EDITORIAL

Updated counselling for the patient with prostate cancer

Introduction

For many years, prostate cancer has been the most common cancer in American men. The disease is now common in men in the Middle East and in Arab countries. The ever-expanding, seemingly conflicting literature on prostate cancer makes counselling patients with prostate cancer a difficult but often necessary part of clinical practice. The mass of information that can be supplied to the patient can be overwhelming and can contribute to increased anxiety about making the ‘best decision’. It is thus important to give the information in a simple, accurate and compassionate manner that allows the patient to understand the facts about prostate cancer.

As a pathological entity, prostate cancer occurs in almost all men as they age. Autopsy studies indicate that some men start to show evidence of cancer in their prostates as early as their third decade, with an increasing incidence over the subsequent decades. Once diagnosed, the patient needs to understand these facts, as well as the modern management methods and their application to his particular condition.

Management

Patients with localised prostate cancer can be cured of their cancer. However, not all patients require a curative treatment with its attendant morbidity. Many patients have low-risk prostate cancer that is unlikely to affect their survival. Further, many patients with relatively limited life-expectancy and who have prostate cancer with low risk characteristics (low volume with Gleason ≤6) do well with expectant management. There are two scenarios for expectant management. The first is used for patients with a life-expectancy of > 10 years and generally < 75 years old who select expectant management. These patients are followed by active surveillance. The second scenario for expectant management is ‘watchful waiting’, i.e. monitoring the cancer with the intent to offer only palliative treatment if progression occurs. This approach is used for patients with a life-expectancy of < 10 years and for most of those who are age > 75 years in whom curative treatment is not intended.

It is important in counselling the patient of the first group who selects active surveillance to understand that he must adhere to monitoring cancer with the intent to offer curative treatment (radical surgery, radiotherapy or cryotherapy) if progression occurs. Although there is no general consensus on a protocol for active surveillance, most authorities would agree on evaluating the patient every 4–6 months for PSA testing and a DRE. The patient can also complete the Sexual Health Inventory for Men and the ICS questionnaires in these clinic visits. Patients on expectant management (active surveillance) are advised to have repeated TRUS-guided prostate repeat biopsies every 12–18 months until aged 75 years. On this protocol the reported ‘risk of progression’, which is defined as the ‘need to undergo definitive treatment’, whether radical surgery, radiotherapy or cryotherapy, is 30%, and the 10-year prostate cancer actuarial survival is 97.2% [1]. This also means that even with this arbitrary and generous definition of progression, 70% of this group of patients required no treatment.

However, young and middle-aged healthy patients who have a long life-expectancy and moderately or highly aggressive localised prostate cancer eventually develop disease progression, causing significant morbidity and possible death. Consequently, definitive treatment with curative intent is offered to these patients. Contemporary series show that the reported complication rate with radical surgery or radiotherapy is still significant. In one report [2], at 5 years after radical surgery or radiotherapy, the erectile dysfunction rate was 79.3% and 63.5%, respectively. In the same report the risk of long-term urinary incontinence was 14.4% for the radical surgery group and 4.9% for the radiotherapy group. Patients choosing radiotherapy should understand that the risk of uncomfortable bowel urgency and painful haemorrhoids is more prevalent with radiation than surgery [2]. The authors noted that in patients who choose radiation over surgery, a radical prostatectomy (RP) after failure of radiotherapy is difficult and associated with more complications. We evaluated the effects of RP or radiotherapy on the quality of life and showed that these effects can be substantial. We further showed that
overall, general well-being measures were better for those who had a radical prostatectomy [3].

Cryosurgical ablation of the prostate (freezing) is another curative method. Cryosurgery has been approved and is reimbursable by Medicare (USA government-paid health insurance for citizens aged > 65 years). Similar to brachytherapy, cryotherapy is done as a day surgery procedure. This offers an advantage over external beam radiotherapy that mandates about 42 days of consecutive radiation sessions. When counselling the patient for cryotherapy, the urologist should confirm that the patient is aware of the possible complications. The incidence of complications with the third-generation cryotherapy machines is 1% for recto-urethral fistula and recurrent UTIs. The incidence of urethral sloughing and incontinence therapy machines is 1% for recto-urethral fistula and recurrent UTIs. The incidence of urethral sloughing and incontinence requiring pads is 2% and 4%, respectively. The incidence of prolonged retention requiring clean intermittent catheterization and perineal or penile pain is 6% [4,5]. Although the incidence of erectile dysfunction after cryotherapy, there are reports showing that up to 39% of patients can regain their potency at 24 months of follow-up [6]. Similar to the situation after radiotherapy, radical surgery is challenging if cryotherapy fails. The reported 5-year disease-specific survival for cryotherapy is 94% [7].

