

Psychosocial implications and the duality of life outcomes for patients with prostate carcinoma after bilateral orchiectomy

Miroslav LOUDA¹, Martin VALIŠ^{2,3}, Jaroslava ŠPLÍCHALOVÁ⁴,
Jaroslav PACOVSKÝ¹, Baker KHALED¹, Miroslav PODHOLA⁵,
Jan JANSÁ⁶, Lucie HASENOHRLOVA⁷, Pavel Kunc², Miloš BROŽÁK¹

1 Department of Urology, Medical Faculty, Charles University and Teaching Hospital in Hradec Králové, Czech Republic

2 Department of Neurology, Charles University in Prague, Faculty of Medicine in Hradec Králové, Czech Republic

3 Department of Neurology, University Hospital Hradec Králové, Czech Republic

4 Department of Urology, Hospital in Svitavy, Czech Republic

5 Department of Pathology, Medical Faculty, Charles University and Teaching Hospital in Hradec Králové, Czech Republic

6 Department of Oncology and Radiotherapy, Medical Faculty, Charles University and Teaching Hospital in Hradec Králové, Czech Republic

7 Department of Surgery, Medical Faculty, Charles University and Teaching Hospital in Hradec Králové, Czech Republic

Correspondence to: Assoc.Prof. Martin Vališ, MD., PhD.
Department of Neurology, University Hospital Hradec Králové,
Sokolská 581, Hradec Králové, 500 05, Czech Republic.
TEL: +420 495831111; E-MAIL: valismar@seznam.cz

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Abstract

OBJECTIVES: The study presented focuses on patients' psychosocial status after a prostate cancer diagnosis that underwent a bilateral orchiectomy. **METHODS:** We evaluated the psychosocial implications of 89 patients with prostate cancer after performing castration and a bilateral orchiectomy. **RESULTS:** Patients suffered significantly more from sleep disorders during hospitalisation when compared to their time prior to an orchiectomy ($p < 0.0005$). There were some increases in the severity of sleep disorder after discharge (level of evidence $p < 0.05$). However, no additional medications for sleep disorders were required. Additionally, there was a significant reduction in the abuse of medication ($p < 0.001$). Ten per cent of the patients were in the care of a psychologist or a psychiatrist before their diagnosis, and 21% asked for the help of a psychologist or a psychiatrist after having a bilateral orchiectomy. The occurrence of mood disorders is also very different than the occurrence of sleep disorders. Mood disorders occurred much less often after orchiectomy and discharge ($p > 0.085$) compared with the period before surgery. Forty per cent of the patients had mood disorders before their operation, while only 37% still had these after discharge. There was a significant decrease in abuse of medication for anxiety. Twenty-four per cent of the patients took medication during hospitalisation, and only 10% continued after orchiectomy. **CONCLUSIONS:** The results of the study show that patients who were notified about their cancer diagnosis, particularly their health status, exhibited moderate stress and psychological impact.

Abbreviations:

BOE	- Bilateral orchiectomy
CaP	- Carcinoma of the prostate
DRE	- Digital rectal examination
LH-RH analogues	- Luteinising hormone-releasing hormone analogues
RAPE	- radical prostatectomy
RT	- radiotherapy

INTRODUCTION

The current review shows some of the psychosocial issues related to prostate cancer and performing castration by bilateral orchiectomy. The European Association of Urology guidelines recommend a yearly digital rectal examination (DRE) along with an annual prostate specific antigen test (PSA) for men 50 years of age and older.

The accepted standard of endocrinal treatment for prostate carcinoma (CaP) was bilateral orchiectomy (BOE). Even in advanced stages of the illness, the multimodal treatment of CaP is based on androgenic suppression, which leads to long-term stabilisation. Because of the side effects and undesirable psychological impacts, surgical castration has been replaced by pharmacological castration. The effectiveness of an orchiectomy is comparable to treatment with LH-RH analogues. According to the European Association of Urology recommendation, therapy using LH-RH analogues is the basic technique for hormonal suppression in patients with locally advanced and generalised prostate carcinoma; nevertheless, the indications for BOE persist. Both techniques lead to optimal reduction of testosterone levels.

