



## INFLUENCE OF THE NAUSEA AND VOMITING REFLEX IN PROSTHETIC TREATMENT OF PATIENTS BY HOMEOPATHIC MEDICINES - A CASE REPORT

Tsvetelina Kanlieva, Kalina Georgieva, Metodi Abadjiev,  
*Department of Dental Material Science and Prosthetic Dental Medicine, Faculty of Dental Medicine, Medical University of Varna, Bulgaria.*

### ABSTRACT

Prosthetic treatment of a patient with manifested nausea reflex could be a dramatic experience. There is a risk of aspiration or ingestion of foreign objects, and the dentist may have great difficulties during the procedures.

**Purpose:** The purpose is to report the efficiency of homeopathic medicines in the case of prosthetic treatment with removable dentures of a patient with a gag reflex and several medical conditions. There is a risk of aspiration of foreign bodies. This leads to compromises in the final treatment quality and difficulty wearing a denture because of gagging. Homeopathy is a safe and natural alternative that finds application in dentistry.

**Material/Methods:** A case of a female patient is reported. Age of 63 with accompanying diseases. The patient has an exaggerated gag reflex during intraoral examination and needs prosthetic treatment with removable dentures.

The gag reflex was assessed by the Classification of Gagging Problem Index (CGP), and examination of reflex reaction with a sterile swab and monofilaments were done before and after the reception of homeopathic medicines.

**Results:** During the first and second visits, the results of the CGP index were recorded in the patient's clinical record. The results of the tests with the monofilaments and the sterile swab before and after taking homeopathic medicines were filled in tables and were compared.

**Conclusions:** A satisfactory, harmless and long-lasting result in the reduction of the nausea reflex is achieved in the reported case by homeopathic medicines. All clinical stages of removable dentures' fabrication were possible, and the patient tolerated the new prostheses pretty well.

**Keywords:** gag reflex, sensitivity, homeopathy, dentures, monofilaments, quantitative testing,

### INTRODUCTION:

The gag is an involuntary contraction of the muscles of the soft palate or pharynx that results in retching. [1]

The nausea reflex is usually a response due to irritation of the exteroceptors of the somatosensory nervous system: visual, auditory, tactile, pain, temperature, taste and smell receptors. [2]

The efferent response to the gag reflex produces spasmodic and uncoordinated muscle contractions [3], which leads to gagging, coughing, and sometimes vomiting. [4] The sympathetic and parasympathetic nervous systems participate in the nausea reflex, which is why it is accompanied by hypersialorrhea, sweating, tachycardia and rapid breathing. [5] Prosthetic treatment of a patient with manifested nausea reflex could be an unpleasant and dramatic experience. There is a risk of aspiration or ingestion of foreign particles such as impression material or stomach contents. The dentist may have great difficulties during the procedures. This leads to a waste of time and compromises in the final treatment quality. [6] The adaptation of such patients to partial or complete removable dentures takes longer, and it could vary from intolerance to the impossibility of wearing the prosthesis.

Homeopathy is an alternative therapy used 200 years ago. The basic principles of homeopathy are three laws: similarity, minimum dose and individuality. [7] Homeopathy is a safe and natural alternative, effective in children and adults. [7] Homeopathic medicines are used for the treatment of oral ulcers, sialorrhea, neuralgia, temporomandibular joint disorders, xerostomia, lichen planus, and bruxism in dentistry. [7]

*Gelsemium sempervirens* 30CH (BOIRON) is indicated in cases of fear, anxiety and stress. It has tropism towards the spinal nerves, cardiovascular system, mucous membranes of the respiratory and digestive systems. [8]

*Ipecacuanha* 9 CH (BOIRON) is used in cases of main symptoms such as nausea, hypersalivation, continuous vomiting spasms, cough with nausea and shortness of breath. Its tropism is parasympathetic, respiratory system and digestive system. [9]

Coccus cacti 5CH's (BOIRON) tropism is a respiratory and excretory system. It is prescribed in cases of nausea when brushing teeth, hypersalivation of the mucous membranes of the oral cavity and pharynx, leading to nausea at the slightest touch. [10]

**PURPOSE:**

The purpose is to report the efficiency of homeopathic medicines in case of prosthetic treatment with removable dentures of a patient with a gag reflex and several medical conditions.

