

Prostate Cancer

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A gland that is uniquely related to men, the prostate is a small, firm structure that plays a supportive role in the male reproductive system. Apart from being significant in the lives of males by its contribution with fertility, this gland also plays another significant, yet negative role as being the second most common location for the development of a cancerous tumor. Prostate cancer portrays as a slow growing, testosterone-dependent tumor that 1 in every 9 men are likely to be diagnosed with. Due to this slow growing characteristic, many men live and die with prostate cancer, with or without knowing they had it (Lutz, 2020), accrediting it as the second leading cause of cancer death in men. With this in mind, early screenings are available and are highly encouraged in adult men in order to have the best chance for successful treatment and to preserve quality of life.

Statement of the Problem

Cancer of the prostate involves an uncontrolled growth of cells that arise from the gland itself and develop into a tumor. While enlarging, these cells carry the possibility of breaking off and spreading to different sites in the body, otherwise known as metastasis. The different routes of metastasis include direct extension in which the seminal vesicles, urethral mucosa, bladder wall, and external sphincter are involved; the spread by lymph nodes; and the spread through the bloodstream in which the pelvic bones, head of femur, lower lumbar spine, liver, and lungs could all be affected (Lutz, 2020). The exact cause of the cancer is unknown, though “in general, gene mutations are a prevalent cause of the cancer” (Sekhoacha et al., 2022). As mentioned previously, genes predisposed for prostate cancer are genes that partake in the androgen pathway and metabolism of testosterone, which is precisely what the prostate epithelium relies on (Sekhoacha et al., 2022). Nationwide, the CDC revealed that 224,733 new cases of prostate

cancer were reported in 2019 with 31,636 deaths resulting (Centers for Disease Control [CDC], 2023). To scale it down further, they also revealed that just in Delaware in 2019, 889 new cases of prostate cancer were reported among men (CDC, 2023). Although additional risk factors will be discussed to come, black men have the most reported incidence rates of prostate cancer in the world, and approximately 60% higher than those of white men in America (Sekhoacha et al., 2022).

In the early stages, prostate cancer is unpreventable and asymptomatic; possibly due to its slow growing nature. As the cancer progresses, one eventually begins to notice symptoms such as weight loss, dysuria, hesitancy, hematuria, loss of libido, and even bone pain (Lutz, 2020). Noticing these signs and symptoms of prostate cancer is dangerous because most of these appear when the cancer has metastasized, and immediate care is needed. Nursing acts as the framework for healthcare by providing the utmost support, quality of care, and education to the patient based on their needs during critical times. With continued ignorance or lack of knowledge for screenings to identify early detection, more nursing care will begin to focus on and shift towards palliative care rather than curative. Instead of saving lives, nurses will be maximizing patient comfort in those who are nearing the end of life.

Risk Reduction/Treatment of the Problem

The risks for prostate cancer involve modifiable and nonmodifiable factors. Among the unmodifiable attributions, age is strongly associated with risk of prostate cancer and is rare among men younger than 40. The incidence rate of prostate cancer also increases dramatically after age 55 (C.H. Pernar et al., 2018). It is important to note that although age is something that cannot willingly be changed, the age at which screening should begin is key. The American Cancer Society recommends screening to start at age 50 for average risk men and age 40-45 for

high risk men (American Cancer Society [ACS], n.d.). Additional risk factors that play a part in a person's susceptibility to prostate cancer include obesity and diet, physical inactivity, smoking, and genetic inheritance. It is said that a diet high in red and processed meat and high-fat dairy products may increase the risk for prostate cancer (Lutz, 2020). C.H. Pernar et al agreed in a separate study, which stated a high calcium intake has been positively associated with prostate cancer, and since dairy foods are a major source of calcium in the diet, a high intake of dairy increases prostate cancer risk (2018). Obesity is closely correlated with diet, and of 150,000 men, waist circumference was positively associated with risk for prostate cancer (C.H. Pernar et al., 2018). Physical inactivity is a third contributory factor, and “among men diagnosed with prostate cancer, physical activity has been linked to improved survival and decreased prostate cancer progression” (C.H. Pernar et al., 2018). The last modifiable risk factor is smoking, which is one of great public health significance. A large study was completed where 524 prostate cancer deaths were observed. Current smokers had a 60% higher risk of prostate cancer mortality compared with men who never smoked (C.H. Pernar et al., 2018). Making several of these lifestyle modifications may lower risk of or offer survival benefits to prostate cancer patients (C.H. Pernar et al., 2018). As for family history, Sekhoacha et al claims that “men with close relatives diagnosed with prostate cancer are at a 50% risk of developing cancer as compared with men with no family history of prostate cancer” (2022), indicating that family history is a primary component for prostate cancer.

