THE INFLUENCE OF PSYCHOCURATIVE ON CORTISOL LEVEL, ANXIETY, AND QUALITY OF LIFE IN ADVANCED STAGE CERVICAL CANCER PATIENTS

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ABSTRACT

Every year, there are 500,000 new cases and more than 250,000 deaths caused by cervical cancer worldwide. Cervical cancer patients faced physical and psychological problems several times that it activate stress mechanism such as hypothalamus-pituitary-adrenal (HPA) axis. These recurrent activations caused HPA axis disruption and adverse clinical effects. Several symptoms of endocrine stress response are the change of circadian cortisol rhythm. Cortisol is known as a stress hormone that involves an organism's response to stress and anxiety that influence the quality of life. This research aims to analyze the differences among serum cortisol level, anxiety, and quality of life in cervical cancer patients before and after psychocurative intervention in obstetrics and gynecology wards and polyclinic in RSUD Dr. Moewardi Surakarta. This research is an experimental double-blind randomized controlled clinical trial pre-test post-test group design study. The subjects were advance stage (IIB-IV) cervical cancer patients. The subjects were randomly chosen into fifteen subjects that given standard therapy and psychocurative, while the other fifteen subjects as a control only got standard therapy. Data were obtained from measurement of serum cortisol level, anxiety questionnaire DASS 42 and WHO quality of life questionnaire. Data were analyzed using SPSS 21 using difference test. The difference mean test result of cortisol serum level, anxiety, quality of life from the controlled group and uncontrolled group showed a significant difference (p ≤ 0.05). In conclusion, psychocurative is significant to reduce cortisol level, anxiety, and improve the quality of life in advanced stage cervical cancer patients.

Keywords: Psychocurative; cortisol; anxiety; quality of life

ABSTRAK


Kata kunci: Psikokuratif; kortisol; kecemasan; kualitas hidup

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INTRODUCTION
Cancer is the fifth leading cause of death in Indonesia. More than 40% of malignancy in women is gynecology cancer. The most common cases of gynecology cancer are cervical cancer, followed by ovary cancer, and uterine cancer. The peak incidence age of cervical cancer is 45-54 years. The five-year survival rate of cervical cancer stage I, II, III, IV are 50%, 40%, 20%, and 0% (Azis, 2009). Every year, there are 500,000 new cases and more than 250,000 deaths caused by cervical cancer worldwide. In Indonesia that has 220 million population, there are 52 million women who are in risk for cervical cancer (Rasjidi, 2009).

In advance stage cervical cancer patients, stress occurs whether biological (progressivity and therapy), psychological (anxiety related to diagnosis, prognosis, medical costs, fear of death), social stress (family, economy, and environment). Long-term and repeated stressors can lead to a dangerous risk of depression. Approximately, 70% of advanced stage cervical cancer patients show changes in circadian profile into flat, consistent in high level, or erratic fluctuations (Sephton, 2000).

Many studies aimed on reducing the stress to improve quality of life and endurance in cervical cancer patients, based on the theory about the relationship between psychological factors and immune system function, blood vessel growth, and tumor development (Schettler, 2013; Soetrisno, 2009). Based on those theories, this study was conducted whether psychocurative interventions (cognitive, social, spiritual and physical) can help to reduce cortisol level that impacts to inhibit recurrence, reduce anxiety and improve the quality of life for cervical cancer patients.

Psychocurative is a treatment that aims to ensure that a person has a better chance to adapt to their psychological conditions and situations, also build harmonious and integral relationships to improve psychological stability and life skills. Psychocurative consists of cognitive, social, spiritual, and physical support that is expected to change distress conditions into eustress (Soetrisno, 2009).

MATERIALS AND METHODS
This research used experimental double-blind randomized clinical trial pre-test post-test group design. The subject of this research is advanced cervical cancer stage patients (IIB-IV) who treated in RSUD Dr. Moewardi Surakarta. Inclusion criterias: diagnosed with cervical cancer stage IIB-IV, able to speak Indonesian, able to communicate well, graduated at least from elementary school, willing and has already signed the consent in this research. Exclusion criterias: suffering another cancer other than cervix, pregnant women, having endocrine disorders, suffering severe mental disorders (psychotic), and history of depression treatment.