During treatment, the standard procedure is hormonal ablation, chemical castration by LH-RH analogues, or operative castration (BOE or pulpectomy). In this study, we present the impact that CaP diagnosis and BOE treatment have on the psycho-social status of patients after diagnosis and in their life after castration. The review focuses on quality of life issues and psychosocial implications.

CaP is the most common urological cancer for men in the Czech Republic and is the most common type of cancer for men in the United States with an estimated 218,000 new cases and 27,000 deaths expected annually in coming years. Approximately 70% of prostate cancer diagnoses occur in men over the age of 65. The psychological reaction to a prostate cancer diagnosis depends on the patient's psychiatric history, e.g., dating as older men, retirement, or previously losing loved ones to cancer (Eton *et al.* 2005). Because surgery and radiation treatments seem to be equally effective in treating the early stages of CaP, controversy still exists concerning the selection of primary treatments for prostate cancer, whether locally advanced or metastatic. In cases of advanced disease or biochemical progression after radical prostatectomy or radiotherapy (RAPE or RT), we recommended some of those patients to have bilateral orchiectomy.

PATIENTS AND METHODS

All evaluated patients had prostate cancer and underwent a bilateral orchiectomy. A total of 143 patients were verified as having a history of prostate carcinoma. In the study, 143 patients were asked about their reaction to the malignant diagnosis, the valuation of their health after treatment, and the psychosocial implications on their life. Each of the 143 patients received a questionnaire, which was included in this study. The level of compliance was 62%. We evaluated 89 returned questionnaires and processed this same number of patients. The age of the patients ranged from 59 to 91, and the average age was 65. The patients' answers were evaluated one to two years after their bilateral orchiectomy. Patients' testicular tissue was removed by orchiectomy or pulpectomy. Hospitalisation usually lasts for three days. Student's t-tests were used for statistical processing.

Questionnaire

1. How old are you?
2. When was your prostate cancer diagnosed?
3. When were you were operated on? / When did you undergo your bilateral orchiectomy?
4. Where you satisfied with your interaction with our staff?
Satisfied/Slightly satisfied/Dissatisfied
5. Are you satisfied with the information given about your therapy?
6. How would you evaluate your current condition after receiving therapy?
7. Do you have any anxieties?
None/Moderate/Medium/Intense
8. Did you have any sleeping disorders before surgery?
Yes/No
In our hospital? Yes/No
After discharge? Yes/No
9. Did you have any mood disorders before surgery?
Yes/No
In our hospital? Yes/No
After discharge? Yes/No
10. How did you accept your diagnosis?
Very well/well/poorly/I didn't accept
11. Have you had any thoughts about committing suicide?
Yes/No
12. After leaving the hospital, what is your living situation?
Live alone/live with family
13. Were you in the care of a psychologist or psychiatrist before your diagnosis?
Yes/No
14. Did you need any psychological help after surgery?
Yes/No
15. Have you taken any medication
- for anxiety?
Yes/No/Only during hospitalisation?
- for sleeping disorders?
Yes/No/Only during hospitalisation?

RESULTS

Patients were asked to evaluate their satisfaction with their doctors' care and behaviour. Ninety-four per cent of patients expressed satisfaction, 5% expressed slight satisfaction, and 1% (one patient) was dissatisfied. They were also asked about the care and behaviour of the middle hospital staff; 89% were satisfied, 7% were slightly satisfied, and 3% were dissatisfied. Patients were also asked to evaluate the actual information they received about this medical procedure; 96% were satisfied, 2% were slightly satisfied, and 2% were dissatisfied. Patients also evaluated the subjective change in their health status and quality of life after surgery. Eighty-six per cent of patients were satisfied, 12% were slightly satisfied, and 2% were dissatisfied (Figure 1). Patients were asked about the occurrence of anxieties. Fifty-five per cent of patients had no or moderate anxieties, 31% had slightly bothering anxieties, and 14% had intense anxieties. Pre-operational sleep disorders before surgery were diagnosed in 48% of patients (rest of 52% of patients did not suffer from these disorders) ($p < 0.005$), 57% of patients suffered from sleep disorders in the hospital (43% did not), and 51% of patients suffered from sleep disorders after leaving the hospital (49% did not) ($p < 0.05$). Mood disorders were observed in 40% of patients before the surgery, 39% in the hospital and 37% after leaving the hospital ($p < 0.085$). Patients were asked about accepting the diagnosis of malignant prostate carcinoma. Eighty-five per cent of patients tolerated the disease well, but 7% didn't accept it and 8% did not come to terms with it. Patients were asked about thoughts of suicide after learning of the diagnosis and treatment proposal. Eighty-nine per cent of patients did not think of suicide, whereas 11% did consider suicide (Figure 2). Ten per cent of patients were in the care of a psychologist or a psychiatrist before the diagnosis, and 21% sought this attention after completion of the bilateral orchiectomy. Ten per cent of patients are on anxiety medication after orchiectomy, and 24% during hospitalisation. Eleven per cent of patients are on a sleep adjustment medication after the operation, which is a statistically significant decrease ($p < 0.001$) compared with 29% of patients who received medication while they were in the hospital.

