



ROLE OF HOMOEOPATHIC MEDICINES IN TREATMENT OF GINGIVITIS - AN EXPERIMENTAL STUDY

Homeopathy

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ABSTRACT

Back ground: Gingivitis means the inflammation of the gingiva. Microbial plaque is the primary aetiological agent for the enema of the periodontal disease however the host immune response plays a major role for the disease progression.

Objective: Role of Homoeopathic Medicines in treatment of gingivitis.

Methodology: An experimental study was carried out in Tanuja Dental Clinic, Andhra Pradesh, India. Thirty out patients with clinically confirmed symptomatic cases of gingivitis were entered trial and treated with Homoeopathic remedies on the basis of Homoeopathic principles.

Result: The overall response of the treatment with the help of seven Homoeopathic medicines. It was observed that 24(80%) fully relieved, 4 (13.33%) partially improved and 2 (6.67%) cases not improved out of thirty patients.

KEYWORDS

Homoeopathic Medicines, Gingivitis, outcome.

Introduction:

The gingiva is the part of the oral mucosa that covers the alveolar processes of the jaws and surrounds the necks of the teeth. The shallow crevice or space around the tooth bounded by the surface of the tooth on one side and the epithelium lining the free margin of the gingival. The depth of the gingival sulcus is or is an important diagnostic parameter under absolute normal or ideal conditions, the depth of the gingival sulcus is 0 mm or close to 0 mm.¹ These strict conditions of normalcy can be produced experimentally only in germfree animals or after intense, prolonged plaque control.^{2,3} An early definition of gingivitis simply stated that gingivitis was inflammation of the gingiva⁴ and gingivitis is inflammation of the gingiva in which the junctional epithelium remains attached to the tooth at its original level⁵.

Type of Gingivitis:

Gingivitis is two types that is Acute and Chronic Inflammation.

Acute Inflammation: A gingival abscess is a localized, painful, rapidly expanding lesion that is usually of sudden onset. It appears as a red swelling with a smooth, shiny surface within 24 to 48 hours.

Chronic Inflammation: A gingival enlargement originates as a slight ballooning of the interdental papilla and marginal gingival. It is complicated by acute infection or trauma.

Stages of Gingivitis:

Stage I Gingivitis: The initial Lesion: The first manifestations of gingival inflammation are vascular changes consisting essentially of dilation of capillaries and increased blood flow. These initial inflammatory changes occur in response to microbial activation of resident leukocytes and the subsequent stimulation of endothelial cells. Clinically, this initial response of the gingiva to bacterial plaque (subclinical gingivitis⁶) is not apparent.

Stage II Gingivitis: The Early Lesion: The early lesion evolves from the initial lesion with about one week after the beginning of plaque accumulation.^{7,8}

State III : The Established Lesion: It is evolves, characterized by a predominance of plasma cells and B lymphocytes and probably in conjunction with a pocket epithelium.⁹ Clinical findings are changes of colour, size and texture.

State IV Gingivitis: The Advanced Lesion: the lesion in to alveolar bone characterizes a fourth stage known as the advanced lesion¹⁰ or phase of periodontal breakdown.¹¹

Clinical features:

Gingivitis is of sudden onset and short duration and can be painful and bleeding. Recurrent gingivitis reappears after having been eliminated

by treatment or disappearing spontaneously. Chronic gingivitis is slow in onset and of long duration, and is painless, unless complicated by acute or subacute exacerbations. Chronic gingivitis is the type most commonly encountered. Chronic gingivitis is a fluctuating disease in which inflammation persists or resolves and normal areas become inflamed.^{12,13}

Etiologic factors are gingivitis that vitamin C and K deficiency, platelet disorders¹⁴, Multiple myeloma¹⁵ and postrubella purpura¹⁶. The effects of hormonal replacement therapy, oral contraceptives, pregnancy and the menstrual cycle are also reported to affect gingival bleeding¹⁷⁻²⁰ and endocrine changes²¹. The gingival coral pink colour becomes pale when vascularisation is reduced.²² The gingival enlargement do to inflammation.²³ Complication of gingivitis is periodontitis.²⁴

Treatment:

Gingivitis can cured with the help of homoeopathic medicines with permanent restoration of health. Homoeopathy is based up on Natural Law 'Similima Similibus Curanter' which means like cure like. Homoeopathy does not have any side effects. The present aim of this study was to treat gingivitis cases with the help of homoeopathic medicines, because they not only cure the present complaints but also prevents further complications. Homoeopathic medicines have anti-inflammatory action and without any adverse effects.

2. MATERIALS AND METHODOLOGY

This study was conducted on the patients who attended to the Tanuja Dental Hospital, Andhra Pradesh, India and the study was undertaken for a period of six months. Detailed case history was taken, analysis and evaluation following Homoeopathic principles was done.²⁵ The potency was selected on the basis of individual susceptibility.