**MATERIALS AND METHODS:**

A case of a female patient is reported. Her apparent age corresponded to her actual age (63 years old). The medical history of the patient included congenital cerebral palsy, type 2 diabetes, hypertension, and cataracts. The regularly taken medicines were Diaprel MR, Metfogamma 500mg, Valtenzin 160mg, Moxogamma 0,3mg, Trifas Cor.

The patient sought dental care because of difficulty in eating and pain in some teeth. Difficulties in pronouncing some vowels and letters and unsatisfactory aesthetics were in second place for her.

The extraoral clinical examination revealed facial asymmetry, a shortened and asymmetric lower facial third on the left and right, ptosis of the right eyelid, downward curved mouth angles, deepened nasolabial and labiomental folds (Fig. 1.)

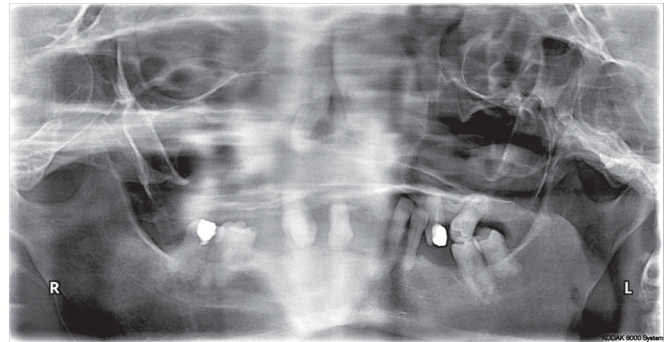
**Fig. 1.** Extraoral front view of the patient



**Intraoral status:**

The partially edentulous upper and lower jaw, several remaining teeth with Godon phenomenon, decreased vertical dimension of occlusion (Fig.2.).

**Fig. 2.** Panoramic x-ray



- Maxilla - 2<sup>nd</sup> class and mandible - 4<sup>th</sup> class according to Kennedy classification
- Teeth # 13,11, 25, 26, 37 and 38 had compromised periodontal support
- Dental calculus and plaque
- Soft tissues - pale pink oral mucosa covering the edentulous areas of the alveolar ridges
- Atrophy was asymmetrical and uneven, maxillary tubercles were non-retentive.
- U-shaped hard palate
- Enlarged tongue
- Increased muscle tone
- Exaggerated gag reflex during intraoral examination

Preprosthetic treatment included extractions of teeth # 13,11, 25, 26, 37 and 38 and periodontal therapy of the remaining teeth. The patient was indicated for prosthetic treatment with removable dentures.

At the first visit, an initial dental examination was performed after informed consent. The gagging reflex was evaluated using a dental mirror and an index according to the Classification of Gagging Problem Index (CGP). Saita N. et al. propose this gag severity index, which assesses the reflex during the initial examination before the actual treatment has started [11]: G1- normal gag, not desensitized; G2 - 1 mild gag; G3 - moderate gag; G4 - severe gag; G5 - very severe gag.

After this assessment, it has proceeded to the examination of reflex reaction for nausea in five intraoral zone (Table1).

**Table 1.** Intraoral zones- from 1 to 5

Zone 1	The middle of hard palate, next to palatal suture
Zone 2	Posterior palatal seal area and fovea
Zone 3	Posterior third of the back of the tongue
Zone 4	Lateral edges of the tongue
Zone 5	Cheeks on left and right side

A set of five coloured monofilaments (MF) is chosen for the purpose of the first examination. The MF are plastic fibers with variable diameters. They bend when they are applied to skin or mucosa and create pressure force corresponding to the diameter of the MF. Each MF is marked

with numbers meaning the size and applied force (Fig.3., Table 2).

