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Letter to the Editor

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Is Laser En Bloc Resection Better than Conventional TURBT?

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Dear Editor,

I read the article published by Yang et al. [1] in the January edition of *Urologia Internationalis* with keen interest. In this article, the authors have performed a meta-analysis comparing laser en bloc resection with conventional transurethral resection of bladder tumor (TURBT). In this study, the authors found laser en bloc resection to be associated with significantly shorter catheterization time (standardized mean difference −074, 95% confidence interval [CI] [−1.35, −0.12]), hospitalization time (standardized mean difference −0.88 95% CI [−1.57, −0.19]), and lower 24-month recurrence rates. Complication rates such as those of obturator reflex (95% CI 0.01–0.12; $p < 0.00001$) and bladder perforation (95% CI 0.05–0.59; $p = 0.005$) were significantly higher in the conventional TURBT group. However, there was no difference in the rates of urethral stricture and operative time. The authors should be commended for their effort for coming up with this study. They have highlighted the strengths and limitations of the study adequately.

The main objectives of TURBT are 3-fold, that is, to provide adequate tissue for histopathological examination, relieve symptoms such as hematuria, and achieve complete resection of tumors [2]. Theoretically, the use of monopolar current can lead to increased stimulation of obturator reflex and thus more chances of bladder perforation, especially when the tumor is located along the lateral wall of the bladder. Herein lies the greatest advantage of laser with the absence of current that reduces the chances of obturator reflex and bladder perforation as noted in this study. Another important objective of TURBT is to provide adequate tissue for pathological examination; that is, tissue should not have severe artifacts and should be representative of the tumor for deep muscle biopsy. Conventional TURBT has been noted in previous studies to cause severe tissue artifacts. Furthermore, in the initial studies of laser TURBT, tissues obtained were not adequate for pathological analysis [3]. However, with the advent of Holmium laser with its superior hemostatic properties and limited depth of penetration, adequate deep tissue without much artifacts can be obtained [3]. One important limitation of this meta-analysis is that the comparison of tissue artifacts and deep muscle biopsy in the two groups is lacking. It would have been interesting if the authors had compared the two groups for decrease in hemoglobin and need for blood transfusion as they are more clinically relevant parameters than catheterization and hospitalization time. Clinical relevance of significant difference noted in hospitalization and catheterization time is small, if any, as these are also dependent upon surgeon factor, institutional protocols, and insurance [2]. Further limitations of this study not high-

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lighted include that all the studies included in this review were Chinese, included patients with non-muscle-invasive bladder cancers only, and were non-randomized studies, thus limiting widespread applications. Heterogeneity in this study can also be due to the use of different lasers for en bloc resection. Last, from a methodological point of view, the authors have used Quality Assessment of Diagnostic Accuracy Studies (QUADAS) scale for quality assessment, which is recommended for quality assessment of studies for diagnostic accuracy. Other tools such as the Cochrane risk of bias tool for randomized and non-randomized studies are more appropriate.

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