Evidence-based practice screening for prostate cancer consists of the prostate-specific antigen (PSA) test and a Digital rectal exam (DRE). The PSA test is a blood test that examines the glycoprotein PSA that is secreted by epithelial cells of the prostate. Normal levels of PSA are 0 to 4 ng/mL, and although this test is the keystone for screening, it is not entirely definitive as

this level could be increased related to other prostatic conditions such as BPH, prostatitis, and recent ejaculation; all noncancerous pathologies (Lutz, 2020). A DRE is completed by inserting a gloved finger into the patient's rectum to palpate for any abnormalities such as being nodular, hard, or asymmetric. While both are primary screening tools used for early prostate detection, neither are conclusive. A biopsy using TRUS is the ultimate way to confirm a cancer diagnosis. A TRUS, or Transrectal Ultrasound, procedure is done by inserting a probe into the rectum for prostate visualization. If abnormalities are spotted, biopsy needles are then inserted to obtain tissue samples of the prostate, which are then examined for malignant changes (Lutz, 2020). If in the unfortunate event of a prostate cancer diagnosis, either conservative or surgical treatment may be used. Conservative, or active surveillance, treatment is typically only reserved for patients with low-grade tumors or a life expectancy of less than 10 years (Lutz, 2020). The most effective surgical treatment for this type of cancer is termed radical prostatectomy; the removal of the entire prostate, seminal vesicles, and part of the bladder neck. A second, also common, treatment is radiation therapy; the use of external beam or internal radiation to target and kill cancer cells of the prostate. No matter the treatment, the purpose is directed towards prolongation of survival and improvement in the quality of life.

Planning of Teaching Content

At the completion of this education, it is important for readers to be able to identify the benefits to early screening and their own personal risk factors that may contribute to developing this cancer. While all men have the risk for prostate cancer due to their anatomy and physiology, every man's risk is individualized based on their lifestyle factors, listed previously; age; and family history. The goal is to bring awareness to those components that many do not realize can contribute to a cancer diagnosis. Understanding those factors and one's risk level may be the

encouragement needed to get early screening. If the amount of men that undergo screening rises, it could increase the success rates of treatments and ultimately reduce the number of deaths that occur from prostate cancer. This information can be relayed through presentations at community events. Displaying this information by means of a tri-fold poster and brochure handouts will hopefully catch the eye of the target audience and allow them a take-home informational sheet to refer to at any time. Being engaging, asking questions, and verbalizing facts can also enable the audience to give insight on any information they already know and allow more reiteration on the important takeaways. The use of a rubber ball can further help visualize what a normal prostate gland is supposed to look and feel like comparable to a description on its abnormalities with prostate cancer.

Conclusion

A prostate cancer diagnosis can be a fear that many men have. It is one of the most common and exists as slow growing, allowing the abnormal cells time to spread before noticeable symptoms arrive. It is imperative to recognize the risk factors that may categorize one as average or high risk. Depending on this risk level, the age in which screening is recommended differs. High risk men, including black men and those with lifestyle factors in line with physical inactivity, improper diet, and smoking, should begin PSA screening at age 40-45. Average risk men should begin at 50. Even without risks, genetics can still determine a man's chance of developing cancer. Screening guidelines and tools are made in order to support the lives of each and every person with an early diagnosis. If diagnosed, there are many treatment options a man can receive to fight off the cancerous cells, such as radiation therapy and surgical treatment. A high quality and longevity of life is the most crucial aspect a person and their caretakers can strive for.

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