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IMPACT OF INTERDENTAL AIDS USAGE AND PROFESSIONAL ORAL HYGIENE INSTRUCTIONS ON PERIODONTAL HEALTH STATUS OF PATIENTS IN CHENNAI - AN RETROSPECTIVE CROSS- SECTIONAL ANALYSIS

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Abstract
Periodontal diseases are well-known to be brought on and spread by dental plaque. According to epidemiological research, tooth plaque accumulation and periodontal disease severity are positively correlated. The standard of defence against periodontal diseases has traditionally been twice-weekly professional mechanical tooth cleaning in addition to daily thorough mechanical plaque removal. According to epidemiological research, tooth plaque accumulation and periodontal disease severity are positively correlated.
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The total viable counts of bacteria in deep and shallow pockets and important bacteria species such as *Porphyromonas gingivalis* and *Aggregatibacter actinomycetemcomitans* decreased in number.
These results are in line with a meta-review published in 2015, which found that the majority of known research has failed to show that flossing effectively removes plaque. This failure may be related to technical issues or poor patient compliance. In fact, additional use of floss helps in plaque reduction compared to tooth brushing alone, even in young patients with intact papilla. The option of an appropriate interdental cleaning aid is also influenced by the ease of use, size of interdental space, acceptability, dexterity, and motivation of the individual.

INTRODUCTION

A healthy periodontium offers the support required to keep teeth functioning properly. Periodontal diseases are well-known to be brought on and spread by dental plaque(1). According to epidemiological research, tooth plaque accumulation and periodontal disease severity are positively correlated(2). The standard of defence against periodontal diseases has traditionally been twice-weekly professional mechanical tooth cleaning in addition to daily thorough mechanical plaque removal. In order to prevent plaque from forming, mechanical plaque control is a crucial strategy, not just for periodontal health(3). Maintaining the health of a thoroughly cleansed periodontal pocket is also crucial by preventing tooth plaque from growing and spreading into regions that have already had treatment.

Interproximal or interdental sites are where periodontal diseases are most usually found; these areas are also where plaque is most frequently found(4). Over time, it has become widely acknowledged that using interdental tools can effectively remove plaque from both the supra- and subgingival regions(5). If used properly, IDA are a useful supplement to brushing; otherwise, they may even cause trauma to the interdental area, resulting in needless damage to the interdental papilla. Plaque control must be optimised for both non-surgical and surgical periodontal therapy to be effective(5,6). This cannot be accomplished with brushing alone; hence, supplementary interdental cleaning tools are required. Additionally, the majority of these aids need a level of manual dexterity that is not even common among all members of any population(5–7).

Additionally, there is a misconception in the public about the difference between toothpicking and using them to remove plaque, which often lowers the effectiveness of IDA. For patients to effectively control plaque, the dentist's or oral hygienist recommendations are essential. In general, random OHI from unreliable sources, performed without consulting a specialist or having prior knowledge, will not yield satisfactory findings(8).

No previous data available about the role of professional IDA on the level of oral hygiene in chennai patients. Thus, this study was carried out to evaluate the impact of previous IDA given by dental professionals on the periodontal health status in patients suffering from periodontal disease.

MATERIALS AND METHODS

Carefully performed supragingival plaque control was shown to be capable of altering the quantity and composition of both supragingival and subgingival microbiota. The total viable counts of bacteria in deep and shallow pockets and important bacteria species such as *Porphyromonas gingivalis* and *Aggregatibacter actinomycetemcomitans* decreased in number .To aid in plaque control, various interdental cleaning aids are used. These include dental floss, interdental brushes, wooden interdental aids, and oral irrigators. A recent study by Marchesan et al. provides convincing data to support the use of interdental cleaning devices for promoting good oral health outcomes. The study found that interdental cleaning is associated with less periodontal disease, less coronal and interproximal caries, and fewer missing teeth; a higher frequency of interdental cleaning 4–7 times per week was also associated with less interproximal periodontal disease. These findings are in agreement with Crocombe et al., who found that regular interdental cleaning was associated with less plaque, calculus, and gingivitis.

DISCUSSION

There is some data in the literature that suggests using floss as a brushing supplement may not be very beneficial. According to a review by Berchier et al., there is no evidence to support routine flossing advice.Although they did identify a considerable effect in lowering gingivitis, the findings of a Cochrane analysis published in 2011 indicated "weak and very unreliable evidence" suggesting flossing as a supplement to brushing may be related with a minor reduction in plaque(9). These results are in line with a meta-review published in 2015(10), which found that the majority of known research has failed to show that flossing effectively removes plaque. This failure may be related to technical issues or poor patient compliance. In fact, additional use of floss helps in plaque reduction compared to tooth brushing alone, even in young patients with intact papilla(10,11).

CONCLUSION

Interdental cleaning aids play a vital role in optimizing gingival health and preventing oral disease(12). Based on the results of this review, interdental brushes provide a significant benefit over brushing as a monotherapy. The use of floss may not achieve similar results if not effectively performed(13). Regarding gingival and plaque indices, interdental brushes may be superior to dental floss in at least one parameter, with the added benefits of patient comfort and acceptance. They are especially indicated in periodontal patients, who are likely to have widened embrasures. Rubber Picks were shown to be comparable to interdental brushes for reducing gingivitis and plaque. The biphasic mode of action of oral irrigators may result in qualitative changes in subgingival plaque. They may, thus, reduce gingival inflammation, although overall plaque levels as measured supragingivally may appear unaffected. Wooden interdental aids appear to offer no significant reduction in plaque compared to brushing, although they may reduce gingival inflammation. Interdental brushes and oral irrigators are recommended over floss for implant maintenance. We provided an overview of different interdental cleaning aids and their effectiveness. However, there is no single cleaning aid that works best for all patients. The option of an appropriate interdental cleaning aid is also influenced by the ease of use, size of interdental space, acceptability, dexterity, and motivation of the individual.

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