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**THE DEVELOPMENT  
OF MEDICAL SCIENCES:  
PROBLEMS  
AND SOLUTIONS**

THE INTERNATIONAL RESEARCH  
AND PRACTICAL CONFERENCE

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Психовегетативний стан студентів Львівського медуніверситету, які перевелись з окупованих окремих районів Донецької і Луганської областей <b>Яцкевич О. Я., Пристуга Ю. О., Смаль І. І., Корнійчук І. Ю.</b> .....	<b>78</b>



**SUBJECTIVE SIGNS OF SIDE-EFFECTS  
OF THE CYTOSTATIC THERAPY IN BREAST CANCER PATIENTS,  
WHICH APPEARS IN ORAL CAVITY**

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One of the most valuable side-effects of the modern chemotherapy is an inflammation of mucosa – chemotherapy-associated mucositis, which can affect any part of intestine, and also oral cavity, and can also lead to ulceration on its surface. It is a serious clinical situation, which can decrease the patients' quality of life, because of the pain syndrome, and lead to disturbances during the meal process, decrease of the body weight, and prolongation of treatment [1, 2, 3, 4]. From the other hand, the appearance of mucositis can limit a dose of chemotherapy.

High proliferative activity of the oral mucose epithelial cells makes them especially sensible to the cytostatic therapy. The incidence of oral mucosa pathology in oncological patients is too high (up to 90 %), even in case of basic regimen of chemotherapy [5, 6]. The same situation is observed in case of intestinal mucose, which can be observed even at standard treatment regimen [7, 8, 9].

Up to now, there was not proposed any adequate individual preventive or treatment care in oncological or dental clinic, that promotes the necessity of development of accompanying therapy for all steps of treatment of breast cancer patients. It was a **background** for this investigation.

**The aim** of this study is determination of peculiarities of the oral cavity organs status, based on patients sensation, who underwent chemotherapy because of the breast cancer, depending of it cycle.

**Methods.** There was selected a group of 26 breast cancer patients stage  $T_1N_0M_0 - T_2N_1M_0$ , whom was performed surgery+local irradiation as a 1 step,

and then 6 cycles of adjuvant chemotherapy in CAF, according to the international recommendations.

All the patients were taught the rules of oral hygiene care and informed about its necessity. Before the beginning of adjuvant chemotherapy patients need to refuse of application of artificial teeth, use of the middle hardness tooth brush with ordinary tooth paste. They should avoid to use any alcohol-based mouth rinse solution, tooth sticks, abrasive meal.

The oral toxicity was evaluated, based on subjective signs – all the patients should fill in a questionnaire, developed by us, in which there were noted all the complaints, which they have during chemotherapy.

**Results.** Analysing the appearance and character of breast cancer patients compliants during chemotherapy, the most part of compliants was appeared during the II cycle of chemotherapy, except mucositis and oral ulceration; they were maximal at VI cycle –  $36,4 \pm 10,5$  and  $27,3 \pm 9,7$  %, respectively.

After the I cycle of chemotherapy there were more often detected such complaints as lips and oral cavity dryness, and based on its thirst, which appeared in  $59,1 \pm 10,7$ ,  $45,5 \pm 10,9$  and  $50,0 \pm 10,9$  % of cases, respectively, and were consistent during the whole chemotherapy. Of course, it can be connected with previously conducted treatment – radiation therapy, in which oral cavity dryness can be observed in 57,8 %. We have observed, the lips dryness was the same during all the 4 cycles of chemotherapy, and was a little bit decreased at V and VI cycles up to  $40,0 \pm 10,0$  and  $36,4 \pm 10,5$  %, respectively, the oral cavity dryness and thirst were increased up to  $52,2 \pm 10,7$  %, the decrease was observed up to VI cycle –  $18,2 \pm 8,4$  ( $p=0,054$ ) and  $13,6 \pm 7,5$  % ( $p=0,009$ ), respectively.

The other valuable complaints were cracks of oral edges, which has been appeared after I cycle –  $40,9 \pm 10,7$  %, tongue plaque –  $36,4 \pm 10,5$  %, oedema of the oral cavity mucose –  $27,3 \pm 9,7$  % and foamy saline in  $27,3 \pm 9,7$  % cases. But, during the further observation, the cracks of oral edges and oedema of the oral cavity mucose after the VI cycle was decreased to  $27,3 \pm 9,7$  % and  $18,2 \pm 8,4$  %, respectively; the incidence of the tongue plaque and foamy saline was on the same level –  $27,3 \pm 9,7$  % for both signs. We have noticed, that the decreased level of appearance of oedema of the oral cavity mucose was the lowest only at V cycle of chemotherapy –  $8,0 \pm 5,5$  % ( $p=0,08$ ).

During the I cycle of chemotherapy the incidence of burning on the tongue was observed in  $13,6 \pm 7,5$  % cases, burning of the gingival papillae – in  $13,6 \pm 7,5$  %, tongue oedema – in  $9,1 \pm 6,3$  % cases, and was not changed during the whole treatment; after the VI cycle they were at the level of  $13,6 \pm 7,5$ ,  $22,7 \pm 9,1$  i  $22,7 \pm 9,1$  %, respectively.

Some colleagues have also observed the same signs in oral cavity while using mouth rinse solution or tooth paste. Typical complaints were feelings like a «burned» eodematic oral mucose, changed taste sensations and swallow



discomfort. In some cases such changes conduct to afraid and refusal of patients of usage of hygiene oral care and chemotherapy [8].

Inflammation and gingival bleeding were observed in  $18,2 \pm 8,4$  % patients after the I cycle of chemotherapy and was increased up to  $30,4 \pm 9,8$  % at II cycle; after that there was detected continuously decrease during VI cycle up to level of  $9,1 \pm 6,3$  %. Meanwhile, the appearance of oral ulceration was increased after the III and VI cycles up to  $33,3 \pm 9,8$  and  $36,4 \pm 10,5$ , respectively, in comparison to  $27,3 \pm 9,7$  % at I cycle; hyperemia and mucose eodema were observed only at VI cycle –  $27,3 \pm 9,7$  and  $13,6 \pm 7,5$  %, respectively, and pain in cheek mucosa were –  $45,5 \pm 10,9$  and  $22,7 \pm 9,1$  % after the I cycle, respectively.

In general, the side-effects appearance in oral cavity conduct to changes of taste and appetite decrease in 63,6 – 82,6 % patients during chemotherapy. This data correlates with investigations' results of other investigators, which exceed 100 % [5, 9, 10].

**Conclusion.** The study results can clearly show the necessity of control of the oral cavity status during the chemotherapy in breast cancer patients with the aim of early detection of side-effects of chemotherapy. We have submitted and showed the negative influence of chemotherapy on oral cavity status.

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## **МІКРОСКОПІЧНА КАРТИНА ЕПІТЕЛІУ ЯСЕН ТА МІКРОБНИЙ СКЛАД РОТОВОЇ ПОРОЖНИНИ ПРИ КОРОТКОТРИВАЛІЙ ДІЇ ОПІОЇДУ**

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Враховуючи незаперечний загальний шкідливий вплив опіоїдних засобів при їх зловживанні, неможливо нехтувати ранніми клінічними проявами уражень слизової оболонки ротової порожнини. Висока ймовірність ураження слизової оболонки порожнини рота обумовлена особливостями будови та безпосереднім контактом з навколишнім