IMPROVEMENT OF ORTHOPEDIC MANAGEMENT IN PATIENTS WITH CHRONIC GENERALIZED PERIODONTITIS

Yusupova M. K.
Andijan State Medical Institute
Akbarov A. N.
Tashkent State Medical University

Keywords: *Chronic generalized periodontitis; orthopedic treatment; two-stage adhesive splinting; occlusion; tooth mobility; microcirculation.*

imrconf.com

Introduction

Chronic generalized periodontitis (CGP) is one of the most common inflammatory diseases of the oral cavity and remains a significant medical and social problem worldwide. According to epidemiological data, generalized forms of periodontitis affect up to 70–80% of the adult population in some regions, leading to progressive destruction of periodontal tissues, alveolar bone resorption, pathological tooth mobility, and occlusal imbalance. These changes result in impaired masticatory efficiency, deformation of dental arches, and deterioration of patients' quality of life.

Modern concepts of CGP pathogenesis emphasize its multifactorial nature. In addition to microbial factors, an important role is played by immune-inflammatory reactions, microcirculatory disorders, metabolic disturbances, and functional overload of the dentoalveolar system. In this context, orthopedic treatment aimed at stabilizing mobile teeth and optimizing occlusal relationships is considered an essential component of comprehensive periodontal therapy. However, clear clinical criteria for selecting optimal

splinting methods and evaluating their functional effectiveness remain insufficiently developed.

Aim of the Study: The aim of this study was to evaluate the clinical and functional effectiveness of two-stage adhesive splinting as a method of orthopedic stabilization in patients with chronic generalized periodontitis.

Results

The baseline examination revealed pronounced occlusal disturbances and increased tooth mobility in the majority of patients with CGP. After treatment, the most significant positive changes were observed in the group receiving two-stage adhesive splinting. This approach resulted in marked normalization of occlusal parameters, including a reduction in occlusion time and load asymmetry, indicating the formation of a functionally favorable and symmetrical occlusion.

Tooth mobility decreased significantly following two-stage splinting, with a substantial increase in the proportion of teeth demonstrating mobility within the functionally acceptable range. Improvement of microcirculatory parameters in marginal periodontal tissues was also recorded, reflecting enhanced tissue perfusion and more favorable conditions for periodontal stabilization.

Long-term follow-up demonstrated higher tooth preservation rates and a greater proportion of patients achieving stable clinical remission in the two-stage splinting group compared with basic therapy alone or temporary splinting. These outcomes were accompanied by high subjective patient satisfaction with treatment results.

Discussion

The findings of this study confirm that functional overload and occlusal imbalance play an important role in the progression of chronic generalized periodontitis. Two-stage adhesive splinting provides gradual and controlled stabilization of the dentoalveolar system, allowing adaptation of periodontal

imrconf.com

tissues and optimization of occlusal relationships. This approach not only reduces mechanical stress on affected teeth but also contributes to improved microcirculation and modulation of inflammatory processes.

Compared with temporary splinting, two-stage adhesive splinting demonstrated superior clinical and functional outcomes, supporting its use as a rational orthopedic strategy in the comprehensive management of CGP.

Conclusion

Two-stage adhesive splinting is an effective method of orthopedic treatment for patients with chronic generalized periodontitis. Its application leads to significant improvement in occlusal parameters, reduction of pathological tooth mobility, enhancement of periodontal microcirculation, and increased rates of clinical remission and tooth preservation. Incorporation of two-stage splinting into comprehensive periodontal therapy can substantially improve long-term treatment outcomes and patient quality of life

imrconf.com

REFERENCES

1. **Belotserkovsky, V. I., & Nguyen Thi Thu Thuong.** (2013). Development of a methodology for assessing the effectiveness of supply chain management in textile and garment enterprises using fuzzy set theory. *Proceedings of Tula State University. Economic and Legal Sciences*, No. 3–1, 285–294.

2. **Bogdanov, A. I., & Mongush, B. S.** (2021). A mathematical model for optimizing the regional placement of production for light industry enterprises. *Production Organizer*, 29(2), 77–88. https://doi.org/10.36622/VSTU.2021.90.47.008

3. **Bolitov, V. I., & Kamenev, A. A.** (2020). *Methods and tools for inventory optimization at enterprises*. Moscow: Rudomino. 256 p.

4. **Bolkhovitinov, S. B.** (2015). *Logistics and supply chain management*. Moscow: Moscow Institute of Physics and Technology (MIPT). 415 p.

5. **Bolkhovitinov, S. B.** (2015). *Logistics and supply chain management* [Electronic resource]. Available at: https://mipt.ru/upload/1bb/f_fy3g-arpgxa6mq5q.pdf

6. **Borisova, V. V.** (2018). Design of digital-type logistics systems. In *Foresight of logistics: The future of logistics through the eyes of young scientists*. Proceedings of the international foresight session (pp. 53–58).

7. **Borisova, E. V.** (2014). Procurement logistics: The impact of supplier selection on supply chain efficiency. *Economics and Entrepreneurship*, No. 5–2, 662–665.

8. **Bochkarev, P. A.** (2015). *Reliability management of supply chains in procurement logistics* (Extended abstract of PhD dissertation). Saint Petersburg State University of Economics, 17 p.

9. **Bryntsev, A. N.** (2017). Risks of logistics providers in the digital economy. *RISK: Resources, Information, Supply, Competition*, No. 2, 16–19.

10. **Bubnova, G. V., Kurenkov, P. V., & Nekrasov, A. G.** (2017). Digital logistics and supply chain security. *Logistics*, No. 7, 46.

11. **Bukrinskaya, E. M., & Myasnikova, L. A.** (2021). The role of logistics in the implementation of the ESG concept. In *Sustainable development: Environmental, economic, and social aspects*. Proceedings of the international conference “Sustainable Development: Challenges and Opportunities” (pp. 79–88). Saint Petersburg: SPbSEU Publishing House.

12. **Butrin, A. G., Kovalev, A. I., & Polyunas, D. A.** (2009). Financial flows in the supply chain of an industrial enterprise. *Finance and Credit*, No. 45(381), 22–28.

imrconf.com