Prostate cancer study tracks long-term urinary, sexual and bowel function side effects

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A new study comparing outcomes among prostate cancer patients treated with surgery versus radiotherapy found differences in urinary, bowel and sexual function after short-term follow-up, but those differences were no longer significant 15 years after initial treatment.

The study, led by first author Matthew Resnick, M.D., instructor in Urologic Surgery, Vanderbilt University Medical Center, was published in the Jan. 31 issue of the New England Journal of Medicine.

From Oct. 1, 1994, through Oct. 31, 1995, investigators enrolled men who had been diagnosed with localized prostate cancer in the Prostate Cancer Outcomes Study (PCOS).

For the current study, investigators followed 1,655 men between the ages of 55 and 74 from the PCOS group, of whom 1,164 (70.3 percent) had undergone prostatectomy, while 491 (29.7 percent) had undergone radiotherapy. At the time of enrollment, the patients were asked to complete a survey about clinical and demographic issues and health-related quality of life. The men were contacted again at set times following treatment and were asked about clinical outcomes and disease-specific quality of life issues.

Men whose prostates had been surgically removed were significantly more likely than those who received radiation therapy to report urinary

leakage at two years and five years. However, at 15 years, the investigators found no significant difference in the adjusted odds of urinary incontinence. Nonetheless, patients in the surgery group were more likely to wear incontinence pads throughout the 15-year follow-up period.

Men in the prostatectomy group were also significantly more likely than those in the radiotherapy group to report having problems with erectile dysfunction two years and five years after surgery.

"At the two- and five-year time points, men who underwent prostatectomy were more likely to suffer from urinary incontinence and erectile dysfunction than men who received radiation therapy," explained Resnick. "While treatment-related differences were significant in the early years following treatment, those differences became far less pronounced over time."

Despite early and intermediate-term data revealing treatment-dependent differences in patterns of sexual dysfunction, after five years both groups had a gradual decline in sexual function.

At 15 years, erectile dysfunction was nearly universal with 87 percent in the prostatectomy group and 93.9 percent in the radiotherapy group reporting sexual difficulties.

The authors noted that age may have played a role in the patients' waning sexual function, as shown in unrelated studies.

Some patients also experienced problems with bowel function in the years following treatment. Those who were treated with radiotherapy had more problems in the short term. Men in the radiotherapy group reported significantly higher rates of bowel urgency than those in the prostatectomy group at two years and five years. However, at 15 years,

despite absolute differences in the prevalence of bowel urgency between the two groups, the researchers found no significant difference in the odds of bowel urgency. Men who had been treated with radiotherapy were significantly more likely to report being bothered by bowel symptoms at both the two-year and 15-year points.

"This study of 15-year outcomes represents a mature portrait of quality of life issues following prostate cancer treatment," said David Penson, M.D., MPH, Ingram Professor of Cancer Research, professor of Urologic Surgery and Medicine, and director of the Vanderbilt Center for Surgical Quality and Outcomes Research, the senior study author.

"Regardless of the form of initial treatment, patients in this study had significant declines in sexual and urinary function over the duration of the study. The causes of these declines probably include advancing age and additional cancer therapies, in addition to the original therapy," Penson said. "Patients need to be aware that all aggressive therapies for prostate cancer have significant side effects and perhaps these data make an argument for active surveillance (avoiding aggressive treatment and closely following the cancer) in certain cases."

Since the median life expectancy after treatment for prostate cancer is 13.8 years, the authors suggested that these data may be used by physicians to counsel men who are considering treatment for localized disease.

Provided by Vanderbilt University Medical Center