The top 13

What family physicians should know about prostate cancer

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ABSTRACT

OBJECTIVE This article identifies 13 key factors of which family physicians should be aware in the ongoing care of men with prostate cancer.

QUALITY OF EVIDENCE PubMed was searched with the relevant search terms for each of the 13 topics discussed. Most of the studies described in this article provide level II or level III evidence.

MAIN MESSAGE Family physicians are increasingly involved in the care of men with prostate cancer. The 13 clinical pearls presented in this article will enhance family physicians' ability to care for these patients along the disease trajectory.

CONCLUSION Men with prostate cancer face unique challenges as they deal with their disease and its treatment. Family physicians can make a substantial contribution to improving the quality of life of their prostate cancer patients by applying the information in this paper.

RÉSUMÉ

OBJECTIF Cet article identifie 13 facteurs clés dont le médecin de famille devrait tenir compte dans le suivi des patients atteints de cancer de la prostate.

QUALITÉ DES PREUVES Une recherche a été effectuée dans PubMed à l'aide des rubriques appropriées pour les 13 sujets à l'étude. La plupart des études décrites dans cet article fournissent des preuves de niveau II ou III.

PRINCIPAL MESSAGE Le médecin de famille est de plus en plus appelé à traiter des patients souffrant de cancer prostatique. Les 13 énoncés cliniques présentés ici devraient aider le médecin à traiter ces patients tout au long de leur maladie.

CONCLUSION Les hommes souffrant de cancer prostatique font face à des problèmes particuliers relatifs à leur maladie et à son traitement. Le médecin de famille peut contribuer de façon importante à améliorer la qualité de vie de ces patients s'il met en application l'information contenue dans cet article.

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Prostate cancer is the most common solid cancer in men. Each year, 20 000 Canadian men are diagnosed with it. The vast majority will not die of the disease.[1] In the prostate-specific antigen (PSA) era, most men are diagnosed with early cancer and will opt for curative therapy in the form of radical prostatectomy (RP) or radiation therapy. Many men seek the advice of their family physicians in making treatment decisions. Increasingly, these men are referred back to their family physicians by urologists and radiation oncologists for ongoing monitoring within 2 to 5 years of completing treatment. They might also seek help from their family physicians for side effects during treatment. Cancer patients report that they want their family physicians to be involved in their care throughout the cancer trajectory.[2]

This article identifies 13 key factors of which family physicians should be aware in the ongoing care of their prostate cancer patients. It is not intended as a comprehensive overview of treatment decision making, but rather to provide family physicians with useful information for their patients during the treatment and recovery phases.

Quality of evidence

PubMed was searched with the relevant search terms for each of the 13 topics discussed. Search terms included *prostate cancer, treatment decision making, radical prostatectomy, radiation therapy, brachytherapy, erectile dysfunction, incontinence, information sharing,* and *PSA velocity.* English articles published between 1999 and 2007 were reviewed. Most of the studies described in this article provide level II or III evidence.

A) Treatment decision making

1. No need to rush into treatment or decisions. Men and their partners or families frequently panic when they hear the diagnosis of prostate cancer and want immediate treatment. This is not unusual following a cancer diagnosis, where there is often a need for rapid treatment to slow the progression of disease or to alleviate symptoms. Prostate cancer, however, is usually an indolent disease, and, in the post-PSA era, most men are diagnosed with localized disease at an early stage.[3] Men need to take some time between diagnosis and definitive treatment to consider their treatment options. All the treatments currently available have substantial quality-of-life implications and patients need to be adequately prepared for them. It appears that time from biopsy or diagnosis to surgery does not increase the risk for biochemical failure (rising PSA as a marker for treatment failure or disease progression).[4,5] The time from biopsy to surgery does not affect postoperative outcomes such as surgical margins, length of stay in hospital, length of operative time, and surgical complications.[6] Men who waited for more than 1 month but fewer than 4 months did not have a statistically higher risk of biochemical recurrence in one study.[7]

