

LETTER TO THE EDITOR

# Supportive antimicrobial treatments in chronic wounds

NOVAKOVA Slavomira, HALASOVA Erika, SKOVIEROVA Henrieta

Biomedical Centre Martin, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Martin, Slovakia. [henrieta.skovierova@uniba.sk](mailto:henrieta.skovierova@uniba.sk)

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Dear Editor-in-chief,

We would like to establish on the impressive article published in Bratislava Medical Journal (1). Bacterial colonization of chronic wounds is one of the factors which complicate a patient's life and significantly prolongate the healing process. Using natural substances as sterilized honey, and apitherapy seem to be a suitable supportive treatment to suppress the antimicrobial activity in non-healing injuries. In several cases, the application of solely natural remedies could not be sufficient or not suitable for the patient's preferences. We would like to point out to another supportive treatment, namely to cold atmospheric plasma (CAP). We have also been focusing on CAP research and its applications on wound healing in cooperation with a research and development company ([novotechnologies.sk](http://novotechnologies.sk)). Other investigators studied the antimicrobial efficiency of CAP during diabetic foot ulcers treatment under clinical conditions (2–3). The first one demonstrated a significant antibacterial effect of CAP in a randomized clinical trial of treatment that lasted 3 weeks. In this study, which involved 44 patients (22 of whom were exposed to CAP), the authors observed that the number of bacterial loads had been significantly reduced. Moreover, the other article reported that three sessions of CAP treatment per week accelerated the healing of wounds caused by diabetic foot ulcers. The treatment was connected with an immediate but brief reduction in the bacterial load. Other clinical findings support the effect of CAP on promoting wound healing while reducing the local bacterial load and pain in patients (4). We would also like to recommend a review summarizing the effect of CAP in various fields of modern medicine (5). Our preliminary data correspond with the results of the above-mentioned research groups and we believe that the way to alleviating the problems leads through the application of multiple medical approaches depending on the specific situation and patient's health status. Similarly,

we suppose that the more choices are made available, the sooner a “tailor-made treatment” for everybody will be found. Personalized medicine research (PerMed) is one of the European Union's (EU) top priorities as a strategy to provide personalized health and care solutions for the benefit of citizens (<https://erapermed.isciii.es/>), while our efforts are to enrich these possibilities by contributing to the understanding of this issue.

## References

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Biomedical Centre Martin, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Martin, Slovakia

**Address for correspondence:** SKOVIEROVA Henrieta, Biomedical Centre Martin, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Malá Hora 4C, SK-036 01 Martin, Slovakia