

Communication on the Impact of Multidisciplinary Care in a Large Volume Robot-Assisted Radical Prostatectomy Program: A Paradoxical Stage Migration toward More Aggressive Disease

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Received date: April 05, 2016; Accepted date: May 03, 2016; Published date: May 09, 2016

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Short Communication

The authors of this manuscript present the effect of successful implementation of a multidisciplinary genitourinary oncology clinic (MDC). The clinic includes coordinated patient visits with medical oncology, urologic oncology, and radiation oncology. At The Miriam Hospital MDC in Providence, Rhode Island (major affiliate of Brown University), individual patients meet with members of the medical oncology, radiation oncology, and urologic oncology teams to discuss their diagnosis, prognosis and potential treatment options [1]. Each specialty has the ability to put forth treatment recommendations based on the patient's comorbidities, clinical stage and appropriate risk stratification (NCCN).

The widespread adoption of robotic prostatectomy and the capital investment in robotic systems nationwide has led many to anticipate more surgery for low risk prostate cancer. However, at roughly the same time the USPSTF recommendations for reduction in prostate cancer screening and the adoption of active surveillance for very low and low risk prostate cancer surfaced.

Contrary to what was expected, we found that our patients, seen at the MDC, undergoing surgery were more likely to have higher risk and stage prostate cancer and that overtreatment of potentially indolent prostate cancer was not seen. With the aggressive adoption of active surveillance surgery for Gleason 3+3 diseases dropped to less than 10% (Unpublished Data The Miriam Hospital MDC 2015).

Finally, it is difficult to determine causation from association and the specific effect of a MDC on pathological upstaging. The implementation of a MDC at other institutions has been associated with changes in disease risk classification. Sundi et al. found patients were up-classified 5.7% of the time and were down-classified 2.9% of the time as a result of a MDC appointment [2]. While much emphasis has been placed on treatment modalities that are selected after patients are seen in a MDC, it is clear that the proper assignment of risk stratification is essential to optimizing care.

Recent research and emphasis on multidisciplinary care for high risk and locally advanced disease has led to an increased adoption of surgery [3]. The Mayo Clinic recently summarized their surgical experience with high risk prostate cancer. They discussed the advantages of surgery including accurate pathological staging, durable local control, and excellent long term cancer specific survival [3]. Further, proper pathological staging may limit associated negative effects of long term androgen deprivation therapy (ADT) (cardiac, cognitive, bone health, mood, etc.) and radiotherapy. In addition, many studies suggest that the morbidity associated with radical

prostatectomy (specifically the robotic approach) is similar between high risk and lower risk disease [4] and therefore surgery is more tolerable than a decade ago. One well established MDC clinic reported improved survival in high stage patients (stage III,IV) treated at their MDC when compared to the SEER national database [5].

High risk prostate cancer patients are increasingly seen as candidates for surgical intervention with extended lymph node dissection [3]. The adoption of the extended lymph node dissection has improved pathologic staging and decision making for adjuvant therapies. The appropriate integration of adjuvant or salvage radiation therapies have improved local control and possibly increased disease specific and overall survival (SWOG). In addition, a myriad of new systemic therapies for metastatic castration resistant disease has extended overall survival and reduced skeletal related events, thus improving patient's longevity and quality of life.

With an increase in surgery as the preferred modality in selected patients with high risk prostate cancer, extended pelvic lymph node dissection has been adopted by many academic groups (Mayo, MSKCC, MD Anderson). The definition of extended pelvic lymph node dissection (ePLND) remains somewhat undefined. The majority of surgeons agree that ePLND must include obturator and external iliac and hypogastria but the inclusion of presacral, common iliac, and presciatic nodes is not agreed upon [6]. Recent evidence from Abdollah et al. suggests that more extensive PLND improves survival in patients with node positive prostate cancer [7]. However, this study is limited by its retrospective design and lack of central pathological review.

Finally, while operative time is increased when performing ePLND, studies to date have failed to demonstrate a significant increased complication rate compared to standard PLND [6]. The lack of level one evidence and difficulty in performing randomized prospective trials has limited guideline adoption of ePLND. Determining which patients with high risk prostate cancer would benefit most from surgery remains elusive and despite attempts to develop preoperative nomograms further research is needed [8].

In conclusion, we are confident that a multidisciplinary approach to address high risk prostate cancer has optimized and improved our patients' outcomes and experiences. With reduced screening for prostate cancer, high risk and locally advanced disease will be diagnosed more frequently [9]. USPSTF increase risk high risk prostate cancer Since the USPSTF recommendation against prostate cancer screening in 2012, there has already been an increase in high risk disease diagnosis (approximately 3% per year) Thus, the development of a MDC at cancer centres around America that incorporate surgery

into the treatment algorithm for properly selected patients with high risk disease will become of paramount importance.

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