PSA and Prostate Cancer Recommendations

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The publication of screening trials, policy statements and editorials about prostate specific antigen (PSA) and prostate cancer during the last several months prompts me to call out “Hey Bob!” The urology community has digested the somewhat conflicting results of PSA screening studies from the United States and Europe. The AUA has published a Best Practice Statement on PSA encouraging patient education as well as the consideration of baseline and subsequent interval PSAs for early detection. Urologists have disputed the United States Preventive Services Task Force Recommendation Statement that PSA testing for patients older than 75 years is inadvisable. Mohler and Thompson recently emphasized the importance of clinical trials to develop the best evidence for guiding treatment.1

So where is all this going? It seems to me that along with the “I feel it in my bones” conviction that most urologists have with regard to the value of PSA for early detection and, therefore, more successful therapy, of equal interest and importance must be the incorporation of strategies to reduce prostate cancer morbidity with chemoprevention. In keeping with Mohler and Thompson, the Prostate Cancer Prevention Trial (PCPT) has provided level I evidence that chemoprevention can be accomplished with a 5α-reductase inhibitor. Through extensive analysis of its data set the PCPT demonstrated beyond a reasonable doubt that high grade cancer induction is highly unlikely. Parenthetically, this is the case because it removes the great burden of discussing high grade cancer induction with every patient with lower urinary tract symptoms for whom 5α-reductase inhibitors are prescribed. I was fortunate to co-chair a guideline jointly sponsored by the AUA and the American Society of Clinical Oncology® which addresses the issue of chemoprevention with 5α-reductase inhibitors.2 Useful patient information and discussion points can be found at www.foundationforurologicalresearch.com/downloads/5ARI-Guide.pdf.

I hope urologists will consider that if we are to pursue the diagnosis of prostate cancer with screening, we ought to with equal vigor use a strategy that has been demonstrated to reduce the incidence/prevalence of the disease. The PCPT together with the recently reported results of the REDUCE (Reduction by Dutasteride of Prostate Cancer Events) trial opens the door for urologists to preempt early detection with disease prevention. I hope the information from these trials and the guideline will penetrate the practice of every urologist.

Hey, Bob, thanks for introducing this column which provides a forum for informal discussion and exchange of ideas.◆


Robotic Urological Surgery at VA Medical Centers: Early Challenges and Successes

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Robotic assisted surgery, particularly robotic assisted radical prostatectomy (RARP), has been rapidly adopted by the urological community since the introduction of the da Vinci® Surgical System in 2001. Robotic assisted surgery offers numerous advantages compared to traditional laparoscopy including wristed instrumentation, 3-dimensional optics and improved ergonomics. Compared with open radical prostatectomy (ORP) advantages of RARP include less blood loss and a shorter convalescence. More recently robotic assisted partial nephrectomy and radical cystectomy have emerged as alternatives to standard laparoscopic and open approaches.

The Department of Veterans Affairs (VA) operates the largest integrated health care system in the United States, and through affiliation with medical schools serves as the largest provider of graduate medical education and training. In 2008 the United States veteran population was estimated to be 23,440,000, with 5,143,000 veterans using VA health care benefits. In 2002 there were 247,914 cases of prostate cancer, 11,878 cases of kidney cancer and 44,397 cases of bladder cancer among users of VA health care.2

The VA strives to provide equal access health care to qualified veterans and offers a unique vantage point to observe the adoption of robotic technology. The first da Vinci robot in the VA system was installed at the Pittsburgh facility in 2004, followed by installation of the second generation type S models at the Palo Alto VA and San Francisco VA in late 2006. Currently there are 10 VA medical centers have da Vinci surgical systems with 3-dimensional optics and laparoscopy including wristed instrumentation and robotic assistance. A majority of VA da Vinci robots have been purchased using 5α-reductase inhibitors for prostate cancer chemoprevention: American Society of Clinical Oncology/American Urological Association 2008 Clinical Practice Guideline. J Urol 2009; 181: 1642.

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tially screens the patients referred for robotic surgery, and is the dedicated case manager and point of contact for patients. This setup is an invaluable resource for patients and families during the preoperative and postoperative periods. Careful patient selection has been paramount in maximizing oncological and functional outcomes during the early learning curve of the surgeon and facility. Patient exclusion criteria for RARP are high grade disease (Gleason 4 or higher), large prostate (greater than 70 cc), morbid obesity (body mass index greater than 30), significant medical comorbidities (eg chronic obstructive pulmonary disease) and prior abdominal surgery (eg sigmoid colectomy). With experience our console time has steadily decreased (less than 3 hours) and our patient selection is now determined on a case by case basis.

Changing Operating Room Culture
The importance of a dedicated robotic surgical team comprised of surgeons,

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Robotic Surgery Program Challenges
An informal survey of urologists performing robotic surgery in the VA suggests that resistance to change presents a significant challenge for VA robotic surgery programs. While patients have rapidly embraced this new technology, a comprehensive and inclusive approach is important to obtain buy-in from the institution and health care providers associated with the robotic surgery program.

Preoperative Care and Patient Selection
The Palo Alto VA robotic surgery team includes a nurse practitioner who initi-
anesthesiologists and operating room (OR) nursing staff cannot be overemphasized. This is critical to the understanding and acceptance of the challenges of the robotic surgery learning curve. At the Palo Alto VA we ensure that all team members have a detailed understanding of robot setup and maintenance, patient positioning and operative steps. After each case feedback is provided regarding aspects of the case that went well or that require improvement. The surgical technique has been refined by review of intraoperative videos as well as attendance of postgraduate courses. Regular updates are provided to the OR nursing director, chief of surgery and hospital administration to ensure uninterrupted institutional support.

Integrating resident surgical training with the development of a new robotics program also presents a challenge. Traditionally residents have exercised greater autonomy in patient care delivered at VA health care facilities. We have addressed the steep learning curve and the constraints of a single console surgeon by implementing graduated resident responsibility. Residents progress from assisting at the bedside to performing the less challenging portions of the case (eg dropping the bladder) and ultimately performing the most challenging aspects of RARP (eg nerve sparing). Robot use at the VA is considerably less than at our university counterpart, and the robot is set up and available for resident training on non-OR days. We anticipate that resident exposure to a formal robotic surgery curriculum will improve resident skill and operative opportunities.

Postoperative Patient Care

The operative team and surgical nursing staff have worked together to develop a postoperative clinical pathway for all patients undergoing RARP. This approach capitalizes on the VA electronic health record to standardize the postoperative orders and medications for all patients. The development of this program encouraged participation of all floor nurses and increased awareness of the aspects of patient care unique to robotic surgery. In addition, a hospital discharge instruction packet has been created for patients with detailed information regarding the scheduling and importance of postoperative care, which provides the patient with realistic expectations of the recovery process.

Summary

Robotic assisted surgery offers users of the VA health care system a minimally invasive method for treating many urological cancers that are common in this patient population. Our experience at the Palo Alto VA parallels that of other VA centers and highlights the challenges of establishing a robotic surgery program. A cohesive and inclusive team oriented approach has facilitated overcoming the barriers of adopting robotic technology at the Palo Alto VA, which has led to an increase in surgical volume. As an integrated, equal access health care system, the VA offers the opportunity to deliver state-of-the-art care to a deserving patient population, as well as excellent potential for collaboration and cooperative study of the implementation of robotic technology in urology.

References