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significant improvement was found in CAL and KGW in both groups on 90 days ($p<0.05$). SP was significantly lower in the adult group than the young group at all post-surgical time points ($p<0.05$), and a negative correlation was found between age and SP ($p<0.05$).

CONCLUSION(S): The present study suggests that age may affect the shrinkage of FGG at early healing stages. Further comparative long term clinical studies are urged to confirm our results.

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Life Quality Changes in Tooth Grinders Following Periodontal Treatment

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AIM or PURPOSE: Oral health-related quality of life (OHRQoL) reflects individual's perception of how oral health affects their overall quality of life (QoL) and health. Tooth grinding, which can contribute to the severity of periodontal disease, may negatively impact QoL due to damage on periodontium. This study evaluated the OHRQoL in gingivitis patients with tooth grinding patterns following initial periodontal treatment (IPT).

MATERIALS and METHOD: A total of 34 systemically healthy, non-smoking volunteers (19/15 female/male; 18-65 years) with tooth grinding patterns were recruited from the Periodontology Clinic of Istanbul Aydin University Faculty of Dentistry. Participants received IPT, which included oral hygiene instructions, along with scaling and polishing across three sessions. Plaque index, gingival index (GI), probing depth, bleeding on probing (BoP) and OHIP-14TR scores were recorded at baseline and 28 days following IPT. Statistical significance was set at $p<0.05$.

RESULTS: The mean participant age was 30.7 years. 82.7% of participants reported brushing their teeth at least twice daily, and 51.7% engaged in interdental cleaning. All periodontal parameter means on the 28th day were significantly lower than at baseline ($p<0.001$). Mean BoP and OHIP-14TR scores decreased from 23.5% to 4.01% ($p<0.001$) and from 14.80 to 10.08 ($p<0.05$), respectively. Correlation analyses revealed positive relationship between post-treatment OHIP-14TR scores and both the GI and BoP ($p<0.05$).

CONCLUSION(S): Despite certain limitations, findings suggest that IPT can improve periodontal parameters, consequently resulting in positive impact on OHRQoL in tooth grinding patients. These results have significant clinical implications, highlighting the importance of IPT in enhancing patient QoL and promoting better patient response and compliance.

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Level of Hsp60 in periodontal tissues after photodynamic therapy

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AIM or PURPOSE: The pathogenesis of chronic periodontitis is associated with the development of autoimmune processes as the result of cross-reactivity between bacterial Hsp60 and host Hsp60. The aim of this work was to evaluate the effect of complex antimicrobial photodynamic therapy and laser on the level of Hsp60 in the periodontal tissue.

MATERIALS and METHOD: Samples of periodontal tissue of mandibular incisors of male Wistar rats (10-12 months of age and weighing 200-220 g) were examined. The study protocol was approved by the Ethics Committee of the Bogomolets National Medical University. The real-time PCR test was used for the investigation of the total bacterial mass before and after treatment (one month). Levels of Hsp60 in total lysates of periodontal tissue were evaluated by Western blotting. Statistical analysis was performed using STATISTICA 8.0 (StatSoft Inc. 2007, USA). Data were analyzed using the Mann –Whitney U-test.

RESULTS: There were statistically significant differences in the total bacterial mass between control (intact rats) and rats with periodontitis ($P = 0.0288$) and between control and rats with periodontitis after complex photodynamic therapy and laser ($P=0.046$). Levels of Hsp60 in total periodontal tissue lysates of periodontal tissue were decreased both after complex photodynamic therapy and laser and after photodynamic therapy alone compared to control and rats with periodontitis ($p<0.001$).

CONCLUSION(S): Complex photodynamic therapy and laser have contributed to the decrease of inflammation, the total bacterial mass, and levels of Hsp60 in the periodontal tissue of rats with periodontitis.

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Evaluation of antioxidant properties of gingival gel in experiment

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AIM or PURPOSE: To investigate the effectiveness of muco-gingival gel based on indicators of antioxidant protection enzyme activity in the conditions of experimental periodontitis in rats.

MATERIALS-METHODS: A total of 32 laboratory white male rats were divided into 4 groups (8 rats each): Group I – intact; Group II – simulated periodontitis (oral administration of a 2% solution of ethylenediaminetetraacetic acid, an indirect anticoagulant, for 30 days); Group III – simulated periodontitis with the application of "Placebo" gel on the mucous membrane; Group IV – simulated periodontitis with the application of plant-based muco-gingival gel. Malondialdehyde content, superoxide dismutase activity, and catalase activity were measured. The study adhered to the European Convention for the Protection of Vertebrate Animals used for Experimental and Other Scientific Purposes (1985).