Selection and treatment

Thus our goal is to identify selected patients with clinically significant prostate cancer who have cancer that is curative by therapeutic intervention and in whom cure is necessary, i.e. patients with a long life-expectancy. Long-established treatment options in these patients include RP and radiotherapy, i.e. external beam or radioactive seed implantation (brachytherapy), or a combination of the two radiotherapy methods. Our view is that RP is the treatment of choice in healthy young patients with a long life-expectancy (≥ 15 years) and clinically significant cancer that is confined to the prostate. However, in older patients who have a reasonably long life-expectancy, radiotherapy (by external beam or brachytherapy) or cryosurgery are appropriate. Radiotherapists often use adjuvant hormonal therapy for patients managed by radiotherapy.

Patients with advanced disease are best managed with hormonal manipulation, i.e. androgen (male hormone) deprivation. The major source of androgen in men is the testicles. Patients on hormonal treatment should be warned of the known side-effects of decreased libido, hot flushes and gynaecomastia, as well as the cardiovascular side-effects and hypercholesterolaemia [8]. Another source that contributes a small fraction of circulating androgens is the adrenal glands. The role of chemotherapy in many advanced prostate cancers is expanding.

Our preference for hormonal treatment with testicular androgen deprivation is simple scrotal orchidectomy (surgical removal of testicles via a small scrotal incision). Compared to medical castration by LHRH agonists or antagonists, orchidectomy is simple, quick and much more economical (the cost of orchidectomy is equivalent to the cost of a few months of medical therapy). In addition, patients who have a surgical orchidectomy do not need antiandrogens, with their additional side-effects and cost.

Patients with advanced prostate cancer who were treated by standard androgen deprivation (medical or surgical castration) eventually have disease progression. These men are considered to have hormone-refractory prostate cancer. Other methods of hormonal manipulation can be added at this time (secondary hormonal therapy). These include additional or different dosages of antiandrogens, using oestrogenic (female hormone), or oestrogenic-containing combinations. Chemotherapy can also be used. More effective chemotherapy has been introduced for these patients and is being used more frequently in appropriately selected patients. Radiotherapy for painful bony lesions is valuable. Radioisotopes such as strontium and samarium can be used for generalised bone pain.

Other factors

Nutritional recommendations for patients with prostate cancer emphasise the role of a low-fat diet. Fat intake should be < 40 g (and preferably less than 33 g) daily. Consumption of adequate amounts of vegetables and fruits, including tomatoes (cooked or fresh) and berries, is probably beneficial. The role of nutritional supplements has not been confirmed; among these nutritional supplements, vitamin E, selenium, lycopene and allelic acid are being studied but have not shown promise. Investigational treatments are being explored and may prove valuable in the near future. These include growth-factor inhibitors, agents that promote differentiation, apoptosis (programmed cell death), angiogenesis inhibitors (agents that inhibit new vessel formation by growing tumour cells, thus starving them), gene therapy (manipulating genes that promote or suppress cancer growth or spread), cancer vaccines and other immunological manipulations.

References

[1] Klotz L, Zhang L, Lam A, Nam R, Mamedov A, Loblaw A. Clinical results of long-term follow-up of a large, active surveillance cohort with localized prostate cancer. J Clin Oncol 2010;28:126–31.
[2] Potosky AL, Davis WW, Hoffman RM, Stanford JL, Stephenson DF, Penson DF, et al.. Five-year outcomes after prostatectomy or radiotherapy for prostate cancer: the prostate cancer outcomes study. J Natl Cancer Inst 2004;96:1358–67.
[3] Rodgers JK, Sawhney R, Chaudhary U, Bissada NK. Quality of life in men with localized prostate cancer treated by radical prostatectomy or radiotherapy. Arch Androl 2006;52:129–33.
[4] Fahmy WE, Bissada NK. Cryosurgery for prostate cancer. Arch Androl 2003;49:397–407.
[5] Head G, Bissada NK. Cryotherapy for prostate cancer. J Ark Med Soc 2008;105:64–5.
[6] Asterling S, Greene DR. Prospective evaluation of sexual function in patients receiving cryosurgery as a primary radical treatment for localized prostate cancer. BJU Int 2009;103:788–92.
[7] Shelley M, Wilt TJ, Coles B, Mason MD. Cryotherapy for localized prostate cancer. Cochrane Database Syst Rev 2007; CD005010.
[8] Saylor PJ, Smith MR. Adverse effects of androgen deprivation therapy: defining the problem and promoting health among men with prostate cancer. J Natl Comp Care Netw 2010;8:211–23.

Nabil K. Bissada
Mohamed H. Kamel
Department of Urology,
University of Arkansas for Medical Sciences, and The Central Arkansas Veterans Healthcare System (CAVAHS), Little Rock, AR, USA
E-mail address: BissadaNabilK@uams.edu