

Efficaciousness and Potency of a Conventional Toothpaste in dominating the plaque control and gingival inflammation: A Clinical Observation

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ABSTRACT

Abstract: Riddance of bacteriological oral accumulation plays a vital role in counteracting plaque formation and gingival inflammation. Self-executed mechanical plaque expulsion with the aid of a conventional toothpaste is believed to be a standout amongst the most acknowledged techniques for controlling plaque and gingival inflammation. In spite of such acknowledgment, a high majority of the human population have a substantial amount of plaque accumulation and gingival inflammation. The performed clinical observational study was directed to survey the efficaciousness and potency of a conventional toothpaste in dominating the plaque control and gingival inflammation. **Materials and Methods:** This clinical observation was performed in a private dental facility in India in the month of January in 2017. The study comprised of 400 patients with varying levels of recognizable plaque accumulation and gingival inflammation. Plaque accumulation was scored on every one of the four surfaces of the six chosen teeth that include 16, 12, 24, 44, 32, and 36 to determine the plaque index. The mean plaque index was computed by isolating the total of the obtained number from scale by the aggregate number of locales scored inside the mouth. The gingival inflammation was scored on every one of the four surfaces of the six chosen teeth that include 16, 12, 24, 44, 32, and 36 to determine the gingival index. The mean gingival index was computed by isolating the total of the obtained number from scale by the aggregate number of locales scored inside the mouth. All the indices were assessed utilizing a simple score of 0-3, with zero being nil, 1 being minor, 2 being moderate and 3 being severe. **Results:** Out of the 400 patients, 200 subjects were males, and 200 were females. These were set deliberately to maintain the sex ratio. Each subject was instructed to brush with the conventional toothpaste. The plaque index showed a decline from 1.8 to 1.65 in a phase of 20 days. Following that, the decline continued from 1.65 to 1.35 in the next 40 days. The substantial decline was also observed in the gingival index which went from 2.31 to 1.96 in a phase of 20 days. Following that, the decline continued from 1.96 to 1.41 in the next 40 days. **Conclusion:** The study has revealed that the conventional toothpaste proved to be compelling medium in counteracting plaque formation and gingival inflammation. There is a need to generate cognizance amongst the general population about the efficaciousness and potency of a conventional toothpaste in dominating the plaque control and gingival inflammation.

KEYWORDS: Efficaciousness, plaque control, Conventional Toothpaste

INTRODUCTION

Riddance of bacteriological oral accumulation plays a vital role in counteracting plaque formation and gingival inflammation. Self-executed mechanical plaque expulsion with the aid of a conventional toothpaste is believed to be a standout amongst the most acknowledged techniques for controlling plaque and gingival inflammation. In spite of such acknowledgment, a high majority of the human population have a substantial amount of plaque accumulation and gingival inflammation.

Dental plaque has been designated as a delicate, non-mineralized, microbial biofilm that comprises of complex groups of bacterial species that live on tooth surfaces or delicate tissues. It gathers on and holds fast to teeth, dental reclamations and removable/fixed appliances in the oral cavity. It is made out of microbes, salivary

glycoproteins organized in the framework of extracellular material.¹ The dental plaque shows up as yellowish or dark stores which can be expelled mechanically. Its expulsion is vital in controlling malady action. Standard expulsion of the plaque is, along these lines, basic and has been the foundation of pathological avoidance. It can be sub-gingival or supragingival relying on their location.²

On the off chance that there is an accomplished clearing of plaque, at that point, caries can be counteracted. For effective removing of plaque, methodologies, for example, mechanical expulsion of plaque, native or systemic utilization of antimicrobial medications, change in plaque organic chemistry, an anticipation of bacterial connection to the tooth surface; and adjustment of plaque biology is critical.

How to cite this article:

Shah A, Makadia N, Kaur K, Pandya D, Aarshavi Shah, Kachhadia R. Efficaciousness and Potency of a Conventional Toothpaste in dominating the plaque control and gingival inflammation: A Clinical Observation. *Int J Oral Health Med Res* 2017;4(2):4-6.

