Oncology

The Influence of Psychosocial Constructs on the Adherence to Active Surveillance for Localized Prostate Cancer in a Prospective, Population-based Cohort

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OBJECTIVE To evaluate the influence of psychosocial factors such as prostate cancer (PCa) anxiety, social support, participation in medical decision-making (PDM), and educational level on patient decisions to discontinue PCa active surveillance (AS) in the absence of disease progression.

METHODS The Comparative Effectiveness Analysis of Surgery and Radiation study is a prospective, population-based cohort study of men with localized PCa diagnosed in 2011-2012. PCa anxiety, social support, PDM, educational level, and patient reasons for discontinuing AS were assessed through patient surveys. A Cox proportional hazards model examined the relationship between psychosocial variables and time to discontinuation of AS.

RESULTS Of 531 patients on AS, 165 (30.9%) underwent treatment after median follow-up of 37 months. Whereas 69% of patients cited only medical reasons for discontinuing AS, 31% cited at least 1 personal reason, and 8% cited personal reasons only. Patients with some college education discontinued AS significantly earlier (hazard ratio: 2.0, 95% confidence interval: 1.2, 3.2) than patients with less education. PCa anxiety, social support, and PDM were not associated with seeking treatment.

CONCLUSION We found that 31% of men who choose AS for PCa discontinue AS within 3 years. Eight percent of men who sought treatment did so in the absence of disease progression. Education, but not psychosocial factors, seems to influence definitive treatment-seeking. Future research is needed to understand how factors unrelated to disease severity influence treatment decisions among patients on AS to identify opportunities to improve adherence to AS. UROLOGY ■■: ■■–■■, 2017. © 2017 Elsevier Inc.

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Active surveillance (AS) has become a preferred treatment option for men with low-risk prostate cancer (PCa).[1,2] However, up to one third of men will discontinue AS in favor of definitive treatment within 5 years.[3,4] Although most men who later choose treatment do so in the context of clinical progression,[5] psychosocial factors may nonetheless drive patients under AS toward definitive treatment.[6,7] Whereas a decision to discontinue AS may be driven by disease progression,[8] the impact of psychosocial constructs such as anxiety, social support, and participation in medical decision-making (PDM) on the course of AS has received little attention in literature to date.

Recent studies suggest that of the men who choose AS for PCa management, approximately 20%-33% will discontinue AS in favor of definitive treatment, including some who are without signs of disease progression.[4,9,10] At present, no population-based study has described the psychosocial characteristics of patients who are likely to discontinue AS. Because PCa treatments carry a risk of side effects,[11] it is important that providers understand the effect of psychosocial factors on adherence to AS.

In this context, this population-based analysis sought to understand why patients decide to discontinue AS and identify patient characteristics that may influence these decisions. We hypothesized that lower social support and PDM scores and higher PCa anxiety scores would be associated with the discontinuation of AS. We also hypothesized that educational level, as a surrogate for understanding the risk of disease progression without treatment relative to the risk of treatment side effects, may influence discontinuation of AS. If so, one could identify patients with psychosocial or demographic determinants of AS discontinuation and target them for interventions designed to improve adherence, thereby reducing the likelihood of discontinuing AS in the absence of clinical progression.

METHODS

Population

The Comparative Effectiveness Analysis of Surgery and Radiation (CEASAR) cohort is an ongoing prospective, population-based, observational study assessing the comparative benefits and harms of management strategies for localized PCa. The CEASAR accrued patients from 2011 to 2012 and included 3269 patients from 5 Surveillance, Epidemiology, and End Results catchment areas (Louisiana, New Jersey, Atlanta, Utah, and Los Angeles).[12] An additional 238 patients from the Cancer of the Prostate Strategic Urologic Research Endeavor (CaPSURE) database, a prospective PCa registry, were included to examine men receiving novel treatment strategies. CaPSURE includes men from 43 community and academic urology practices in the United States.[13] Inclusion criteria were men aged 80 years or younger diagnosed with PCa within 6 months of enrollment, prostate-specific antigen (PSA) less than 50 ng/dL, and clinical stage cT1 or cT2. For this analysis, we excluded patients with D'Amico high-risk disease because they are not appropriate candidates for AS.

AS Cohort and Survey Instruments

The AS cohort included men with low or intermediate D'Amico risk disease who had no treatment within 12 months of diagnosis. CEASAR study patients completed an enrollment survey as well as 6-month, 12-month, and 36-month surveys. Men who had no treatment within 6 months of diagnosis and either chose AS on a survey or had chart documentation of choosing AS were also included. Information from the 12- and 36-month surveys, Surveillance, Epidemiology, and End Results registries, and medical charts was used to determine whether AS patients subsequently underwent definitive treatment. Patients who indicated they underwent treatment on the 12-month or 36-month survey or had record of treatment in the medical chart or registry were considered to have discontinued AS at the date of their treatment, and patients who did not report treatment were considered to be continuing with AS.

Men were assessed at baseline on social support, PCa-related anxiety, and PDM levels among other demographic, psychosocial, general health, and disease-related factors that could influence treatment choice or treatment outcome. Social support was assessed using questions from the Medical Outcomes Study Social Support Survey, which reflect patients' perceptions of their social support networks, with higher scores indicating more social support.[14] PCa anxiety was assessed using questions from scales developed by Clark et al, which measure patient perceptions of their PCa treatment,[15] yielding a 0-100 score, with higher scores indicating more concern over disease control. Patients' participation in treatment decisions was assessed using the PDM scale, a survey that asks patients to rate how their physicians involve them in decisions and encourage patient responsibility in care, with higher scores indicating higher levels of PDM.[16] Disease characteristics and treatments were obtained from a chart review done at the time of the 12-month survey. The 3-year CEASAR survey asked patients their reasons for discontinuing AS in favor of definitive treatment. Patients self-reported their educational level, race, and marital status. Validated survey instruments were used to assess patient comorbidities (Total Illness Burden Index to Prostate Cancer [TIBI-CaP][17]) and general- and disease-specific health-related quality of life (Expanded Prostate Cancer Index Composite[18]).

Statistical Analysis

Patients in the AS cohort were compared with patients who initially chose definitive treatment on several patient and disease characteristics and on pretreatment function using summary statistics. Patient-reported reasons for seeking definitive treatment were tabulated. The distribution of times to discontinuing AS was characterized with a Kaplan-Meier survival curve with confidence intervals calculated using Greenwood's standard error estimator. To identify predictors of discontinuing AS, we fit a Cox proportional hazard