The outcomes were an improvement of symptoms recorded in monthly basis individual symptoms which includes any appropriate measures of pain, swelling and bleeding. The following 7 Homoeopathic Medicines are selected for the study with its indications.^{26,27}

Exclusion Criteria:

- Presence of systemic disease using drugs affecting periodontal disease
- Antibiotic therapy for periodontitis or gingivitis during the last 6 months,
- Pregnancy,
- Alcoholic
- Smoking
- Use of orthodontic appliances
- Continuous use of mouth rinses containing chemical agents in the previous 4 months and any history of allergies to herbal medicines.

Inclusion Criteria:

- Both sexes aged between 20 to 70 years, Cases of gingivitis were included in the study.

- All subjects were given verbal and written information concerning the study and after entering the study, signed a written consent form regarding all information received (English).

Method:

30 patients with established gingivitis were included in this experimental study. These 30 cases selected as per the inclusion criteria using sampling Techniques. Taken Local Ethical Committee Permission (because Homoeopathic medicines are safe and without side effects up on the human beings) and Diagnose made according to Dental clinical History with necessary investigations. The Homeopathic Medicines are prescribed to all cases and followed for a period of 6 moths. The data were presented according to Standardized Case Record.

Data collection:

This study was conducted over six month duration. Clinical follow up was performed at the end of first month, three month and six month after initial use of Homoeopathic Medicines. Throughout the study all measurements, instrumentations and clinical data was collected by investigator. Homoeopathic medicines are prescribed on base of totality of symptoms only.

Statistical Analysis:

Data was presented according to sex, age and present complaints (percentage). Collection data was analyzed by using T test. Also used test in Homoeopathic medicines Distribution of cases according used by number of patients.

Result:

Among thirty gingivitis patients with mean ± SD, maximum cases were observed in sex group 15 (50%) are females and 15 (50%). Out of thirty patients are occupation group House wife 4 cases (13.33%), student 18 (60.00%) and service 8 (26.66%).

Table 1: Distribution of Cases according to sex

Sex	No. of Patients	Percentage (%)
Male	15	50
Female	15	50
Total	30	100

Result of age group cases between 60-70 years were 1(3.3%) 50 – 60 years were 2 (6.67 %), cases age group 40 – 50 years are 8 (26.67 %), cases between age group 30 – 40 years are 14 (46.66 %),cases between age group 20-30 years are 5 (16.66%).

Table 2: Distribution of cases according to age group of patients

Age group in years	No. of patients	Percentage (%)
20 – 30	5	16.66
30 – 40	14	46.66
40 – 50	8	26.67
50 – 60	2	6.67
60-70	1	3.33
Total	30	100

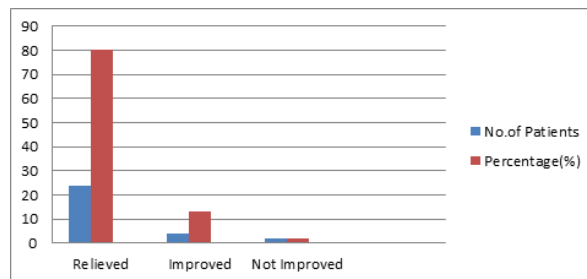
In the research of Homoeopathic medicines in the treatment of gingivitis 7 Homoeopathic medicines were prescribed to the patients according to the symptoms similarity and the following observations were made. Arnica Montana is the most effective medicine out of the total Seven Homoeopathic medicines chosen for the study. Arnica Montana cured 12 (40%) cases, Calcarea Flourica 3 (10%) cases, Mercurius Solubilis 5 (16.67%) cases, Hepar Sulphuris 2 (6.67%) cases, Belladonna 3 (10%) cases, Phosphorus 4 (13.33%) cases, Hypericum 1 (3.33%) case cured with Homoeopathic Medicines.

Table 3: to medicines Distribution of cases according used by no. of patients

S. No	Name of Medicines	No. of patients	Percentage (%)
1	Arnica Montana	13	43.33
2	Calcarea Flourica	3	10.00
3	Mercurius Solubilis	4	13.33
4	Hepar Sulphuris	3	10.00
5	Belladonna	3	10.00
6	Phosphorus	2	6.66
7	Hypericum	2	6.66

The overall response of the treatment with the help of Seven Homoeopathic medicines. It was observed that out of 30 patients, fully relieved 24 (80%) cases, partially Improved 4 (13.33%) cases and not improved 2(6.67%) cases

Figure 1: Distribution of cases according to patient's treatment



Discussion:

Thirty patients with established gingivitis were included in this experimental study. These 30 cases selected as per the inclusion criteria using sampling Techniques. Diagnose made according to Dental clinical History with necessary investigations. The Homeopathic Medicines are prescribed to all cases and followed for a period of 6 moths. The data were presented according to Standardized Case Record. This study was conducted over six month duration. Clinical follow up was performed at the end of first month, three month and six month after initial use of Homoeopathic Medicines. Throughout the study all measurements, instrumentations and clinical data was collected by investigator. Homoeopathic medicines are prescribed on base of totality of symptoms only.

