The Nurse’s Role in Prostate Cancer Education: Prevention, Treatment, and Rehabilitation

Marianne Mathewson-Chapman, PhD, ARNP

Incidence

The American Cancer Society predicted that 334,500 new cases of prostate cancer would be diagnosed in 1997, but the prediction was revised to 209,000 cases to reflect the 24% decline between the years of 1992 and 1994. Between 1976 and 1994, prostate cancer rates doubled. The rise in new cancer cases may be explained by many factors, including an increase in longevity for men, an increase in disease prevalence due to environmental carcinogens, an acceptance of the prostate-specific antigen (PSA) blood test, and improvements in techniques such as transrectal ultrasonography and prostate biopsy. Although the cancer rates have risen at all age levels, of particular note is the percentage of men under 70 years of age, with increases from 38% to 47% from 1986 to 1993. With the advancing age of the population, prostate cancer will remain a significant worldwide health care issue into the 21st century.

Incidence of prostate cancer is low in Asian men and highest in black American men and Scandinavian men. In Japan, the number of new cancer cases is expected to double by the year 2000 and quadruple by the year 2010. In contrast to white American and Japanese men, black American men have a 47% higher incidence and a 128% higher mortality rate than white men who live in the same geographic area. Men around the world are concerned with being diagnosed with prostate cancer, with the treatment decisions, and most importantly, with the impact of prostate cancer and its treatment on their quality of life. They have been called the “walking worried”: anxious about slow-rising PSA test results, the recurrence of cancer, and the need for education about the disease.

Education/Prevention

Nurses as educators must be aware of the following issues concerning prostate cancer. (1) Age: Prostate cancer is known as the disease of the elderly, and it increases faster with age than any other malignancy. (2) Family history: Prostate cancer has a heredity correlation. Male relatives of prostate cancer and breast cancer patients have an increased risk of developing prostate cancer. (3) Race: Black American men develop the disease more frequently and have a worse prognosis. Decision-making to respond to the disease, to seek medical attention, and to choose and comply to medical treatment programs may be a complex multidimensional process and may explain certain racial differences in outcome. (4) Socioeconomic status: Socioeconomic factors may not explain major differences among racial groups, while economic factors may explain access to care, type of care, and attitudes about personal health beliefs. (5) Occupation: Studies focus on men’s exposure to occupational hazards that may impact the biology of the disease. (6) Cigarette smoking: Data are not convincing to link smoking with the disease. (7) Heavy metal exposure: Cadmium exposure (batteries/paint exposure) may contribute to prostate cancer directly, or the risk may result from the availability of zinc and cadmium. (8) Sexually transmitted infections: Data implicating sexual activity, the number of sexual partners, or the presence of gonorrhea, human papillomavirus, cytomegalovirus, and herpes viruses have shown an association but not causation. (9) Vasectomy: Data are conflicting regarding vasectomy as a cause of the disease. (10) Benign prostatic hyperplasia: Studies are inconclusive to prove that BPH is a precursor. (11) Hormones: Testosterone, estrogen, and prolactin may influence the growth of the prostate gland, but their roles in developing the disease are conflicting. (12) Diet: Circulating androgen levels are influenced by diet, and an association exists between high-fat diets and an increased risk in developing prostate cancer.

Although there is no definitive cause of prostate cancer, researchers have found that on autopsies from around the world, prostate cancer becomes histologically detectable at age 50 in a few instances, and by age 80 to 90 years, almost 70% to 90% of men will have evidence of histologic tumors on autopsy regardless of national origin. Dietary factors, environmental hazards, and hormone influence are currently under investigation. The nurse’s role in education is vital.

Prostate Cancer Screening Guidelines

In 1997, the American Cancer Society updated their guidelines to recommend that digital examination and the PSA test be offered annually beginning at age 50 years to men with a life expectancy of 10 years and beginning at 45 years of age for those at high risk. Nurses must educate men as to the benefits and risks of cancer screening. An abnormal PSA test has been defined as a value more than 4.0 ng/mL, although PSA elevations may be caused by benign conditions. Digital rectal examination should be performed by a trained professional, but this examination is less effective than the PSA test in detecting cancer. More education is needed regarding the risks and benefits of screening and guidance about the PSA test results for men of all ages. Men with positive screening results are faced with difficult decisions regarding treatment options and the impact of such treatment to their quality of life. Further research is needed to evaluate the psychosocial impact and cost effectiveness of screening, enhancements of PSA testing, new screening tests to predict the aggressiveness of the disease, imaging and biopsy techniques, and impact of early detection on patient outcomes. Nurses can make a vital contribution to prevention efforts through cancer risk assessment, patient education, and promotion of alterations in lifestyle and diet, all of which may lower the incidence, mortality, and impact on quality of life for men with prostate cancer.

Treatment Decision Making

Men may present to their physicians with signs of urinary obstruction including frequency, dysuria, slow stream or hematuria, and increasing symptoms as the tumor increases in size. Following the prostate cancer diagnosis, diagnostic tests are used to stage the disease. Treatment is based on the TNM staging system: stage A (well-differentiated) through stage D (distant metastasis).

The treatment options offered to men include periodic observation, radical prostatectomy, radiation therapy, hormonal therapy, and combination therapy. Each option offers challenges for the nurses who care for patients. Nurses must address issues with patients that impact quality of life and physical functioning (eg, sexual dysfunction, incontinence, problems associated with radiation and surgery, recurrence of disease, and living with advanced metastatic disease). Nursing care is critical in the management of prostate cancer patients throughout the disease continuum. Patient education, as well as emotional support to the patient and spouse, is vital from screening to diagnosis, from treatment to cure, or from palliative care to hospice care. The challenge to oncology nursing is to assist men in making appropriate decisions regarding treatment options.

Research and Rehabilitation
Three areas that seriously impact decisions regarding treatment are sexual dysfunction, urinary/bowel incontinence, and impaired quality of life. The CARES (Cancer Rehabilitation Evaluation System) tool is a quality-of-life measurement designed to identify rehabilitation needs in physical, psychosocial, marital, sexual, and medical interaction domains and to track needs over time. Further research in instrument development specific for prostate cancer is needed to determine needs early after diagnosis and to target interventions that will enhance optimal outcomes and improve quality of life for prostate cancer survivors.

References


---

Dr Mathewson-Chapman is a research associate at the Florida Research Institute, Veterans Administration Medical Center, Gainesville, Florida.