

OP20 CYTOTOXIC DRUG TREATMENT IN CANCER-SURVIVORS SIGNIFICANTLY INFLUENCES THE STABILITY OF ORTHODONTIC TREATMENT – A CASE CONTROLLED STUDY

Maria Mitus-Kenig¹, Magdalena Loboda², Marcin Derwich³, Magdalena Durka-Zajac⁴, Elzbieta Pawlowska⁵,
¹Department of Experimental Dentistry and Prophylaxis, Jagiellonian University Medical College, Krakow,
²Department of Orthodontics, Specialist District Outpatient Clinic Zbigniew Zak Memorial, Krakow, ³Individual
Dental Practice, Grudziadz, ⁴The Specialist Orthodontic Practice, Szczecin and ⁵Department of Orthodontics,
Medical University, Lodz, Poland

AIM: To compare the stability of orthodontic treatment in cancer survivors compared with a control group of healthy subjects.

SUBJECTS AND METHOD: Fifty two cancer-survivors treated orthodontically between 2008 and 2013 (29 males, 23 females; median age 19.2 years). All had received cytotoxic drugs in the period of permanent tooth development. Fifty two healthy control subjects matched for age, gender, and malocclusion served as the control. Thirty three patients had skeletal a Class II, six a skeletal Class III and 13 a skeletal Class I. The Peer Assessment Rating (PAR) Index, the Index of Complexity, Outcome and Need (ICON) and Patients Satisfaction Score were assessed before treatment, after treatment and at the 3-year follow-up. A repeated ANOVA was used to test the statistical relationship of the scores.

RESULTS: An appropriate ideal occlusion was achieved in all patients with mean PAR scores of 4.2-6.0 in both study groups. The reduction in PAR score was on average 81.7 and 80.5 per cent in the control and cancer-survival patients, respectively. At follow-up, the average PAR score reduction was insignificantly lower (78.7; $P = 0.4$) for the control group (relapse in three patients classified as 'improved' and in one patient classified as 'greatly improved'). At the same time, the average PAR reduction significantly decreased (72.3; $P < 0.05$) for the cancer-survivor group with relapse in five and two patients classified as 'improved' and 'greatly improved'. Similarly, there was an insignificant increase (9.3 versus 10.2; $P = 0.2$) in the mean ICON score in the control group and a significant increase (10.2 versus 15.6; $P < 0.05$) in the cancer-survivor group comparing the time after treatment and at the 3-year follow-up. There was no significant change in patient satisfaction score.

CONCLUSIONS: The results of properly conducted orthodontic treatment of cancer survivors do not differ significantly from those of healthy subjects. However, there is a significant worsening of treatment stability during the follow-up of the cancer survivors. This group of patients should have a more intense follow-up to maintain the results of orthodontic treatment and more detailed pre-treatment discussion about possible outcome.