

Efficacy of Oil Pulling Therapy

Dr. Seema Diwan¹, Dr. Abhishek Kandwal², Dr. S L Jethani³,
Vaibhav Gupta⁴

¹MDS, FCFO (Fellowship in Craniofacial Orthodontics) Associate Professor and Head, Department of Dental Sciences, Himalayan Institute of Medical Sciences

² MDS (Periodontics) Assistant Professor, Department of Dental Sciences, Himalayan Institute of Medical Sciences;

³Dean, Professor and Head of Department of Anatomy. Himalayan Institute of Medical Sciences;

⁴ Research Fellow, Cancer Research Institute, Himalayan Institute of Medical Sciences;

Abstract: We report a case report of 34 year old male who came with complaint of halitosis and loose tooth. Examination revealed poor oral hygiene with sub gingival calculus. Diagnosis of chronic generalized gingivitis with localized periodontitis was made. A strict oral hygiene protocol was developed for maintaining oral hygiene status and oil pulling therapy was started as an integral part of the therapy. We found a significant improvement in mobility of tooth due to bone regeneration and improved halitosis scores. From this case report, it is evident that oil pulling therapy as an adjunct to oral hygiene protocols efficient in treating periodontal diseases in future.

Key words: Halitosis, Oil pulling therapy, Periodontitis,

I. Introduction

Prevention is always better than cure. Hence, more population is inclining towards preventive measures for the treatment. Oil pulling therapy is one of the preventive methods which involve the use of pure oils as antibacterial agents for inhibiting harmful bacteria, fungus and other organisms of the mouth, teeth, gums and throat [1]. It has been mentioned in the Ayurvedic text Charaka Samhita (Sutrasthana 5, 78-80) where it is called Kavala Gandoosha/Kavala Graha [2]. Oil pulling therapy has been used extensively as a traditional Indian folk remedy for many years to prevent decay, oral malodor, bleeding gums, dryness of the throat, and for strengthening teeth, gums, and the jaw [3]. Concept of oil pulling therapy was first familiarized by Dr F. Karach in 1990 [4]. Although there has been many studies who have proved effect of oil pulling therapy in reducing plaque, gingivitis and periodontitis [5, 6, 7, 8,] but there is no literature or scientific proof to accept oil pulling as an adjunct therapy. The present case report clearly demonstrates soft and hard tissue regeneration by using oil pulling therapy as an adjunct to oral hygiene protocol.

II. Case Report

A 34-year-old male presented with the complaint of a loose lower back tooth and oral malodor in the department of dentistry. Patient gave a positive history of bleeding gums and halitosis since five years. Medical and family histories were non-contributory. A complete and comprehensive periodontal examination was initiated which revealed a poor oral hygiene with a score of 4.6 (3.5 + 1.16) for oral hygiene index (OHI Green and vermilion). Gingival status was recorded by Loe and Silness index which gave a score of 2.2, indicating severe gingival inflammation (**Table. 1**). There was generalized loss of stippling on attached gingiva and the marginal gingiva were round, bulbous, erythematous, fragile and bleeding on probing was present. Next periodontal probing was done and CAL (Clinical Attachment Level) scores were recorded (M B D L) scores were recorded at four sites on all teeth. On clinical examination, it was found that patient had deep periodontal pockets in tooth 36, 37, 46, 47 and angular bone defect. A diagnosis of chronic generalized gingivitis with localized periodontitis in respect to teeth no. 16, 18, 26, 36-38, 46-48, was made (**Fig. 1**). Halitosis was also assessed by two examiners and average was taken out for three visits. Score of 4 was given indicating strong malodor. Patient was not ready for any surgical intervention hence the required periodontal flap surgery was not initiated. Instead a strict oral hygiene protocol was developed for maintaining oral hygiene status and oil pulling therapy was started as an integral part of the same. Patient was explained the procedure of oil pulling therapy thoroughly. He was advised to use a tablespoon of sesame oil to be sipped, sucked and pulled between the teeth for 10-15 minutes empty stomach. Afterwards, the viscous oil was to be spat out. This was followed by tooth brushing and rinsing of the mouth with plain water. After recording all baseline data and taking OPG record, a deep through root planning and sub gingival scaling was done under local anesthesia and patient was instructed to start oil pulling therapy. Subgingival scaling was done one quadrant per week. After completing the supra and sub gingival scaling, patient was instructed to be on monthly recall for reinforcement of oral hygiene measure and evaluation