DISCUSSION

A BOE procedure is selected as one of the palliative medical procedures of patients with locally advanced or disseminated prostate carcinoma, either as a monotherapy or as a part of their treatment (Pirl *et al.* 2002; Bolla *et al.* 2005; Seidenfeld *et al.* 2000; Eton *et al.* 2001). Charles Huggins demonstrated the influence of androgens in the growth and survival of prostatic cancer cells more than 60 years ago. He was awarded a Nobel Prize in medicine for his research in 1966 (Huggins & Hodges 1941). The suppression of androgens has been

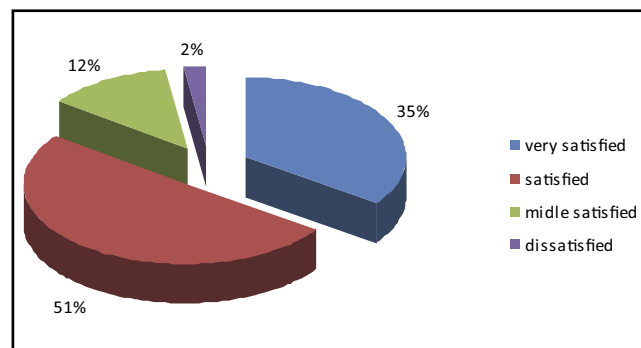


Fig. 1. Treatment results.

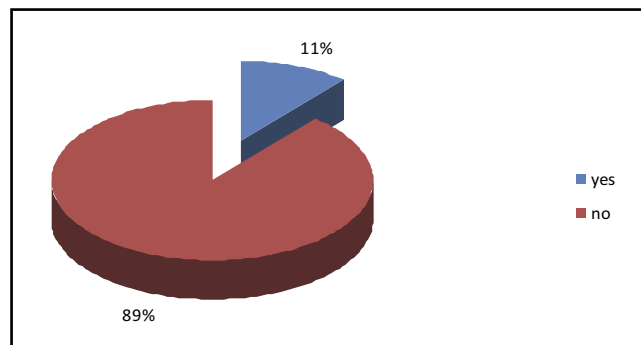


Fig. 2. Suicidal intentions.

the basic treatment to apply endocrine therapy against hormonally dependent generalised prostate cancer for more than 40 years. Castration induces fast and permanent suppression of testicular androgens (Pirl *et al.* 2002; Salminen *et al.* 2003; Heracek *et al.* 2007).

Results of our study show that patients notified of their cancer diagnosis evaluate their health status practically, with moderate psychological stress influences. Less than 15% of treated patients experienced serious general anxiety (Potosky *et al.* 2001; Roth *et al.* 2008; Harden *et al.* 2008). Those who underwent bilateral orchiectomy had no change in their sleeping patterns. There were no records of mental instability. Two patients considered suicide but remained stable (Herr & Sullivan 2000; Holzbeierlein *et al.* 2004). They were well familiarised with their new condition and with the treatment possibilities, and existing problems were managed by psychotherapy. Pharmacological therapy did not have to be increased (Eton & Lepore 2002; Eton *et al.* 2005).

The BOE was tolerated and selected as a good method of treatment by both patients and physicians (Smith 2003; Zhoua *et al.* 2010; Brodak *et al.* 2011; Chen & Petrylak 2004).

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