**Fig. 3.** Set of five coloured monofilaments



**Table 2.** Set of five monofilaments (a scheme)

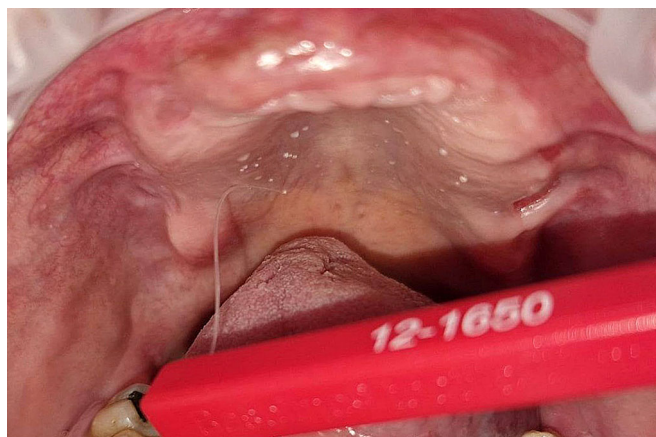
	Size	Force/gram (g-f)	Thresholds
<b>Green</b>	2,83	0,07	Normal
<b>Blue</b>	3,61	0,2	Diminished light touch
<b>Purple</b>	4,31	2	Diminished protective sensation
<b>Red</b>	4,56	4	Loss of protective sensation
<b>Orange</b>	6,65	200	Lack of sensation/ Untestable

MF were applied from the smallest to the largest number in above mentioned five zones, symmetrically on the left and right (Fig. 4, 5, 6 and 7).

**Fig. 4.** Irritation in zone 1 with MF size 4.31, purple



**Fig. 5.** Irritation in zone 2 with MF size 4.56, red



**Fig. 6.** Irritation in zone 3 with MF size 4.31, purple



**Fig. 7.** Irritation in zone 5 with MF size 4.56, red



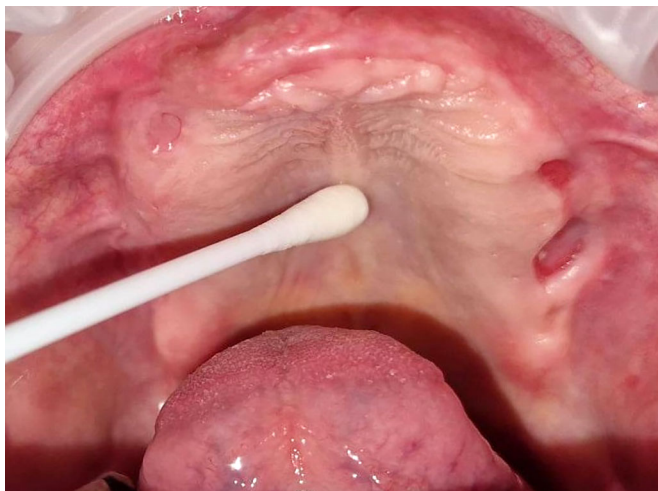
The presence or absence of sensitivity and gaging was observed and marked as “+” or “-” in each area. The results were filled in table 3.

Irritation by touching each zone three times with a sterile swab with a viscous tip was applied during the second examination. The procedure was done on the left and right side. The patient got distracted by counting from 1 to 20 (Fig. 8.-14.).

