diagnosis of some stages of non-muscle invasive lesions. In a piecemeal resection of the tumor there may be tumor seeding. En-bloc resection techniques were described in 1997 by Kawada et al. using a new arched resection loop. En-bloc transurethral resection of bladder tumors (ERBT) is removing the bladder tumor in one piece. ERBT has the advantage of decreasing spillage and improving oncological outcomes. It was shown that compared to TURBT, ERBT has a longer operation time but shorter irrigation time and lower risk of bladder perforation. However, trials were not able to show a difference in catheterization time, hospital stay, occurrence of obturator nerve reflex, presence of detrusor muscle in specimen or recurrence rates. European urologists reported that en-bloc TURBT is the resection technique of choice in 35% of cases [1].

The quality of transurethral tumor resection plays an important role in histopathological assessment and treatment decision-making, which affects the prognosis of the disease. Piecemeal resection of tumor tissue leads to the dissemination and implantation of tumor cells, and may lead to tumor recurrence. Fragmented tumor is difficult for pathologists to assess the pathological stage and grade [2]. Even now, there is no strong clinical evidence that en bloc tumor resection is superior to conventional resection in terms of oncological outcomes. Considering the high recurrence rate, small or occult tumor lesions may be overlooked and incomplete tumor resection may occur during white light cystoscopy assisted transurethral resection. Molecular fluorescent tracers have the ability to bind tumor cells with high sensitivity and specificity. Optical molecular imaging can detect small or occult malignant lesions while minimizing the occurrence of false positive results. Integrating the advantages of these two technologies, optical molecular imaging-assisted en

bloc tumor resection shows the potential to improve the positive detection rate of small or occult tumor lesions and resulting in high recurrence-free and progression-free survival rates [2].

Further studies showed that, compared to conventional TURBT, en-bloc TURBT is associated with a higher percentage of muscularis propria in the histopathological specimen, higher three-month recurrence-free survival and shorter hospitalization time [3]. There was a tendency toward increased recurrence in patients with dysplasia or malignancy in their lateral margins in En-Bloc Resection of Bladder Tumor (ERBT) specimens. This was not statistically significant. Larger sample sizes are required to determine the clinical impact of lateral margins in the pathological analysis [4]. ERBT considerably identifies the muscularis mucosae but requires increased attention not only during resection but also during intraoperative sample recovery and subsequent handling. When present, muscularis mucosae is most frequently scattered, which renders its usage as a reference structure for substaging more difficult. At the same time, this stresses the importance of optimal specimen orientation and tissue integrity. In this context, future prospective studies on ERBT are necessary, [5] For patients with newly diagnosed NMIBC, after bloc resection of bladder tumor, thulium laser en bloc resection of bladder tumor (TmLRBT) combined with immediate intravesical chemotherapy, Continuous Saline Bladder Irrigation (CSBI), cannot improve oncological outcomes and reduce the incidence of perioperative complications. Therefore, TmLRBT may be performed as day-surgery operation for well-selected patients [6]. Other findings suggested that high-risk NMIBC patients initially treated with ERBT presented no significantly lower rates of residual tumor, upstaging, recurrence, or progression after resection. Reresection does not seem to improve the prognosis of patients with high-risk NMIBC who undergo en bloc resection [7].

It seems that TURBT and ERBT do not differ significantly regarding perioperative morbidity. Also, when using laser devices, one may not fear any Obturator Nerve Reflex (ONR) [8]. Since

EBTUR is safe and feasible, every urologist should adopt EBTUR [9]. Other findings showed that ERBT of NMIBC presents optimal long-term recurrence- and progression-free survival. Further studies with larger cohorts in multicenter and randomized settings are mandatory for confirming results and for a proper comparison with the traditional piecemeal resection [10].

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