



# HYGIENIC STATE OF THE ORAL CAVITY IN ORTHODONTIC PATIENTS

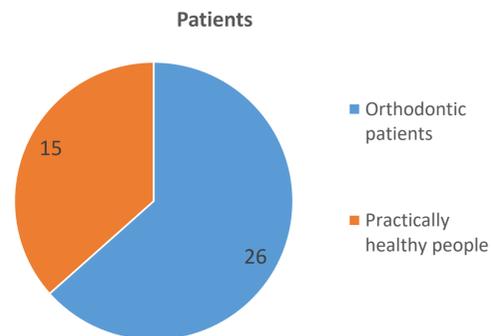
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## INTRODUCTION

Nowadays, the number of adults receiving orthodontic treatment is increasing. However, fixed orthodontic devices require patients to strictly observe personal hygiene, increase the number of personal hygiene products, as well as sufficient manual skills (Al Moharib H.S. et al., 2024). The consequences of unsatisfactory hygiene can be dental caries in the area around the braces, chronic catarrhal or hypertrophic gingivitis (Baumer C, et al., 2024).

## MATERIALS AND METHODS

26 people aged 18-35 who started orthodontic treatment with a multibracket appliances (treatment duration no longer than a month) were examined. The control group included 15 practically healthy people of the appropriate age. A clinical examination of the oral cavity was carried out, the hygienic condition of the oral cavity was assessed using the Simplified Oral Hygiene Index (OHI-S). The level of tongue hygiene was determined using the Winkel Tongue Coating Index. (W.T.C.). Statistical processing of the material was performed using modern methods of variation statistics.



## OBJECTIVES

1. To conduct a survey on individual oral hygiene of patients.
2. To assess the hygienic condition of the oral cavity in young people who use fixed orthodontic appliances.



## RESULTS

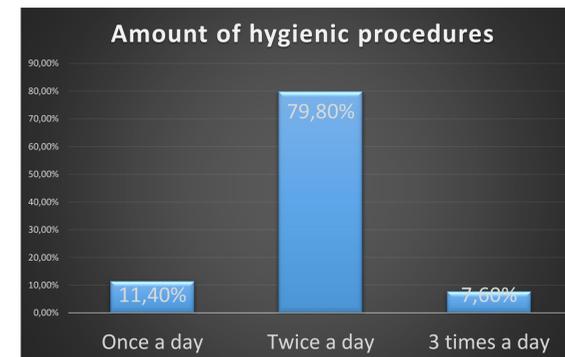
The survey of patients after one month of using orthodontic appliances showed that the main hygienic tools were: manual toothbrush (77.0%), orthodontic brush (57.7%), monobundle brush (42.4%), interdental brush (100%) and superfloss (3.8%).



After 3 months of treatment, the number of patients who used a monobundle brush and an irrigator increased by 10.8% and 3.8% respectively.

## RESULTS

Among the most popular hygiene products were: a toothpaste (100%) and a mouthwash (26.6%). The number of hygienic procedures during the day was also determined. Before orthodontic treatment, 11.4% of patients brushed their teeth once a day, 49.8% - twice a day, and 7.6% - three times a day. 49.4% of patients rinsed their mouth with water after each meal.



The average value of OHI-S in patients of the main group was 3.4 times higher than in the control group ( $p < 0.05$ ), which corresponded to unsatisfactory oral hygiene and required correction. A good level of oral hygiene was established in 7.7% of the main group, which is 4.3 times less than in the patients of the control group ( $p < 0.05$ ).

All patients were instructed on individual oral hygiene. Taking into account individual needs, basic and additional hygiene products were prescribed.

## RESULTS

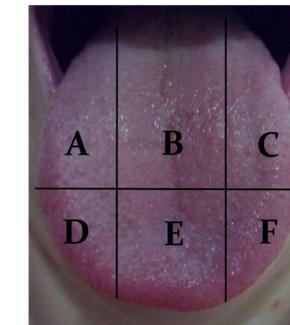


Patient B., 18 years. Identification of dental plaque using Plaque Disclosing Solution (Miradent Mira-2-Ton)

During each visit, oral hygiene was monitored by painting the surfaces of the teeth with a Plaque Disclosing Solution. In this way, patients' motivation for high-quality oral hygiene was increased.

After 3 months, the value of the OHI-S in the patients of the main group decreased by 1.96 times ( $p < 0.05$ ). But it still did not reach the level of the control group.

Average W.T.C. index in the main group exceeded the value in the control group by 2.1 times ( $p < 0.05$ ).



Patient R., 35 years. Assessment of the W.T.C. index

## CONCLUSIONS

Despite the high motivation of patients regarding orthodontic treatment, the level of hygiene in the majority remained unsatisfactory at the beginning of treatment. Therefore, in our opinion, it is expedient not only to carry out professional hygiene, but also to regularly monitor the level of knowledge and skills of individual hygiene of orthodontic patients.



## REFERENCES

1. Al Moharib HS, Alqasem A, Almusfer G, Aldosari MA, Almadhoon HW. The effectiveness of water jet flossing and interdental flossing for oral hygiene in orthodontic patients with fixed appliances: a randomized clinical trial. BMC Oral Health. 2024;24(1):498. doi: 10.1186/s12903-024-04166-0.
2. Baumer C, Schmidtman I, Ohlendorf D, Ferrari Peron P, Wehrbein H, Erbe C. Orthodontists' instructions for oral hygiene in patients with removable and fixed orthodontic appliances. Int J Dent Hyg. 2024;22(2):329-336. doi: 10.1111/idh.12763.

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