

## **Adverse effects after radical prostatectomy are strongly associated with the personality trait of neuroticism**

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**Background:** Factors influencing post-operative adverse effects (AEs) after radical treatment for prostate cancer (PCa) have been studied extensively during the past decades in order to improve the AEs of the patients. The EPIC-26 is a well-established questionnaire for assessing AEs for patients treated with either radical prostatectomy (RP) or radiotherapy. Previous studies have documented that urinary incontinence is related to age and development of surgical techniques, while erectile dysfunction is influenced by age, nerve-sparing, and pretreatment erectile function.

The basic personality trait of neuroticism strongly influences urinary, bowel, and sexual functions in general. However, few studies of men treated with RP for PCa have examined associations between AEs and neuroticism. Therefore, we have analyzed the relations between AEs and neuroticism in Norwegian men after RP for PCa, and compared the ratings of neuroticism among them to population data.

**Methods:** In 2011, 982 men who had RP at Oslo University Hospital, Radiumhospitalet between 2005 and 2010, received a mailed questionnaire. Among them 777 responded (79%), and 761 reported on AEs and neuroticism. AEs (outcomes) were self-reported by the EPIC-26. Neuroticism was self-rated by the Eysenck Personality Questionnaire. Descriptive statistics and regression analyses were applied.

**Results and limitations:** Mean time from surgery to survey was 3.0 years. Treatment failure defined as salvage radiation treatment, hormonal treatment or significant PSA elevation was reported by 21% of the men and high neuroticism by 22%. None of the PCa-related variables were associated with high neuroticism. Within the urinary, bowel, sexual and hormonal domains all function scores and all bother scores were significantly poorer in men belonging to the high versus low neuroticism groups, also after adjustments for age at survey and somatic comorbidity. Men treated for PCa hardly differed from population-based normative findings concerning neuroticism. Cross-sectional design is a relative limitation of the study.

**Conclusions:** We have demonstrated that AEs after RP was strongly associated with high neuroticism even after adjustments. Pre-operative screening for high neuroticism could prepare patients for more AEs problems at follow-up.

Thus, the personality trait of neuroticism is strongly associated higher levels of all AEs after RP at a mean of 3.0 years after surgery. At that time, the patients had neuroticism comparable to normative data. Screening for neuroticism could identify patients at risk for high levels of AEs, and further studies are needed to analyze whether interventions in this patient group might improve QoL after RP for a significant group of men treated for prostate cancer.

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