of treatment. Patient was guided for oral hygiene measures every month and a OPG was decided to be taken at 6th month recall. At same visit oral hygiene indices were repeated along with a comprehensive periodontal examination. There was significant improvement in oral hygiene score, gingival score and halitosis grade. On comparing OPG a clinically significant bone regeneration was observed which was correlated with improvement in mobility and CAL scores (Fig. 2), (Table. 1).



Fig. (1): OPG at baseline showing areas of localized periodontitis.

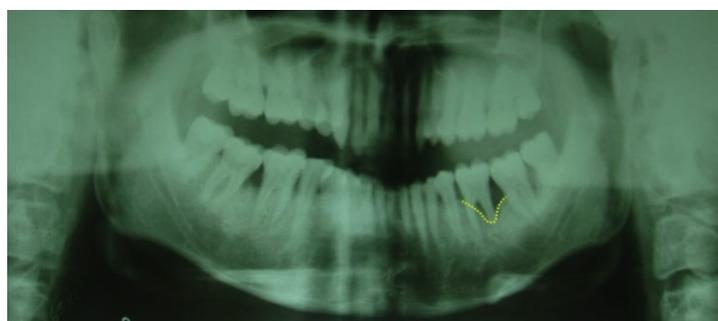


Fig. (2) OPG at 6th month recall depicting bone formation.

III. Mechanism Of Action

Sesame oil is a vegetable fat which reacts with salivary alkalis like bicarbonates causes saponification by acting as an emulsifying agent. This soapy layer prevents bacterial adhesion to tooth surface and coaggregation of bacteria layer in biofilm [9].

IV. Discussion

There are very few clinical trials evaluating the effect of oil pulling therapy on oral health. Amithet *al*, [8] reported significant improvement in plaque scores, while Sharath A *et.,al* [10] concluded its effectiveness in inhibiting microorganisms. Our case report also showed results consistent with the earlier mentioned authors. There was a significant improvement in plaque, gingival scores. Also, soft and hard tissue regeneration was observed in present case in terms of CAL improvement and radiographic evidence of bone formation. In routine clinics, we always use chlorhexidine as a gold standard for improving health of periodontal tissues. Because of staining and bitter taste of chlorhexidine, patient compliance is not very good always. But oils used in oil pulling therapy are non-staining, easily accessible even available in homes. Hence, making compliance much better. Therefore, we may conclude that oil pulling therapy along with oral hygiene protocol is effective in controlling periodontal diseases in both types of patients who are not willing for periodontal surgery or medically compromised patients.

Tooth no	Baseline			6 th month		
	CAL (M,B,D,L)	Mobility	Furcation grade	CAL (M,B,D,L)	Mobility	Furcation grade
16	6,6,5,5	1		5,4,5,5	0	
18	5,7,8,6	1		5,5,6,5	0	
26	6,7,5,5	1		5,6,5,5	1	
36	6,6,8,7	3	3	5,5,6,5	1	2b
37	6,5,8,8	2	2a	5,5,6,6	1	2a
38	5,4,3,3	1		4,4,3,3	1	
46	6,9,9,8	2	2b	5,6,6,5	1	2a
47	9,6,5,4	2	2a	6,6,5,5	1	2a
48	6,5,4,4	1		5,5,4,4	0	

Table (1): Baseline and 6th month data of CAL, Mobility and Furcation grades.

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