The study was conducted on the patients who attended the Out Patient department at Tanuja Dental Clinic, Andhra Pradesh, India. Among thirty gingivitis patients with mean ± SD, maximum cases were observed in sex group 15 (50%) are females and 15 (50%). Out of thirty patients are occupation group House wife 4 cases (13.33%), student 18 (60.00%) and service 8 (26.66%). The patient's age 20 – 70 years were selected for the study. Result of age group cases between 60-70 years were 1(3.3%) 50 – 60 years were 2 (6.67 %), cases age group 40 – 50 years are 8 (26.67 %), cases between age group 30 – 40 years are 14 (46.66 %), cases between age group 20-30 years are 5 (16.66%). Both sexes were included and who belong to different socio economic group was taken as per criteria. A total of 30 cases were selected. Minimum duration of study was six months.

The statistical analysis made here is based on the data obtained from thirty cases. This study was conducted to prove the efficiency of the treatment for successful management of gingivitis and arrive at a constitutional Homoeopathic remedies frequently indicated in such as a condition. In the research of Homoeopathic medicines in the treatment of gingivitis 7 Homoeopathic medicines were prescribed to the patients according to the symptoms similarity and the following observations were made. Arnica Montana²⁸⁻³¹ is the most effective medicine out of the total Seven Homoeopathic medicines chosen for the study. Arnica Montana cured 13 (43.33%) cases, Calcarea Flourica 3 (10%) cases, Mercurius Solubilis 4 (13.33%) cases, Hepar Sulphuris 3 (10%) cases,³² Belladonna 3 (10%) cases,^{33,34} Phosphorus 2 (6.66%) cases, Hypericum 2 (6.66%) cases cured with Homoeopathic Medicines. Each and every Homoeopathic medicine is prescribed on the base of totality of symptoms. Individual patient follow up was taken every first month, three months and six month with systematic case taking according to Homoeopathic case taking and also did each care reperteriozation. The overall response of the treatment with the help of Seven Homoeopathic medicines, it was observed that out of 30 patients, fully relieved 24 (80%) cases, partially Improved 4 (13.33%) cases and not improved 2(6.67%) cases.

From the analysis of the results obtained it is obvious that the constitutional Homoeopathic drugs are very effective in the treatment of gingivitis.

Conclusion:

The research shows that Homoeopathic medicine plays an important role in the treatment of gingivitis in all age group. The study depicts that 80% of patients got relief from the Homoeopathy medicines and this is not a small number. The most effective remedies during the study are

Arnica Montana cured 13 (43.33%) cases, Calcarea Flourica 3 (10%) cases, Mercurius Solubilis 4 (13.33%) cases, Hepar Sulphuris 3 (10%) cases, Belladonna 3 (10%) cases, Phosphorus 2 (6.66%) cases, Hypericum 2 (6.66%) cases cured with Homoeopathic Medicines. There were no side effective during the treatment and it can be concluded that homoeopathic medicines can be help the patient to take a new lease on life.

During the study it was observed that in almost all the cases the homoeopathic medicines responded well and the patient not only got rid of the main complaints of gingivitis but also got vital energy .With the help of homoeopathic medicines even surgical intervention was avoided. Thus we can conclude that Homoeopathic medicines used with holistic approach are very effective in treating the cases of gingivitis.

References:

