

Gag Reflex and Prosthodontic Procedures - A Comparative Study

Research Article

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Abstract

Gagging is a characteristic feature of the upper respiratory tract to keep check of any foreign body. Severe gagging can occur during dental and prosthodontic procedures, which may cause irritation to the clinician and patient leading to compromised quality of treatment. This study was aimed to assess the relationship between gagging and various prosthodontic procedures thereby to improve the overall quality of treatment provided. Fifty Patients undergoing various prosthodontics treatments in our institution were selected for the study. A self-structured questionnaire was used to assess the prevalence and severity of the gag reflex. Results revealed that females had more gagging during prosthodontic procedures compared to males. 40% of patients who underwent fixed partial denture fabrication and 41.67% who were treated for temporary partial denture construction expressed gagging. From the present study it is evident that increased awareness is necessary to manage patients with gagging as it is major road block in providing quality prosthodontic treatment.

Keywords: Gagging; Patient; Reflex; Prosthodontics; Dentures.

Introduction

Gagging is a characteristic feature of the upper respiratory tract to keep check of any foreign body. However, it can likewise be a procured reflex which is conditioned by different stimuli for example, visual, acoustic, olfactory or chemical. It is a natural and normal defensive mechanism. As a result of gagging, patients often complain of nausea and unpleasant sensations amid dental procedures making it a troublesome situation to oversee [1, 2]. Severe gagging may cause irritation of the clinician and patient leading to compromised quality of treatment.

The gag reflex is a self-defensive reaction for survival and is controlled by parasympathetic division of the autonomic nervous system which involves ejection of foreign bodies. Five locales in the oral cavity have been perceived as the major trigger zones for initiating gag reflex, namely base of the tongue, palate, fauces, uvula and posterior pharyngeal wall [3, 4]. Different dental proce-

dures like making of maxillary and mandibular impressions, cavity preparation, checking of the posterior vibrating line for complete or partial dentures, crowns or root canal treatment for posterior teeth, taking intraoral radiographs particularly for the posterior teeth and extraction of third molars can cause overstated choking reflex [5, 6].

Gagging can cause unnecessary stress to both the operator and patient leading to reduced patient cooperation and reduced quality of treatment provided. Sometimes the reflex maybe triggered by fear, other psychologic factors or visual stimuli such as sight of impression material or a mouth mirror. Management of such patients having serious gag reflex can be challenging and proper knowledge regarding the reflex is vital to overcome it effectively [7]. Despite a range of strategies available no single method has been proved to completely stop the reflex. This study was done to assess and compare the gag reflex for various prosthodontic procedures among the Chennai population.

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Materials And Methods

A descriptive study was conducted in the undergraduate clinic in Saveetha Dental College and hospital during the period November to December 2020. Fifty Patients undergoing various prosthodontics treatments were selected for the study. Detailed case history of the patient was taken. A self-structured questionnaire was used to assess the prevalence and severity of the gag reflex. Since, there is no scoring system to grade severity of gagging, the gagging reflex is graded based on patient feedback. If the patient expressed that they experienced occasional gag reflex during insertion or usage of the prosthesis it was classified as mild type of gagging. If the patient expressed gagging after prolonged usage of prosthesis it was classified as moderate type of gagging and if the patient experiences gagging immediately during prosthesis insertion it was classified as severe gagging. Data collected was tabulated and results obtained.

Results

Among 50 participants in our study, 27 were females and 23 were males in the age group of 25 -70 years. Out of the study group, only 38% of the patients experienced gag reflex among which 57% were females and 43% were males [Figure 1, Table 1].

Among thevarious prosthodontic procedures, 26.67% of patients treated for complete denture prosthesis, 40% of patients who underwent fixed partial denture fabrication and 41.67% of patients treated for temporary partial dentureconstruction expressed gagging [Figure 2, Table 2]. Also, it was seen that females had more gagging during prosthodontic procedures compared to males.