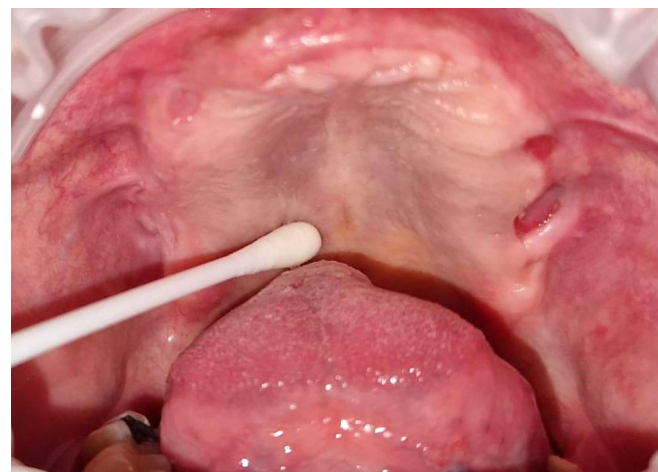
**Fig. 8.** A sterile swab with a viscous tip



**Fig. 9.** Irritation in zone 1



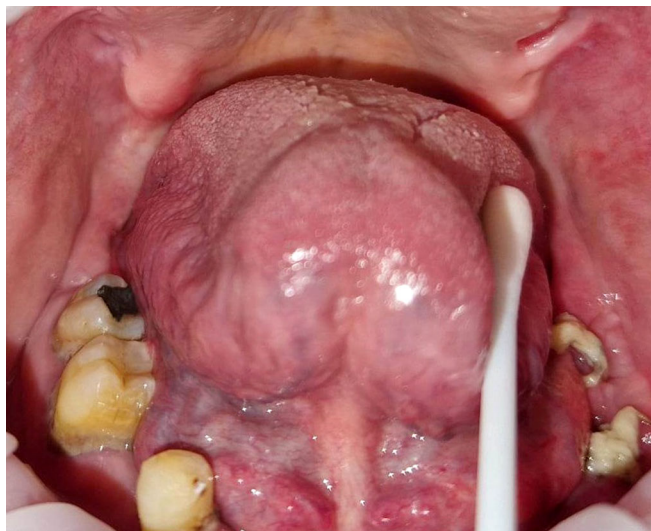
**Fig. 10.** Irritation in zone 2



**Fig. 11.** Irritation in zone 3



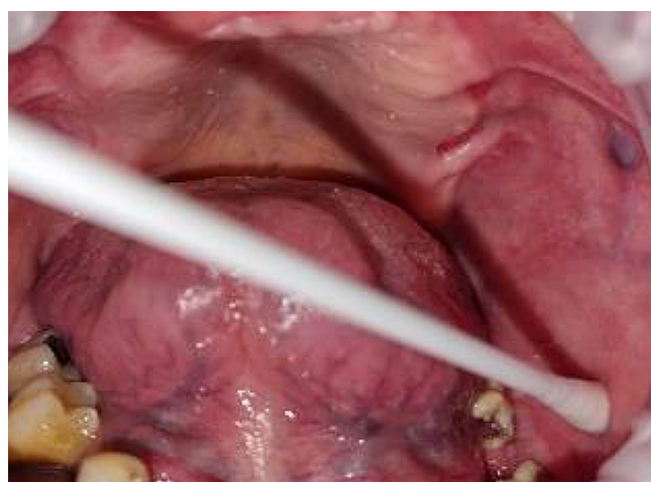
**Fig. 12.** Irritation in zone 4



**Fig. 13.** Irritation in zone 5 on right side



**Fig. 14.** Irritation in zone 5 on left side



The presence of reflex was marked “+” and absence “-” and all the results were filled in table 4.

**At the end of the examination, premedication with homeopathic remedies was prescribed:** Gelsemium sempervirens 30CH, Ipecacuanha 9 CH, Coccus cacti 5CH- three days before the next visit, five granules of each, at least three times per day. They are supposed to be placed under the tongue until they are completely dissolved. Their intake could be done at any time, regardless of the diet and other medicines related to other diseases the patient has.

During the second visit, the same tests were done:

• **assessment of the gag reflex by Classification of Gagging Problem Index (CGP)**

• examination of gag reflex in 5 zones with both MF and a sterile tampon with a viscous tip

The difference is that a 3 days intake of homeopathic medicines is done, and the results are filled in tables 5 and 6.

