ABIRATERONE FOR LOCALIZED HIGH-RISK PROSTATE CANCER

The management of localized high-risk prostate cancer (LHRPC) remains challenging with high recurrence rates reported with presently available treatment options. Recent literature has documented the role of preoperative abiraterone acetate in localized high-risk disease in castration-naïve men. The use of abiraterone acetate and prednisone (AAP) + luteinizing hormone-releasing hormone agonist (LHRHa) has been described. Efstathiou et al. reported the results of a randomized preoperative study of LHRHAs with or without AAP. In a small study involving 65 men (median age of 61 years) with LHRPC, patients were randomized 2:1 to receive AAP + LHRHa (n = 44) versus LHRHa alone (n = 21) for 3 months followed by radical prostatectomy. The authors found that the residual tumor at prostatectomy was significantly lower in the AAP + LHRHa group as compared with the LHRHa group. Thirty-seven (84%) AAP + LHRHa-treated patients and one patient in the LHRHa group had undetectable PSA (<0.1 ng/ml) before prostatectomy (P < 0.0001). Furthermore, the adverse events were similar between both the arms while no patient had Grade 4 events. Forty-four percent (19/43) and 59% (10/17) of men in the AAP + LHRHa and LHRHa groups had PSA recurrence, respectively (P = 0.28). A lower tumor epithelium volume correlated with superior biochemical recurrence-free survival, with a median follow-up of >4 years (P = 0.0014).

URINARY MARKERS IN NONINVASIVE BLADDER CANCER

The management of nonmuscle-invasive bladder cancer (MIBC) involves regular follow-up to look for recurrence. This follow-up traditionally involves periodic cystoscopy. This is not only invasive but also costly. Over the years, investigators have tried to identify urinary biomarkers for surveillance of these patients. However, most commercially available tests target single markers resulting in unreliable outcomes as compared to urine cytology and cystoscopy. Single biomarkers may not be very useful as there is high mutation load as well as heterogeneity in bladder cancer. Witjes et al. recently described a new urinary test (Bladder EpiCheck™) that is based on a panel of 15 DNA methylation patterns and reported promising results. D’Andrea et al. did an independent study to identify the clinical role of methylation urine biomarker test in the surveillance of non-MIBC. The authors analyzed prospectively the data of 357 patients. Their results showed that the test had a specificity of 88% (95% confidence interval [CI]: 84–91), a negative predictive value (NPV) of 94.4% (95% CI: 91–97) for the detection of any cancer, and an NPV of 99.3% for the detection of high-grade cancer. The authors performed a decision curve analysis to evaluate the impact of this investigation on decision-making in routine clinical practice and found that this test can reduce number of unnecessary investigations.

SHOULD NEOADJUVANT CHEMOTHERAPY BE USED IN ALL PATIENTS WITH MUSCLE-INVASIVE BLADDER CANCER?

Neoadjuvant cis-platinum-based combination chemotherapy (NAC) is recommended before radical cystectomy (RC) in patients with MIBC because of reported absolute survival benefit of 5% at 5 years. Various studies have shown that pathological downstaging associated with NAC was associated with better survivals. However, patients who were not downstaged after NAC had poorer outcomes than patients who underwent RC alone (without NAC). To answer if patients with persistent MIBC after NAC and RC had worse overall survival (OS) and cancer-specific survival (CSS) than patients with similar pathology who underwent RC alone, Lane et al. analyzed the Surveillance, Epidemiology, and End Results-Medicare data. The authors evaluated the records of patients with pT2-4N0M0 disease who underwent RC with or without NAC between 2004 and 2011. They identified 1886 patients, of which 1505 underwent RC alone while 381 received NAC + RC. The authors found that patients with persistent MIBC disease after platinum-based NAC + RC versus RC alone obtained OS advantage but no benefit in CSS with NAC. However, patients who were not downstaged after NAC have shown that pathological downstaging associated with NAC was associated with better survivals. Absolute survival benefit of 5% at 5 years.

NEPHRECTOMY FOR MULTICYSTIC DYSPLASTIC KIDNEY

Multicystic dysplastic kidney (MCDK), a congenital renal cystic disease, was historically treated by nephrectomy.
Cognitive Impairment in Men With Prostate Cancer on Androgen Deprivation

Aging in men is associated with a fall of serum testosterone levels while the risk of dementia increases. A causal relationship has been proposed but not proven. Androgen deprivation therapy (ADT) is commonly used for the management of metastatic prostate cancer. ADT has been reported to impair cognitive function. In a large study, involving 25,967 men with prostate cancer and 121,018 prostate cancer-free men, investigators from primarily Swedish centers, aimed to investigate the risk of dementia, separated into Alzheimer’s dementia and non-Alzheimer’s dementia, in men with prostate cancer treated with different types of ADT, or watchful waiting (i.e., no initial treatment but treatment at progression), in comparison with prostate cancer-free men. The median follow-up was 4 years, and in both the groups, 6% of men were diagnosed with dementia. The authors conclude that their population-based cohort study does not support previous observations of an increased risk of Alzheimer’s dementia for men on ADT; however, there was a small increase in the risk of non-Alzheimer’s dementia.