2. Involve the partner. Cancer has been described as a couple's experience in that life-threatening illness in one partner affects all aspects of the other partner's life, as well as their life together. Initially the focus is on survival, fear that the man will die, and finding some control in what feels like an uncontrollable situation. Women tend to focus on the survival of their partners[8] and often are the more stressed of the two.[9] Couples will often find themselves talking about their relationships and connecting with each other on an emotional level between the time of diagnosis and treatment. Communication between partners might decrease, however, as men withdraw and refuse to talk, and the female partners are reluctant to insist on talking about it as they do not want to make the situation for their husbands any worse.[10]

It is recognized that involvement of partners in decision making can be helpful to men.[11,12] Partners are often left out, however, either because the men do not involve their partners or because the care providers do not invite them to be part of the consultation. The men might not fully understand the details of what they are told, and when they relay this information to their partners, it is often highly inaccurate.[13]

3. Ask the man what he believes and what stories he has heard. It is difficult for men to decide among the different choices of treatments, especially in the light of the considerable threat to quality of life that each imposes. A landmark study recently found that patients' treatment

Levels of evidence

Level I: At least one properly conducted randomized controlled trial, systematic review, or meta-analysis
Level II: Other comparison trials, non-randomized, cohort, case-control, or epidemiologic studies, and preferably more than one study
Level III: Expert opinion or consensus statements

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A companion article on monitoring prostate-specific antigen levels posttreatment can be found on **page 204.**

preferences were not based on careful risk assessments, but rather on fear and uncertainty. Patients' treatment preferences were found to be heavily influenced by misconceptions (for example, that surgery would remove the cancer entirely, hence guaranteeing a complete cure) and anecdotes about the cancer experiences of others (for example comparing themselves with celebrities or relatives who might well have had different stages or grades of cancer).[14]

4. Men tend to minimize the risk of side effects. The time around diagnosis is when rationalization about treatment side effects takes place. Men might minimize the anticipated loss of sexual function and risk for incontinence in an attempt to control uncertainty and take action. This is corroborated by their partners' support and desire for their survival above all else.[15] Anticipating how sexual problems might affect the relationship is different for men and women. Men are aware that erections are more important to them than to their female partners. Women might in fact overestimate the importance of erections to their husbands.[16,17] Women also tend to believe that penetrative sex is less important than the emotional aspects of the relationship. Couples might be hopeful that medication will allow them to continue at the same level of sexual functioning after treatment[18] and might be unable to conceive of a life devoid of sex.

B) After radical prostatectomy

5. Pelvic pain is common, especially among younger men after RP. The urinary catheter is left in situ for up to 14 days after surgery. This can cause swelling, excoriation, and pain at the urethral meatus. Leakage of urine past the catheter is common. The indwelling catheter can be a source of spasms and rectal pain and is described by some as the worst aspect of the prostatectomy experience.[19] Men might feel unprepared for the amount of postoperative pain and discomfort they experience, and younger men tend to report more pain and be less tolerant of the catheter than their older counterparts.

6. Incontinence will occur in the postoperative period. After removal of the catheter, urinary incontinence and urgency are common and can last from a few days to weeks, months, or years with maximum continence being achieved only by 24 months after surgery.[20] Damage to the nerve supply of the distal urethral sphincter and the development of strictures at the site of the anastomosis of the urethra are the most common causes of postoperative incontinence.[21]

This is a source of great distress for many,[22] and can have long-term psychological consequences for men and their self-image. The information provided to men about the risk of incontinence in written material tends to be overly optimistic and minimizes the experience, so men are often ill prepared for the postoperative realities.[23] Men and their partners appear to have difficulty processing information about the probability of postoperative incontinence and the degree to which this will have an adverse effect on quality of life.[24]

7. Erectile functioning might return slowly over years. Recovery of sexual function is dependent on age (younger men have greater success), erectile function before surgery, size of the prostate gland (smaller size has better outcomes), and surgical technique.[25] Sexual problems can persist for years following the surgery; however, a trend toward improvement is seen up to 5 years later.[26] Among men reporting ongoing problems with erectile dysfunction,[27] the effects are seen in general quality of life, self-confidence, and self-esteem.[28] Changes in social and intimate relationships can result, and masculine self-concept is also changed.[29] Erectile dysfunction, however, might be interpreted differently by men with prostate cancer, as they can rationalize this as a result of cancer treatment and might have better psychological health than men with erectile dysfunction who do not have cancer.[30]

8. PDE5 inhibitors help only 50% of the time. Phosphodiesterase 5 (PDE5) inhibitors sildenafil, vardenafil, and tadalafil act by causing the relaxation of smooth muscle in the corpus cavernosa of the penis, allowing blood to enter this spongy tissue during sexual stimulation.[31] There are no independent comparisons of the 3 PDE5 inhibitors in men after RP[32] to help in choosing the best drug.

