



## Prolotherapy of the temporomandibular joint is denoted as a new health technology in Korea

Won Lee, DDS, MSD, PhD

Editor-in-Chief of JKAOMS

*Department of Dentistry, College of Medicine, The Catholic University of Korea, Seoul, Korea*

Recently, the New Health Technology Assessment (nHTA) Committee<sup>1</sup> categorized prolotherapy of the temporomandibular joint (TMJ) area as a new health technology. This therapy involves injection of drugs such as dextrose or lidocaine into the TMJ area. The committee considered the technique effective since the treatment group showed reduced TMJ pain in comparison with the control group (placebo, anesthetic drug injection). Also, the nHTA Committee denoted prolotherapy as a safe technique because the side effects and complications related to the procedure were mild and clinically acceptable.

Based on systematic literature review of existing studies, the nHTA Committee of Korea reviews the safety and effectiveness of a technology at the committee level and performs expert evaluation in appropriate subcommittees for each field of interest. This committee recognized prolotherapy of TMJ as a safe and effective new medical technology for relieving TMJ pain caused by ligament or tendon rupture, partial tear, laxity, TMJ noise, mouth opening disorder, TMJ disc displacement, and TMJ subluxation or dislocation.

In the 1930s, injection of a solution into the fibrous tissue of the TMJ was shown to be effective for pain and TMJ hypermobility<sup>2</sup>. The representative method of prolotherapy is hypertonic dextrose prolotherapy (DPT), which is an injection therapy used to treat chronic painful musculoskeletal disorders. Although the mechanism of action is not exactly known, in general, DPT is used to treat tissue through temporary initiation of an inflammatory response along with related

tissue proliferation and is known to promote healing and control of pain<sup>3</sup>. Prolotherapy is similar to arthrocentesis of the TMJ in that it uses a needle injection; however, prolotherapy injects mainly high-concentration (12.5%-30%) dextrose alone or with other solutions into an area of connective tissue dysfunction, while arthrocentesis injects saline into the superior joint space of the TMJ. For patients with TMJ derangement that has not been resolved by conventional and conservative methods for temporomandibular disorder treatment such as splint therapy or arthrocentesis, prolotherapy can be an excellent alternative to non-surgical treatment methods if used appropriately.

In modern society, functional problems and pain of the TMJ have been increasing in frequency due to stress, etc., and are widely treated not only in oral and maxillofacial surgery and oral medicine, but also in traditional oriental medicine. Based on this use, oral and maxillofacial surgeons should pay more attention to prolotherapy of the TMJ.

In this journal, a related paper was published last year<sup>4</sup>, and we hope that many oral and maxillofacial surgeons will perform prolotherapy of TMJ and report excellent research and clinical reports.

### Conflict of Interest

No potential conflict of interest relevant to this article was reported.

### References

1. Center for New Health Technology Assessment (NECA). Introduction of nHTA [Internet]. Seoul: NECA [cited 2023 Apr 5]. Available from: <https://nhta.neca.re.kr/nhta/eng/nhtaENG0101VA.ecg>
2. Hakala RV. Prolotherapy (proliferation therapy) in the treatment of TMD. *Cranio* 2005;23:283-8. <https://doi.org/10.1179/crn.2005.040>
3. Sit RW, Reeves KD, Zhong CC, Wong CHL, Wang B, Chung VC, et al. Efficacy of hypertonic dextrose injection (prolotherapy) in temporomandibular joint dysfunction: a systematic review and

### Won Lee

Dental Clinic, The Catholic University of Korea, Uijeongbu St. Mary's Hospital, 271 Cheonbo-ro, Uijeongbu 11765, Korea  
TEL: +82-31-820-3184

E-mail: [cmfs21@catholic.ac.kr](mailto:cmfs21@catholic.ac.kr)

ORCID: <https://orcid.org/0000-0002-6383-8754>

© This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Copyright © 2023 The Korean Association of Oral and Maxillofacial Surgeons.

- meta-analysis. *Sci Rep* 2021;11:14638. <https://doi.org/10.1038/s41598-021-94119-2>
4. Memiş S. Evaluation of the effects of prolotherapy on condyles in temporomandibular joint hypermobility using fractal dimension analysis. *J Korean Assoc Oral Maxillofac Surg* 2022;48:33-40. <https://doi.org/10.5125/jkaoms.2022.48.1.33>

**How to cite this article:** Lee W. Prolotherapy of the temporomandibular joint is denoted as a new health technology in Korea. *J Korean Assoc Oral Maxillofac Surg* 2023;49:59-60. <https://doi.org/10.5125/jkaoms.2023.49.2.59>