Is Bladder Pain Syndrome Centrally Mediated?

Bladder pain syndrome (BPS)/interstitial cystitis is a vaguely understood condition characterized by pain in the urinary bladder. Multiple etiological theories have been proposed. There has been a controversy whether the symptoms are peripherally mediated or are due to abnormal processing of sensory information within the central nervous system. To answer this hypothesis, the authors intravesically administered lidocaine in patients with BPS to test the hypothesis that symptoms have a peripheral versus central mechanism. The authors performed a cross-sectional study involving 24 women with BPS. The Central Sensitization Inventory and the King’s Health Questionnaire were completed by all patients followed by urodynamic assessment. During urodynamic study, participants were asked to report their pain using a numeric rating scale at cystometric capacity and after voiding. After this, the participants received intravesical instillation of either 20 ml of 2% alkalinized lidocaine (n = 16) or 20 ml of normal saline (n = 8). These solutions were kept intravesically for 20 min, and the pain score was repeated. Furthermore, the urodynamic study was repeated. The authors found that there was a statistically significant increase in bladder volume following lidocaine treatment: maximal cystometric capacity (MCC) 192–261 ml postlidocaine (P = 0.005). In contrast, there was no significant difference in the saline controls: MCC 190–183 ml (P = 0.879). Individual analysis revealed that 5 of 16 lidocaine participants did not respond to lidocaine. These five reported a significantly worse quality of life than lidocaine responders and had a tendency toward central sensitivity syndromes. In these 5 women, peripheral drive from the bladder was not related to pain. The authors suggest that this study can be used as a simple test to stratify patients for recruitment in various drug trials.

Sexual Functions Following Anastomotic Urethroplasty

Anastomotic urethroplasty (AU) and dorsal buccal onlay urethroplasty (DBOU) are the two most common types of urethroplasties performed for bulbar urethral strictures. AU for short bulbar strictures is associated with excellent results. However, lately, there has been a tendency to avoid transaction of the urethra because of fear of sexual side effects. Furr et al. performed a retrospective analysis of patients operated between 1998 and 2015 (40 underwent DBOU, Group I, while 139 AU, Group II) to compare the success and patient-reported urinary and sexual outcomes between the two methods. The long-term success was 95% and 99.3% (P = 0.06), with a mean follow-up of 51.4 and 63.3 months in Groups I and II, respectively. Patient-reported outcomes were similar in both the groups. However, postvoid dribbling was reported more common in Group I (28.1% vs. 8.3%, P < 0.0001), while tethering with erections in Group II (23.4% vs. 3.1%, P = 0.008). Ninety-eight percent of men in the anastomotic group and 91% in the dorsal buccal onlay group would choose their surgery again (P = 0.07). The authors concluded that the patient-reported outcome measures were similar regardless
of approach, despite inherent differences in stricture length. Their results indicate that AU should not be avoided due to concerns of sexual side effects.

**NARROWBAND IMAGING FOR BLADDER TUMORS**

Transurethral resection of bladder tumor (TURBT) is the initial step in the management of bladder tumors. This procedure is typically performed under white light (WL). However, WL may miss some lesions leading to inadequate treatment. Narrowband imaging (NBI) is an optical image enhancement technique that uses wavelengths in the blue (415 nm) and green (540 nm) zones of the electromagnetic spectrum. These specific wavelengths are strongly absorbed by hemoglobin, and vascular structures making them appear dark brown or green against a pink or white normal mucosal background. In a prospective, blinded, sequential, intervention randomized controlled trial, the authors aimed to determine the impact of NBI in the detection and resection of tumors during TURBT.[19] Patients with bladder tumors were randomized into two groups. In Group A, TURBT was performed under WL first followed by NBI, while in Group B, NBI was used followed by WL. In each group, the number of patients in whom additional lesions were detected by the second light source was analyzed. In addition, the feasibility of initial resection of tumor under NBI was also studied. A total of 110 patients were randomized and included in this study. Of 54 patients in arm A (WL first), additional lesions were identified at the second look in 20 patients (37%). In contrast, of 56 patients in arm B (NBI first), additional lesions were identified in 5 (9%) patients. This difference of 28% was statistically significant (P < 0.001). In arm B (NBI first), there were 7 breaches in protocol (due to bleeding in 6 and perforation in 1), and all these patients had high risk (≥3 in number or 3 cm in size) tumors (P < 0.002). Fifty-six cases were excluded at the time of recruitment because of the concerns of sexual side effects.

The authors concluded that NBI was better to WL in the detection of tumors, thus allowing a more complete resection. However, initial resection under NBI was difficult due to poor visibility, especially for high-risk tumors. The authors coined an adage “white to resect, blue to detect” for future use.

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