Discussion

The present study was done to establish a relationship between prevalence of gag reflex according to gender and type of prosthesis fabricated among the population residing in Chennai.Gag in dental terms is neural response initiated on touching the posterior pharynx or the soft palate. It involves uniform elevation of the soft palate, retraction of the tongue and contraction of the pharyngeal muscles. Gagging during dental procedures can cause lots of stress to both the clinician and the patient [8].

The management of gag reflex depends on treatment of the cause and not only symptomatic treatment. Exhaustive clinical examination, recording of legitimate patient history and proper discussion with the patient can be the key factors in understanding the aetiology of the gag reflex. The dental professional needs to characterize if the patient's concern is connected to natural ag-

Figure 1. Gender-wise distribution of gag reflex.

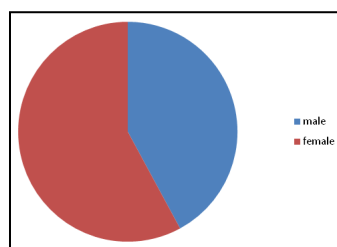


Figure 2. Prosthodontic treatment-wise distribution of gag reflex.

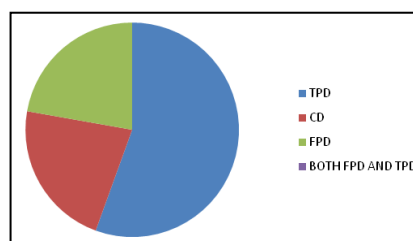


Table 1. Distribution of gagging reflex among genders.

Gender	Gagging present	Gagging absent	Total
Male	8	15	23
Female	11	16	27

Table 2. Distribution of gagging reflex for prosthodontic procedures.

Prosthodontic procedures	Gagging present	Gagging absent	Total
Complete Denture	4	11	15
Temporary partial denture	10	14	24
Fixed partial denture	4	6	10
FPD and RPD	0	1	1

gravations, iatrogenic variables, anatomic or mental elements. It is imperative to perceive whether, single or numerous components are causing the issue [9]. Gagging can be of a lot of trouble to the patient and the disposition of the clinician towards the patient may impact the result of treatment. The patient ought to be educated of the intraoral examination and methodology before the treatment furthermore, the clinician ought to continue just when assent has been given [10].

A patient wearing complete denture can have a gag issue because of different causes. Some of the causes might be identified with denture itself, while others can be psychogenic causes like declining to swallow the spit for the reason that the denture will oust. As a result, saliva pooling could trigger the gag reflex. But, in removable partial dentures, the denture-related mucosal disturbance in the oral cavity amid biting can likewise cause poor adaptation and stability of the dentures, leading to choking [11]. Therefore, awareness and knowledge regarding management of patients with gag reflex is essential. Proper history taking and conversations with the patient can give clues regarding the aetiology of gag reflex. The dental clinician needs to investigate and find factors responsible for this reflex during the time in the dental chair. Ramsay et al., [12] also suggested prior bad experiences may also be a factor causing gagging in patients even when there is no relevant triggering factor.

Various techniques can be used to manage gagging [13]. In a particular technique, a thin denture base is fabricated without any teeth and the patient is asked to use them for 5 minutes a day followed by gradually increasing them to develop resistance to the sensitivity. Psychological methods such as asking the patients to raise their feet alternatively may reduce gagging [14]. Therapies such as acupuncture, cognitive behaviour therapy and administration of certain drugs are known to decrease gag reflex [15]. With a rich case bank established over the last decades we have been able to publish extensively in our domain [16-19]. Further large scale multi-centric trials are required to establish the prevalence and causes of gagging reflex during the various prosthodontic procedures in our study population.

Conclusion

From the study it can be concluded that gag reflex is a major roadblock during prosthodontics procedures among the population in Chennai. Hence, increased awareness regarding the management of gag reflex is necessary. Proper patient-doctor communication and detailed history of the patient may help the clinician to plan the treatment and customize them according to the patient's re-

quirements.

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