



## Is Chemotherapy Related with Erectile Dysfunction in Non-Urologic Cancer Patients?

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### Dear Editor,

Erectile dysfunction (ED) is characterized as men's inability to terminate or hold penile erection to complete the coitus (1). Sexual dysfunction (SD) contributes to quality of life (2). Malignancy can cause sexual adverse effects by direct and indirect ways. It can involve sexual organs, indirectly affect body image, or cause depression or fatigue with effects on libido (3). Most sexual disabilities are not caused by the cancer itself, but by side effects of cancer management (4). Chemotherapy and radiotherapy-related SD generally ends after the completion of therapeutic manipulations, whereas anatomical defects due to surgery might have a permanent effect on the patients' sexual activity (2, 5). Other aspects that play a role include subjects' age, general and urogenital co-morbidity, and degree of ED before cancer treatment (6-9).

Determining the incidence of ED in various chemotherapeutic regimens in these patients can lead to finding ways to improve quality of life, decrease anxiety, and increase acceptance in these patients.

In this prospective analytical study, 61 patients were treated with different chemotherapy regimens for non-genitourinary and central nervous system cancers, accepted written consent, and completed medical history; the patients were evaluated with the International index of erectile function (IIEF) questionnaire. Morning testosterone levels are also measured in the serum of patients. At the end of the month 3, after the start of chemotherapy, a reevaluation will be taken and the results will be analyzed.

After institutional review board approval was obtained, 61 patients with the mean age of  $58.66 \pm 15.11$  years (range 30 - 81 years) signed written informed consent and were included in the study; two patients were excluded from the study due to a change in the treatment plan. The

mean of testosterone concentration in the morning before and 3 months after the chemotherapy was  $3.13 \pm 2.007$  and  $3.30 \pm 2.19$ , respectively, which was not statistically significant. The mean score of IIEF questionnaire before and 3 months after the chemotherapy was  $11.29 \pm 2.42$  and  $10.95 \pm 2.31$ , respectively, which was not statistically significant (Table 1). In subgroup analysis, the mean score of the IIEF questionnaire in the group under treatment with Cisplatin-based chemotherapy drugs was used in patients with esophageal cancer, nasopharyngeal and mandibular cancer, and significantly decreased after treatment (before chemotherapy  $11.53 \pm 2.03$  and, then,  $10.27 \pm 2.57$  with P value: 0.02).

Sexual problems are nearly always caused by a combination of psychological parameters. Generally, having a diagnosis of cancer is regarded as a critical point in life associated with long-lasting psychological effects. Men may still suffer from anxiety, depression, and decreased sexual arousal, even a decade after neoplasm treatment (10).

The present study showed that patients treated with platinum-based chemotherapy agent had a sexual dysfunction, which could be due to the effect of this drug on germ cells and hypogonadism. Cancer treatment has multiple and variable side effects. Sexual abnormalities may be underestimated by physicians due to the use of various surgical procedures and may reduce the quality of life of patients. All patients should be informed of the treatment complications and choose the best treatment for cancer.

**Table 1.** Mean IIEF5 Score According to Chemotherapy Regimens Prototype

Chemotherapy Regimen	Mean IIEF Score		P Value
	Before Chemotherapy	After Chemotherapy	
5FU based <sup>a</sup>	11.62 ± 2.02	11.46 ± 1.19	0.65
Carboplatine-based	10.68 ± 3	10.58 ± 2.83	0.72
Cisplatin-based	11.53 ± 2.03	10.27 ± 2.57	0.02
Cyclophosphamide-based	11.56 ± 2.69	11.67 ± 2	0.76
Others	11.67 ± 57	12.33 ± 57	0.18
Sum	11.29 ± 2.42	10.95 ± 2.31	0.08

<sup>a</sup> 5FU: 5 Fluorouracil.

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## Footnotes

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