**RESULTS:**

During the first and second visits, the results of the CGP index were recorded in the patient’s clinical record.

The results of the tests with the monofilaments and the sterile swab before taking homeopathic medicines are filled in tables 3 and 4, where S stands for sensitivity and G - gaging.

**Table 3.** Test results with MF before intake of homeopathic medicines

Color and size of MF		Force/gram (g-f)		Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				S	G	S	G	S	G	S	G	S	G
Green	2.83	0.07	Normal	-	-	+	-	-	-	-	-	-	-
Blue	3.61	0.2	Diminished light touch	+	-	+	+	-	-	-	-	-	-
Purple	4.31	2.0	Diminished protective sensation	+	+	+	+	-	-	-	-	-	-
Red	4.56	4.0	Loss of protective sensation	+	+	+	+	+	+	-	-	-	-
Orange	6.65	200	Lack of sensation/ Untestable	+	-	+	+	+	+	-	-	-	-

**Table 4.** Positive or negative results for the presence or absence of gag reflex before intake of homeopathic medicines

Zone 1- The middle of hard palate, next to palatal suture			Zone 2- Posterior palatal seal area and fovea			Zone 3- Posterior third of the back of the tongue			Zone 4- Lateral edges of the tongue			Zone 5- Cheeks on left and right side		
-	-	-	+	+	-	-	-	-	-	+	-	-	-	-

The presence or absence of sensation and gaging is marked as follows with “+” or “-”. The results of the same two examinations, from the second visit, after the intake

of homeopathic medicines, were filled in similar tables so that they could be compared more clearly (Table 5 and Table 6).

**Table 5.** Results with MF after homeopathic premedication

Color and size of MF		Force/gram (g-f)		Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				S	G	S	G	S	G	S	G	S	G
Green	2.83	0.07	Normal	-	-	-	-	-	-	-	-	-	-
Blue	3.61	0.2	Diminished light touch	+	-	-	-	-	-	-	-	-	-
Purple	4.31	2.0	Diminished protective sensation	+	-	+	+	-	-	-	-	-	-
Red	4.56	4.0	Loss of protective sensation	+	-	+	-	-	-	-	-	-	-
Orange	6.65	200	Lack of sensation/ Untestable	+	-	+	-	-	-	+	-	-	-

**Table 6.** Positive or negative results for the presence or absence of gag reflex after intake of homeopathic medicines

Zone 1- The middle of hard palate, next to palatal suture			Zone 2- Posterior palatal seal area and fovea			Zone 3- Posterior third of the back of the tongue			Zone 4- Lateral edges of the tongue			Zone 5- Cheeks on left and right side		
-	-	-	-	+	-	-	-	-	-	-	-	-	-	-

## DISCUSSION:

### *Analysis of patient's results*

At the patient's second visit, after strict intake of the prescribed homeopathy, the following was found:

- gagging reflex was G3 according to CGP during the first visit, and it was decreased to G1 (normal gagging)
- Zones 1, 2, 4 and 5 were negative for gagging. The only exception was zone 3, in which only MF size 4.31 activated a nausea reaction (table 5).
- The sensitivity remained almost the same after homeopathic intake. The total number of positive results after the first visit was eleven compared to eight during the second visit.
- Three of the results of irritation by touching with a sterile swab in the first visit were positive compared to only one positive after premedication.

The prosthetic treatment plan included an upper complete denture and a lower partial removable denture. Due to the strong nausea reflex, the impression taking pro-

cedures were difficult. It is strongly recommended to find a solution for gagging reflex management. Homeopathic medicines are chosen in this case because of their extremely good safety profile, their lack of side effects and risk of overdose (e.g., accidentally taking more than the recommended dose).

Considering the patient's common diseases and regular intake of medications, the way of managing the gag reflex should be as harmless (without side effects) as possible and easily long-term applicable at home.