Response is mediated by type of surgery, age, and preoperative erectile functioning.[33] If both nerve bundles are spared and age is younger than 55 years, 80% of men respond with erections firm enough for penetration in more than 50% of attempts. For men between the ages of 56 and 65 years, 45% respond in similar fashion with bilateral nerve-sparing surgery, but this drops to 33% for men older than 66 years.[34] If one nerve bundle is spared, only 44% of men younger than 55 years have a positive response, and when both nerve bundles are cut, there is no response regardless of age and previous erectile functioning. Once again, the information that men read about this prior to making treatment decisions is often vague and overly optimistic.

9. Penile shortening or fibrosis might occur after surgery. Almost 70% of men can expect to experience some degree of penile shortening and decrease in girth following RP.[35,36] The overall range of shortening is from 0.5 to 4 cm. Reduction in girth might in fact be more significant than reduction in length.[37] This probably occurs for several reasons: anatomical changes to the structure of the penis; cavernosal nerve injury that alters penile

structure; hypoxia to the corpora cavernosa that alters the anatomical structure of the penis; and sympathetic hyperinnervation as a result of damage to autonomic nerves that results in unantagonized sympathetic tone, and hence a penile hypertonic state.[38]

Treatment is unproven and, minimally, men should be warned that penile shortening and shrinkage is probable. There is some suggestion that hyperthermia from ultrasound is effective in reducing the amount of shortening.[39] There is also a suggestion that regular use of a penile vacuum erection device can stretch the penis.

10. PSA velocity is a more reliable indicator of recurrence than an isolated PSA measurement is. Identification of treatment failure is important so that men can be given salvage therapy to prevent metastatic disease and death. There is some controversy about how to measure treatment failure. Any elevation of PSA levels following primary treatment is thought to be suggestive of treatment failure; however, a generally accepted cut point above 0.2 to 0.4 ng/mL is used to define this.[40] This should be measured on 2 consecutive occasions.[41] Prostate-specific antigen velocity (the time taken for the PSA level to double or triple) is a more useful measure and can help to identify whether recurrence is local (and thus amenable to salvage radiation therapy) or distant (requiring systemic treatment).[42] Pretreatment PSA velocity is also an important predictor of relapse after definitive treatment and should be considered in addition to grade, surgical margins, and clinical stage.[43] After completion of definitive treatment for prostate cancer, it is standard follow-up to monitor PSA levels every 3 months for the first year and every 6 months thereafter.

C) After radiation therapy

11. Bladder irritation is common after radiation therapy. Men treated with radiation therapy, particularly brachytherapy, are more likely to experience urinary frequency and dysuria during and after treatment than men who have undergone surgical treatment (who typically suffer incontinence). Eighty-five percent of men might experience dysuria after brachytherapy and α-blockers can be used as prophylaxis with good results.[44] The use of α-blockers decreased from 88% of the sample at 3 months posttreatment to 31% at 3 years, indicating a decrease in need.[45] Urinary frequency is quite common among aging men, and radiation therapy appears to compound the problem.[46]

12. Bowel complications might occur in the long-term. In addition to a high incidence (45%) of proctitis (rectal pain or irritation) during external beam radiation therapy (EBRT), men also experience diarrhea.[46] Brachytherapy appears to have different short-term bowel sequelae (20% with some rectal bleeding in the first 12 months) than EBRT[45]; however, this complication might be more common 12 to 24 months after completion of treatment.[47] Radiation therapy has also been implicated in the development of rectal cancer (OR 1.7, 95% CI 1.4–2.2)[48];

Resources

Canadian books

Goldenberg L, Thompson I. *The intelligent patient guide to prostate cancer.* 3rd ed. Vancouver, BC: The Intelligent Patient Guide Ltd; 2001.