Thirty subjects who met inclusion and exclusion criteria were divided into two groups randomly. The treatment group was given to psychocurative in addition to standard therapy in four meetings, for each one 60 minutes every Monday in September 3rd, 10th, 17th, and the 24th year 2018. In the end of every psychocurative session, there were discussion and exploration about the experience that patient had during the previous psychocurative.In addition, the subjects performed an individual psychocurative three times a week at home with a psychocurative guide book that the researcher had been created and given by. Researchers visit each subject's house once a week in order to monitor and motivate the subject as well to discuss and explore things related to the research and previous psychocurative.

The control group was only given standard therapy/chemoradiation, which is done on different time with the treatment group in order to not violate ethics and respect patients' rights to get comprehensive services according to standard hospitals.

Before and after psychocurative intervention, the subject in treatment and control groups were measured their cortisol level in Laboratorium Klinik Prodia Surakarta at 06.00 WIB as this hormone is constant in the morning before starting their activity. After that, anxiety was measured using DASS 42, and the quality of life was measured using WHO questionnaire. The obtained data were analyzed using SPSS 21 using different test method.

RESULTS
As seen in Fig. 1, the average of cortisol in the treatment group is decreased about 5.19 after psychocurative intervention, while in control group has decreased into 1.07. The average of anxiety in the treatment group is decreased about 18.0 after psychocurative intervention, while in the control group decreased into 8.74. The average quality of life in the treatment group is increased after psychocurative intervention about 7.61, while in control group is constant. Whereas, the result of different mean scores of blood cortisol serum level, anxiety, quality of life between treatment and control group showed significant differences (p<0.05).
Psychoacurative in Advanced Stage Cervical Cancer

**DISCUSSION**

Psychoacurative that consists of cognitive, social, spiritual and physical support is an effort that is expected to change distress conditions into eustress in an advanced stage of cervical cancer patients. It happened because psychoacurative able to make cervical cancer patients adjust on their psychological conditions and situations, and build harmonious and integral relationships in order to improve their psychological stability.

In cancer patients, the main psychological problem is the fear of the disease. This fear arises because of the lack of understanding about the disease. Some researchers claim that cancer patients feel like a victim or someone who has been sacrificed then they suffer such a malignancy. The lack of support from the surroundings (social support) can also reduce the motivation of patients to survive (Soetrisno, 2009).

According to Kang et al (2009), logotherapy (similar to psychoacurative) can be useful to increase the quality of life by reduces the suffer in advanced stage cancer patients. There are differences in the study, where the subjects used are adolescents with all types of the advanced stage of cancer.

Similar research that conducted by Martha (2006) used a cross-sectional study on 84 breast cancer patients, aged over 21 years, and had not received chemotherapy or radiation intervention. As a result, patients who have the meaning of a good life and close to God (good psychological well-being) have better physical and psychological responses than patients who have a low value of life (p = 0.00). On the other hand, aspects of spirituality (including interpreting life and prayer) are stated to improve psychological and physiological responses in cancer patients.

Other researchers found that the increase of blood serum cortisol levels was found in individuals experiencing biological or emotional stress, depression, sleep disorders, fever, hypoglycemia, anorexia nervosa, and post surgery (Young, 2004; Lovallo et al 2006).

In this study, researchers used blood serum for cortisol examination. The number and timing of blood serum collection were the same in all patients in both the treatment and control groups. Researchers used blood serum cortisol levels with consideration of cortisol secreted through a series of processes involving the hypothalamic-pituitary-adrenal axis (HPA), which is associated with circadian rhythms. The blood serum is best to describe the actual cortisol level, because the result of cortisol level on the HPA axis, is closest to blood vessel cortisol level.
Stone (2001) in his study examined the relationship between stress and cortisol level with different samples using saliva that has the same results using the serum. Although saliva is easier to collect than blood, researchers prefer blood serum because of the various considerations above.

In this study, the treatment group subjects have the serum cortisol levels decreased, the level of anxiety decreased and quality of life increased. Based on the conclusions of this study, it is necessary to do psychocurative in advanced stage cervical cancer patients to prevent the increase of cortisol levels from avoiding distress or excessive emotional stress and pathological changes to eustress.

CONCLUSION

Blood serum cortisol level in patients with psychocurative treatment was lower than that in control group. Blood serum cortisol level in patients treated with psychocurative method was lower than that in control group. Whereas, the quality of life of patients who received psychocurative treatment was higher than that in control group.

SUGGESTION

Psychocurative that consists of cognitive, social, spiritual and physical support is given to every patient with an advanced stage of cervical cancer in addition to standard therapy (chemoradiation) by the therapist.

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