The patient got used to wearing her dentures faster than expected. Homeopathy had a positive result on the adaptation period.

## CONCLUSION:

A satisfactory, harmless and long-lasting result in the reduction of the nausea reflex is achieved in the reported case by homeopathic medicines. All clinical stages of removable dentures' fabrication were possible, and the patient tolerated the new prostheses pretty well.

---

## REFERENCES:

1. Ferro KJ, Morgano SM, Driscoll CF, Freilich MA, Guckes AD, Knoernschild KL, et al. The Glossary of Prosthodontic Terms: Ninth Edition. *J Prosthet Dent.* 2017 May; 117(5S):e1-e105. [[Crossref](#)]
2. Park MJ, Byun JS, Jung JK, Choi JK. The correlation of gagging threshold with intra-oral tactile and psychometric profiles in healthy subjects: A pilot study. *J Oral Rehabil.* 2020 May;47(5):591-598. [[PubMed](#)]
3. Katsouda M, Tollili C, Coolidge T, Simos G, Kotsanos N, Arapostathis KN. Gagging prevalence and its association with dental fear in 4-12-year-old children in a dental setting. *Int J Paediatr Dent.* 2018 Nov 7. [[PubMed](#)]
4. Eachempati P, Kumbargere Nagraj S, Kiran Kumar Krishanappa S, George RP, Soe HHK, Karanth L. Management of gag reflex for patients undergoing dental treatment. *Cochrane Database Syst Rev.* 2019 Nov 13; 201(11):CD011116. [[PubMed](#)]
5. Nesheiwat Z, Ghanim M, Eid J, Patel N, Burmeister C, Eltahawy E. Gag Reflex-Mediated Restoration of Sinus Rhythm during TEE Probe Insertion for Atrial Fibrillation: A Word of Caution. *Case Rep Cardiol.* 2020 Mar 2;2020: 6398196. [[PubMed](#)]
6. Stefos S, Zoidis P, Nimmo A. Managing Gag Reflex during Removable Partial Denture Treatment: A Review and a Clinical Report. *J Prosthodont.* 2019 Jul;28(6):618-622. [[PubMed](#)]
7. Amaral TG, Zina LG, Paula JS. Systematic Review on the Use of Homeopathy in Dentistry: Critical Analysis of Clinical Trials. *J Altern Complement Med.* 2021 Mar;27(3):214-224. [[PubMed](#)]
8. Boericke W. Gelsemium Sempervirens (GELSEMIUM). In: Homeopathic Materia Medica. *Medi-T.* 2004 [[Internet](#)]
9. Boericke W. Ipecacuanha (IPECA). In: Homeopathic Materia Medica. *Medi-T.* 2004 [[Internet](#)]
10. Boericke W. Coccus Cacti. In: Homeopathic Materia Medica. *Medi-T.* 2004 [[Internet](#)]
11. Saita N, Fukuda K, Koukita Y, Ichinohe T, Yamashita S. Relationship between gagging severity and its management in dentistry. *J Oral Rehabil.* 2013 Feb;40(2):106-11. [[PubMed](#)]

*Please cite this article as:* Kanlieva T, Georgieva K, Abadjiev M. Influence of the Nausea and Vomiting Reflex in Prosthetic Treatment of Patients by Homeopathic Medicines - A Case Report. *J of IMAB.* 2023 Apr-Jun;29(2):5000-5005. [[Crossref](#) - <https://doi.org/10.5272/jimab.2023292.5000>]

Received: 06/03/2023; Published online: 22/06/2023



### Address for correspondence:

Tsvetelina Kanlieva,  
Department of Dental Material Science and Prosthetic Dental Medicine, Faculty of Dental Medicine, Medical University – Varna;  
Address: No.84, Tsar Osvoboditel Street, Varna, Bulgaria.  
E-mail: [cvetelina.kanlieva@abv.bg](mailto:cvetelina.kanlieva@abv.bg)