Gray R. *Prostate tales: men's experiences with prostate cancer.* Harriman, TN: Men's Studies Press; 2003.

Jamnicky L, Nam R. *So you're having prostate surgery.* Toronto, ON: SCRIPT Medical Press Inc; 2003.

Klotz L. *Prostate cancer: a guide for patients.* Toronto, ON: Coles Publishing; 2001.

US books

Centeno A, Onik G. *Prostate cancer: a patient's guide to treatment.* Omaha, NE: Addicus Books; 2004.

Grimm P, Blasko J, Sylvester J. *The prostate cancer treatment book.* New York, NY: McGraw Hill; 2003.

Lange P, Adamec C. *Prostate cancer for dummies.* New York, NY: Wiley Publishing Inc; 2003.

Marks S. *Prostate and cancer: a family guide to diagnosis, treatment & survival.* Cambridge, MA: Perseus Publishing; 2003.

Walsh P, Worthington J. *Dr Patrick Walsh's guide to surviving prostate cancer.* New York, NY: Warner Books; 2001.

Specialty books

Alterowitz R, Alterowitz B. *The lovin' ain't over: the couple's guide to better sex after prostate disease.* West Bethesda, MD: Health Education Literary Publisher; 1999.

Alterowitz R, Alterowitz B. *Intimacy with impotence.* Cambridge. MA: DeCapo Life Long; 2004.

Perlman G, Drescher J. *The gay man's guide to prostate cancer.* Binghampton, NY: Haworth Medical Press; 2005.

Websites

Mayo Clinic: **www.mayoclinic.com/health/prostate-cancer/PC99999**

Memorial Sloan Kettering: **www.mskcc.org/mskcc/html/403.cfm**

Canadian Cancer Society: **www.cancer.ca/ccs/internet/standard/0,2939,3172_10175_87671_langId-en,00.html**

however, brachytherapy patients are not seen to have this complication.[49]

13. Later onset of erectile dysfunction. Erectile dysfunction tends to occur later among men treated with radiation therapy compared with surgery.[50] This is associated with venous leak, particularly from the crura of the penis.[51] Brachytherapy tends to have better sexual outcomes than EBRT, with only 9% of brachytherapy patients experiencing erectile dysfunction 18 months after treatment when using PDE5 inhibitors compared with 53% of EBRT patients.[45] Five years after brachytherapy treatment, 50% of treated men were able to have erections sufficient for intercourse, with 22.1% of these using PDE5 inhibitors.[52] It is suggested that use of PDE5 inhibitors soon after treatment preserves erectile function, and men should be encouraged to use them.[53] Interestingly, there have been reports of pregnancies in couples when the men were treated with brachytherapy; loss of fertility in men should not be presumed.[54]

Conclusion

Men with prostate cancer face unique challenges as they deal with their disease and its treatment. Family physicians can make an important contribution to improving the quality of life of their prostate cancer patients by applying the information in this paper to their interactions with these patients.

Competing interests

None declared

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EDITOR'S KEY POINTS

- Each year, about 20 000 Canadian men are diagnosed with prostate cancer.
- In most cases, there is no need to rush into treatment. It is important to spend adequate time discussing treatment options, potential side effects, and future monitoring.
- The type of treatment chosen will affect the post-treatment course and the likelihood of side effects, particularly erectile dysfunction and its response to phosphodiesterase 5 inhibitors.
- Ongoing monitoring after treatment is essential. Prostate-specific antigen velocity is a more reliable indicator of recurrence than is an isolated measurement.

POINTS DE REPÈRE DU RÉDACTEUR

- Chaque année, environ 20 000 Canadiens reçoivent un diagnostic de cancer prostatique.
- Dans la majorité des cas, il n'y a pas d'urgence à traiter. On doit prendre le temps de discuter des choix de traitement, des effets indésirables potentiels et de la surveillance future.
- Le type de traitement choisi influencera la période post-traitement et la probabilité d'effets indésirables, notamment la dysfonction érectile et sa réponse aux inhibiteurs de la phosphodiestérase de type 5.
- Une surveillance continue est essentielle après le traitement. Le taux d'augmentation de l'antigène prostatique spécifique est un indicateur plus fiable qu'une mesure isolée.

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