The expulsion of plaque from interdental surfaces remains an imperative long lasting objective for dental patients.³ Bacteria are one of the fundamental components causing periodontal aggravation, consequently watchful plaque control is exceptionally vital. Be that as it may, mechanical plaque expulsion is insufficiently performed by most individuals from the populace. The requirement for extra help in controlling bacterial plaque gives the method of reasoning to patients to utilize antimicrobial dentifrices notwithstanding their mechanical oral cleanliness regimens. A typical issue with all interdental cleaning helps is prerequisite expertise and motivation.⁴ Various antiplaque agents, for example, toothpaste, tooth powder are of fundamental significance in anticipating gathering of plaque and subsequently dental caries. In the market, different dentifrices are accessible that provide varied outcomes. It ought to have calming, cell reinforcement, and antiplaque action. A decent quality tooth paste ought to have the capacity to clear dental plaque effectively.⁵ The performed clinical observational study was directed to survey the efficaciousness and potency of a conventional toothpaste in dominating the plaque control and gingival inflammation.

MATERIALS AND METHODS

This clinical observation was performed in a private dental facility in India in the month of January in 2017. The study comprised of 400 patients with varying levels of recognizable plaque accumulation and gingival inflammation. Plaque accumulation was scored on every one of the four surfaces of the six chosen teeth that include 16, 12, 24, 44, 32, and 36 to determine the plaque index. The mean plaque index was computed by isolating the total of the obtained number from scale by the aggregate number of locales scored inside the mouth. The gingival inflammation was scored on every one of the four surfaces of the six chosen teeth that include 16, 12, 24, 44, 32, and 36 to determine the gingival index. The mean gingival index was computed by isolating the total of the obtained number from scale by the aggregate number of locales scored inside the mouth. All the indices were assessed utilizing a visual simple score of 0-3, with zero being nil, 1 being minor, 2 being moderate and 3 being severe.

RESULTS

Out of the 400 patients, 200 subjects were males, and 200 were females. These were set deliberately to maintain the sex ratio. Each subject was instructed to brush with the conventional toothpaste. The plaque index showed a decline from 1.8 to 1.65 in a phase of 20 days (Chart 1). Following that, the decline continued from 1.65 to 1.35 in the next 40 days (Chart 2). The substantial decline was also observed in the gingival index which went from 2.31 to 1.96 in a phase of 20 days (Chart 3). Following that, the decline continued from 1.96 to 1.41 in the next 40 days (Chart 4).

