Bladder Cancer Treatment: Optimize, Don't Compromise

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Patient selection based on a much more comprehensive biologic assessment of both host and tumor is likely the key to further advances in the treatment of all bladder cancer patients. Until such time, there can be no compromise in the careful application of the rigorous therapy required to optimize outcomes.

Bladder cancer represents one of the most prevalent genitourinary cancers and one of the most challenging to manage. Comprised of two distinct entities, bladder cancer will either present as a noninvasive, relatively low-risk variant or as a muscle-invasive form that is potentially life-threatening. Treatment for noninvasive disease centers on the elimination of any residual papillary or flat disease while minimizing the risk of subsequent recurrence. In contrast, the management of invasive bladder cancer is designed to minimize the risk of both local and distant recurrence and to maximize survival. Dickstein and Kamat present an excellent overview of the current treatment options for invasive bladder cancer. The take-home message from this review should be the importance both of accurate diagnosis and of the delivery of optimal therapy. Several key points are worthy of emphasis.

Optimizing therapy for invasive bladder cancer can be life-saving; in many instances, this requires a multimodality approach. Improving the outcome starts with an expeditious and accurate diagnosis. The authors highlight the ongoing problem of delayed diagnosis that occurs in many patients due to misinterpretation of presenting symptoms. Prompt referral for a complete work-up of symptoms, particularly hematuria, is necessary to ensure early identification and treatment. In addition, the authors nicely delineate the role of an adequate transurethral resection. Appropriate treatment assignment is completely dependent on an accurate diagnosis of stage, grade, and cell type. Many tumors require a restaging transurethral resection in order to achieve accurate staging and/or ensure the resection of all disease prior to initiation of bladder-sparing protocols.

Radical cystectomy has remained the mainstay of definitive local-regional therapy for most patients who present with muscle-invasive bladder cancer confined to the pelvis. Over the last decade, level 1 evidence from randomized prospective studies has demonstrated a survival advantage for the combination of surgery and preoperative cisplatin-based systemic chemotherapy. The current review notes that patients who receive optimal surgical treatment in combination with appropriate systemic chemotherapy are the most likely to survive their disease. Delivery of 3 to 4 months of cisplatin-based chemotherapy may decrease the risk of dying by 33% (hazard ratio [HR], 1.33 for death for patients managed with surgery alone vs chemotherapy followed by surgery).[1] We share the authors’ concern that national practice patterns within the United States demonstrate that only a small percentage of patients with muscle-invasive disease receive this combination therapy. Although many patients undergoing radical cystectomy are elderly and have multiple comorbidities, and thus may not be able to tolerate cisplatin chemotherapy, it also appears that physician preference may play a major role in determining whether a combination treatment approach is offered. Greater standardization of multimodality care for high-risk patients should be a priority, as this is likely to improve survival outcomes.

The goal of surgery is to remove all local and regional disease, clearing the margins around the tumor and maximizing locoregional control. Meticulous attention to technique improves oncologic outcomes as well as functional recovery following urinary tract reconstruction. Resection of the regional pelvic lymphatics is increasingly recognized as an important part of the surgical treatment of invasive bladder cancer. Removal of the primary and secondary lymphatic drainage basins leads to a cure in up to one third of patients with regionally metastatic disease.

Given the rapid adoption of robotic radical prostatectomy over the last decade, it is not surprising that there is now a corresponding move to robotic radical cystectomy. From a purely technical perspective, these operations, exclusive of the urinary diversion, are nearly identical. The literature has quickly filled with series of various sizes from numerous institutions demonstrating the feasibility of this approach. However, it cannot be overemphasized that the stakes are much higher in the case
of patients with bladder cancer. Invasive bladder cancer is a lethal disease, and failure to achieve locoregional control results in certain death. The primary focus must always be oncologic and not technologic. Many octogenarians need cystectomy, and this patient population is decidedly different from those undergoing prostatectomy. Comorbidity scores are much higher. Longer operative times and the physiologic effects of both pneumoperitoneum and Trendelenburg may not be as easily tolerated in this population. Small effects can become important. We agree with the authors that careful study, preferably in the form of randomized trials, needs to occur before robotic cystectomy becomes the de facto procedure of choice.

In this thorough review, Dickstein and Kamat give significant attention to bladder preservation strategies. Multimodality trials combining radical TURBT (transurethral resection of bladder tumor), systemic chemotherapy, and definitive radiation therapy to the bladder and pelvic lymph nodes have shown promising results in properly selected patients. The ability to cure invasive disease and preserve the bladder is a shared goal of patients and clinicians; however, proper patient selection and patient motivation figure strongly in its success. Toxicity, recurrence within the bladder, and disease progression need to be carefully evaluated over the long term. As the authors suggest, patient selection based on a much more comprehensive biologic assessment of both host and tumor is likely the key to further advances in the treatment of all bladder cancer patients. Until such time, there can be no compromise in the careful application of the rigorous therapy required to optimize outcomes.

Financial Disclosure: The authors have no significant financial interest or other relationship with the manufacturers of any products or providers of any service mentioned in this article.

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