RESULTS: Group II showed a 25.4% increase in malondialdehyde content ($p<0.001$) and significant activation of superoxide dismutase and catalase by 1.33 times ($p<0.05$) and 2.18 times ($p<0.001$), respectively, compared to Group I. Similar changes were observed in Group III. In Group IV, the application of the muco-gingival gel prevented the activation of peroxide processes and did not increase the activity of the studied antioxidant defense enzymes.

CONCLUSION: The muco-gingival gel proved effective in the context of experimental periodontitis in rats. This was evidenced by a reduction in malondialdehyde content and the activity of superoxide dismutase and catalase enzymes compared to Group I, indicating a decrease in oxidative stress in the periodontium.

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Oral health of young people during the Ukrainian war

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AIM or PURPOSE: To analyze the changes in the state of the oral cavity in young people after the beginning of the full-scale invasion of Ukraine.

MATERIALS and METHOD: The study involved 152 people (women 64.47% and men 35.53%) aged 34 ± 7.5 years. A questionnaire, examination, dental hygiene and treatment of patients were conducted.

RESULTS: It was found that 23% of the subjects had intact periodontal tissue, 77% had periodontal disease: gingivitis - 23.58%, periodontitis - 53.29%. The survey data indicate that 31.6% of the respondents consumed up to 3 cups of coffee per day before the military invasion, 23.7% started to consume more afterwards; 8.6% of the respondents did not smoke before the war but started to smoke, and 34.2% smoke more after the beginning of full-scale invasion. The frequency of visits to the dentist in 39.5% of the surveyed is once a year, 60.5% do not visit a periodontist (bleeding gums - 40.1%), 31.6% of the surveyed conduct professional hygiene once a year.

CONCLUSION(S): Since the beginning of the war, individual oral hygiene has deteriorated, the number of visits to dentists has decreased, dietary habits have changed, and the frequency of smoking has increased. All of these factors have led to a rise in the prevalence of periodontal diseases and worsened oral health among young people in Ukraine.

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Purity and Toxicity of Fucoidan Extracted from Brown Algae

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AIM or PURPOSE: Brown algae contains phlorotannin, meroditerpenoid, alginate, phenolic acid, fukosterol, pheophytin A, and fucoidan compounds. One of its ingredients, namely fucoidan, has been widely used as medicine in traditional health care. Fucoidan has many benefits, including high antiviral, anti-coagulant, anti-thrombin, and antioxidant effects. It was found that fucoidan can stimulate the formation of osteoblasts and show signs of bone formation by osteocalcin and alkaline sulfate. This research aimed to determine the toxicity effect of the bioactive fucoidan made from brown algae (Sargassum Sp.) on mice (Mus Muculus)

MATERIALS and METHOD: Acute toxicity tests were carried out on 25 male mice (Musculus M) weighing 45-50g. Mice were divided into five groups treated with Sargassum Sp fucoidan bioactive compound extract (Group I: 1% CMC negative control; Group II: formulation treatment 1(F1) Sargassum Sp fucoidan extract 17.5 mg/KgBW; Group III: Formulation 2(F2) Sargassum Sp fucoidan extract 35 mg/KgBB; Group IV: formulation treatment 3(F3) Sargassum Sp fucoidan extract 70mg/KgBB and Group V: Formulation treatment 4(F4) Sargassum Sp fucoidan extract 140mg/KgBB).

RESULTS: Based on the FTIR test results, the infrared absorption obtained generally indicates that the characteristics of the fucoidan from Sargassum Sp. has similar characteristics to standard fucoidan. There were no acute toxicity effects through clinical symptoms at 5, 10, 15, 30, 60, 120, 180, 240 minutes and no deaths were found in mice in all dose groups.

CONCLUSION(S): This study concludes that there is no toxicity effect of the bioactive fucoidan Sargassum Sp on clinical symptoms or mortality in animals after administration of fucoidan Sargassum Sp.

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Effectiveness of VCO on Periodontitis through Growth Factor Expression

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AIM or PURPOSE: This study aims to see the effect of VCO gel in periodontal regeneration in periodontitis through analyzing PDGF and IGF expression as the growth factor of tissue healing.

MATERIALS and METHOD: This study refers to the ethics issued by the Health Research Ethics Committee with the number 0141/PL.09/KEPK FKG-RSGM UNHAS/2023. This study is a laboratory experimental research with a post-test only control group research design. Thirty experimental 6-8 months old Wistar rats were conducted in this study. Virgin coconut oil applied to Wistar rats gingival soft tissue. The sample was divided into three groups, observations were made on the 7th and 21st days, then immunohistochemical