

## Clinical Evaluation of Treatment of Gingival Recessions Supported by Bayesian Statistics

---

MARIA DOBREVA<sup>1</sup>, IVAN CHENCHEV<sup>2</sup>

<sup>1</sup> Plovdiv University, <sup>2</sup> Medical University of Plovdiv  
Plovdiv, Bulgaria  
mimi.d.d@abv.bg

Gingival recession is a common manifestation in most populations. Gingival recession may be a concern for patients for a number of reasons such as root hypersensitivity, erosion, root caries, and esthetics. Multiple gingival recessions may be a concern for patients with a high lip smile line. Studies on this surgical challenge mostly concern the treatment of recession defects. Multiple adjacent recession-type defects present a further challenge because several recessions must be treated at a single surgical session to minimize patient discomfort.

VISTA (vestibular incision subperiosteal tunnel access) is a novel, minimally invasive approach applicable for both isolated recession defects as well as multiple contiguous defects in the maxillary anterior region. A 6-month postoperative measurement period is sufficient to evaluate the stability of the gingival margin.

The aim of this study is to offer an approach for comparing sample results with the clinical outcomes reported in several case studies.

We will compare our clinical results in terms of root coverage with the clinical outcome reported in a case study.

We will do practical analysis with a representative sample. Markov chain Monte Carlo (MCMC) algorithms and software, along with fast computer hardware, allows us to do this Bayesian data analysis ([2,3]).

In the case study reported in [1] gingival recession was measured at 6 month post-surgery and root coverage of 91% was obtained. The question is whether the value of interest falls among the most credible values in the posterior.

**Acknowledgments.** The research is partially supported by the Fund NPD, Plovdiv University, No. SP15-FMIIT-0015.

### REFERENCES

- [1] Chatterjee A., Sharma E., Gundanavar G., Subbaiah SK, *Treatment of multiple gingival recessions with vista technique*, A case series, J Indian Soc Periodontol, 19(2) (2015), 232235.
- [2] Gelman, A., Carlin, J. B., Stern, H. S., Rubin, D. B. *Bayesian data analysis*, Boca Raton, Chapman and Hall/CRC, Third Edition, 2013
- [3] Kruschke, J. K., *Doing Bayesian data analysis: A tutorial with R and BUGS*, Burlington, MA: Academic Press/Elsevier, Second Edition, 2011