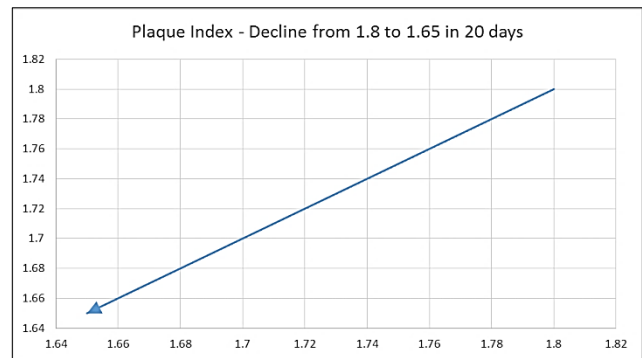


Chart 1 - Plaque Index - Decline from 1.8 to 1.65 in 20 days

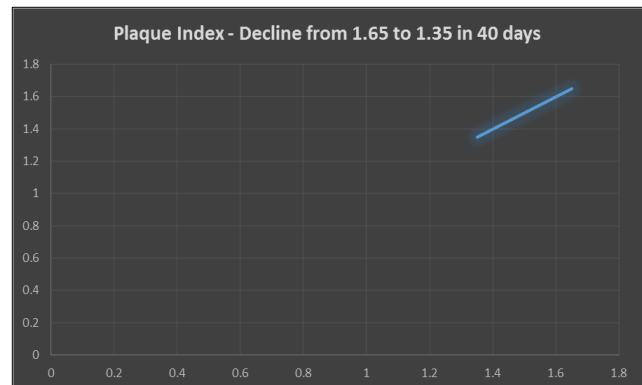


Chart 2 - Plaque Index - Decline from 1.65 to 1.35 in 40 days

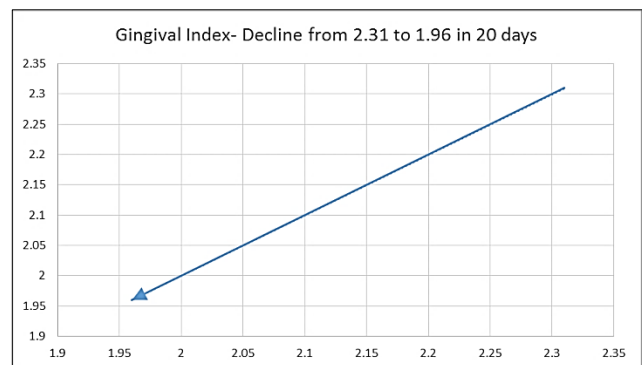


Chart 3 - Gingival Index - Decline from 2.31 to 1.96 in 20 days

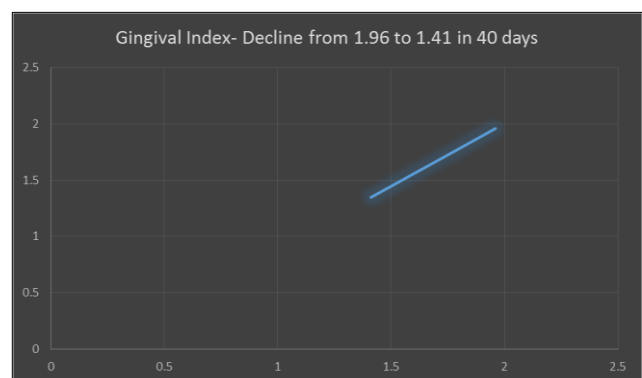


Chart 4 - Gingival Index - Decline from 1.96 to 1.41 in 40 days

DISCUSSION

Recently, there has been a cultivating enthusiasm for the use of conventional products. Despite the fact that

reviews in living creatures and in vitro may demonstrate the antimicrobial properties of a few of these items, there is no other method for knowing their genuine clinical impact without leading a randomized clinical trial. Cleansers and abrasives may modify the substantivity or the antimicrobial movement of dynamic fixings. Support of good oral cleanliness is the way to counteract dental ailments. The happenings of the oral micro flora are the reason for most oral sickness and gingival inflammation. The expansion of antibacterial operators in the generation of toothpaste helps in keeping these oral living beings to a level predictable with oral wellbeing.⁶

Out of the 400 patients, 200 subjects were males, and 200 were females. These were set intentionally to keep up the sex proportion. Each subject was told to brush with the ordinary toothpaste. The plaque record demonstrated a decay from 1.8 to 1.65 in a period of 20 days (Chart 1). Taking after that, the decay proceeded from 1.65 to 1.35 in the following 40 days (Chart 2). The considerable decay was additionally seen in the gingival file which went from 2.31 to 1.96 in a period of 20 days (Chart 3). Taking after that, the decrease proceeded from 1.96 to 1.41 in the following 40 days (Chart 4).

Comparable outcomes were acquired in studies led by Ozaki et al.,⁷ Pannuti et al.,⁸ Shama Rao et al.⁹ However, huge contrasts in gingival and plaque lists were acquired for the test gathering and not for the control bunch in a review led by George et al.¹⁰ A confinement of this study is that little specimen size of the observational study may have affected the outcome. Henceforth, additional studies are prescribed to incorporate bigger specimen estimate with both the sexual orientation are recommended to test the efficaciousness and potency of a conventional toothpaste in dominating the plaque control and gingival inflammation.

CONCLUSION

The study has revealed that the conventional toothpaste proved to be compelling medium in counteracting plaque formation and gingival inflammation. There is a necessity to generate cognizance amongst the general population

about the efficaciousness and potency of a conventional toothpaste in dominating the plaque control and gingival inflammation.

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Source of Support: Nil
Conflict of Interest: Nil