Review Article

Neem in dentistry- a review

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ABSTRACT

Background: Since days neem has been utilized by Indian individuals for treatment of different ailments because of its therapeutic properties. **Objective**: The aim of the study to evaluate how the neem has a beneficial effect on dental diseases. **Methods**: Pubmed and Google Scholar were searched for relevant information regarding Neem and its uses. **Results**: Total 31 articles were selected for review which included information about the uses of Neem and its effects. **Conclusion**: It is an attempt to become familiar with the old Indian ways, which can be used to reduce most of the dental problems. It can be used better than the allopathic drugs as it doesn't contain any side effects.

Key words:- *neem, antifungal, candida, nimbidin, azadiractin*

Neem has been widely utilized in Ayurveda, Unani, and Homeopathic prescription and has become a marvel tree of present-day medicine [1]. Ayurveda incorporates treatments for the treatment of these Orofacial Diseases such as oral purging, extractions, extractions, and fold medical procedures. Ayurveda affirms on the utilization of homegrown brushes twice day by day to forestall ailments. The strategies comprise the utilization of twig/stick toward one side, bite on it, and eat it gradually.

Azadirachata Indica is the most acclaimed homegrown biting sticks [2]. In 2011 Anirban Chatterjee et al. [3] assessed the counter gum disease and hostile to plaque impact of an *Azadirachta Indica* [neem] mouth wash on plaque instigated gum disease and demonstrated that *Azadirachta Indica* mouth flush is as successful in lessening periodontal records as Chlorhexidine.

Amla functions admirably as a mouth wash. One to two grams for each day can be taken orally in containers for the drawn-out advantage to the teeth and gums, improving mending and improvement of connective tissue [4]. Customary utilization of Bilberry and Hawthorn Berry organic products balances out collagen and upgrade the gum tissue. It has been utilized customarily for the treatment of irritation, contamination, fever, skin infections, and dental issues. It is powerful in a few epidermal dysfunctions, for example, skin inflammation, psoriasis, skin inflammation.

Neem leaves have been detected to have antihyperglycemic, [5] immunomodulatory, [6] anti-inflammatory, [7] antimalarial, [8] antioxidant, [9] antiviral, [10] antimutagenic, [11] and anticarcinogenic properties. Neem likewise displays antibacterial, antifungal, [11] hepatoprotective, [12] anti-ulcer, [13] anti-fertility, and antinociceptive activity [14,15]. Neem twigs are utilized as an oral antiperspirant, toothache reliever, and for cleaning of teeth. Neem bark has antibacterial and antiperspirant movement. The phytochemical constituents present in neem are nimbidin, nimbin, nimbolide, azadirachtin, gallic corrosive, epicatechin, catechin, and margolone. The main aim of this article is to show how the traditional tree Neem is being used for dental problems.

Dental use

Antibiotic: Neem is a characteristic antibacterial specialist. Different logical investigations have uncovered their antibacterial activity [16]. The antimicrobial impacts of Neem have been accounted for against *S. mutans* and [17]. Ethanolic concentrate of Neem leaves and sticks and bark showed huge antibacterial activity [18,19]. Dried biting sticks of Neem demonstrated the greatest antibacterial movement against *S. mutans* contrasted with other dental caries-causing creatures, *S. salivarius, S. mitis,* and *S. sanguis* [20].

Antifungal activity: Ethanolic and fluid concentrate of Neem leaf demonstrated a huge anti-fungal impact against *C. Albicans* [21]. A clinical report exhibited the impacts of the leaf fluid concentrate from Neem on attachment, cell surface hydrophobicity furthermore, biofilm arrangement, which may influence the colonization by *C. albicans*. The outcomes propose that Neem leaves have a potential anti-adhesive impact on the organisms contemplated in vitro [22].

Anticaries agent: Chloroform concentrate of Neem leaf repressed *Streptococcus mutans* and *Streptococcus salivarius* and provides a guide for treating dental caries [23]. Antimicrobial movement of economically accessible Himalaya home-grown dental cream containing neem and fluoride-containing cheerio gel toothpaste has been surveyed in younger students. The examination announced both the toothpaste demonstrated a decent antimicrobial impact on caries creating salivary *Streptococcus mutans* [24]. The toothpaste containing Neem just as fluoridated toothpaste was similarly adequate against caries-producing microscopic organisms. $[CH_3]_2CO$ separate from the bark of Neem is bactericidal against *S. sobrinus* henceforth demonstrates its anti-cariogenic activity [25].

Plaque reducer: Watery concentrate of Neem stick and the gallotannin enriched extricate from *Melaphis chinensis* restrained insoluble glucan amalgamation also, brings about bacterial total. It lessens the capacity of *streptococci* to colonize tooth surfaces [26]. Neem oil shows noteworthy antibacterial movement and has been proposed for use in treating dental plaque [27].

Periodontal disease: Brushing with Neem toothpaste after each supper and utilizing a mouthwash with Neem remove is prescribed treatment for forestalling gum disease. In an examination, Neem-based mouth flush was given to patients for surveying anti-plaque and anti-gingivitis action. The discoveries reason that Neem mouth wash is as successful as chlorhexidine in lessening periodontal lists. Neem stick is seen as compelling as a toothbrush in lessening dental plaque and gingival inflammation [28]. Studies demonstrate that leaf concentrate of *A. indica*-based mouth wash is exceptionally adequate and it might be utilized as another option treatment in the treatment of periodontal disease [29].

Gingivitis has been forestalled or even turned around with standard utilization of Neem toothpaste and mouthwash. Additionally, Botelho et al. [30], in their investigations and preliminaries presumed that *Azadirachta indica* is exceptionally adequate in the treatment of periodontal malady, therefore, displaying its biocompatibility with human periodontal fibroblast.

Root canal irrigant: It causes potential debilitating of the tooth structure by diminishing the hardness and basic trustworthiness of the dentin inside the root waterway. To defeat this drawback home grown medications are utilized successfully to repress *E. faecalis* that cause root waterway disappointment in patients experiencing endodontic treatment. Fluid and ethanolic concentrate of Neem leaf restrains *S. mutans* furthermore, *E. faecalis* which cause root channel disappointment in endodontic technique. Its cancer prevention agent and antimicrobial properties make it a potential specialist for the root waterway water system as an option in contrast to sodium hypochlorite [31]. Literature proposed that the Neem leaf remove has critical antimicrobial impact against *E. faecalis* got from contaminated root channel tests. The removal was seen as strong contrasted and 2% sodium hypochlorite.

CONCLUSION

Customary brushing with Neem-containing toothpaste will decrease the amount of plaque, forestalls caries, and improves the invulnerable reaction for by and large oral wellbeing. Proper use of mouthwash containing Neem concentrate will reduce gingival tissues, and treats halitosis. In this cutting edge, in the vogue world, we have done what's needed harm to nature. It's about time that we begin evolving ways, to synchronize ourselves with nature, giving abundant space to one another. Here we are attempting to recover and become familiar with the old Indian ways, which can be used to reduce most of the dental problems. It can be used better than allopathic drugs as it doesn't contain any side effects.

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