- Gottlieb B, Orban B: Active and passive eruption of the teeth. *J Dent Res* 1933; 13:214.
- Attstrom RM, Graf de Beer M, Schroeder HE: Clinical and histologic characteristics of normal gingiva in dogs. *J Periodont Res* 1975; 10:115.
- Caffesse RG, Kornman KS, Nasjleti CE: The effect of intensive antibacterial therapy on the sulcular environment in monkeys. II. Inflammation, mitotic activity and keratinisation of the sulcular epithelium. *J Periodontol* 1980; 5:155.
- Lyons H, Kerr DM, Hine MK: Report from the 1949 Nomenclature Committee of the American Academy of Periodontology. *J Periodontol* 1950; 21:40.
- Friedman LM, Furberg CD, DeMets DL: *Fundamentals of Clinical Trials*, ed 3. St Louis, Mosby, 1996.
- Lindhe J, Schroeder HE, Page RC, et al: Clinical and stereologic analysis of the course of early gingivitis in dogs. *J Periodont Res* 1974; 9:314.
- Page RC: The role of inflammatory mediators in the pathogenesis of periodontal disease. *J Periodont Res* 1991; 26:230.
- Payne WA, Page RC, Ogilvie AL, et al: Histopathologic features of the initial and early stages of experimental gingivitis in man. *J Periodont Res* 1975; 10:51.
- Schroeder HE, Graf de Beer M, Attström R: Initial gingivitis in dogs. *J Periodont Res* 1975; 10:128.
- Page RC, Ammons WF, Simpson DM: Host tissue response in chronic inflammatory periodontal disease. IV. The periodontal and dental status of a group of aged great apes. *J Periodontol* 1975; 46:144.
- Lindhe J, Schroeder HE, Page RC, et al: Clinical and stereologic analysis of the course of early gingivitis in dogs. *J Periodont Res* 1974; 9:314.
- Hoover DR, Lefkowitz W: Fluctuation in marginal gingivitis. *J Periodontol* 1965; 36:310.
- Larato D, Stahl SS, Brown R Jr, et al: The effect of a prescribed method of toothbrushing on the fluctuation of marginal gingivitis. *J Periodontol* 1969; 40:142.
- Greenstein PG, Caton JG, Polson AM: Histologic characteristics associated with bleeding after probing and ritual signs of inflammation. *J Periodontol* 1981; 52:420.
- Bennett JH, Shankar S: Gingival bleeding as the presenting feature of multiple myeloma. *Br Dent J* 1984; 157:101.
- Hoover DR, Lefkowitz W: Fluctuation in marginal gingivitis. *J Periodontol* 1965; 36:310.
- Machte EE, Mahler D, Sanduri H, et al: The effect of menstrual cycle on periodontal health. *J Periodontol* 75:408,2004.
- Reinhardt RA, Payne JB, Maze CA, et al: Influence of estrogen and osteopenia/osteoporosis on clinical periodontitis in postmenopausal women. *J Periodontol* 70:823, 1999.
- Tilakarantne A, Soory M, Ranasinghe AW, et al: Effects of hormonal contraceptives on the periodontium, in a population of rural sri lankan women. *J Clin Periodontol* 27:753, 2000.
- Tilakarantne A, Soory M, Ranasinghe AW, et al: Periodontal disease status during pregnancy and 3 months post partum, in a rural population of sri lankan women. *J Clin Periodontol* 27:787, 2000.
- Tatakis DN, Trombelli L: Modulation of clinical expression of plaque induced gingivitis. I. Background review and rationale. *J Clin Periodontol* 31:229, 2004.
- Dummett CO: oral tissue color changes. *Ala J Med Sci* 16:274, 1979.
- Femin A, Carranza and Eva L. Hogan: Carranza clinical Periodontology, Gingival Enlargement, 23:373, 2002.
- Femin A, Carranza and Eva L. Hogan: Carranza clinical Periodontology, Chronic Periodontitis, 31:494, 2002.
- Hahnemann Dr. S.C.F. The Chronic Disease and their Peculiar Nature and their Homoeopathic Cure, B Jain Publisher (P) Ltd., New Delhi, (2002).
- Boericke W, Pocket Manual of Homoeopathic Materia Medica, 9th ed. B Jain Pub.
- Allen's, Allen's Key Notes and characteristics with comparisons of some of the leading remedies of the Materia Medica with Nosodes, 6th ed. B Jain Publishers Pvt. Ltd.
- Mansoor Ahmad, Farah Saeed, Mehjabeen, Noor Jahan. Neuro-Pharmacological and Analgesic Effects Of Arnica Montana Extract. *Int. J Phar Sci.* 2013; 5(4):590-593.
- Tommaso Iannitti, Julio Cesar Morales-Medina, Paolo Bellavite, MD, Valentina Rottigni, MSC, Beniamino Palmieri. Effectiveness and Safety of Arnica montana in Post-Surgical Setting, Pain and Inflammation. *Ame J Ther.* 2014; 10:1-17.
- Koo, H.; Gomes, B.P.; Rosalen, P.L.; Ambrosano, G.M.; Park, Y.K.; Cury, J.A. In vitro antimicrobial activity of propolis and Arnica montana against oral pathogens. *Arch Oral Biol.* 2000, 45, 41-48.
- Bhushan S Kala, Chauhan Gunjan, Nagpal Disha, Prakash Shobha. Treatment of Periodontal Disease - A Herbal Approach. *Int J Phar.* 2015; 33(2):126-136.
- S Farrer, ES Baitson, L Gedah, C Norman, P Darby, RT Mathie. Homeopathic prescribing for chronic and acute periodontal conditions in 3 dental practices in the UK. *Faculty of Homoeo.* 2013; 102:242-247.
- Bertha OH. Atropa Belladonna. *J Ph Sci.* 1915; 4(2):234-238.
- John Uri Lloyd, Joseph Stephen Niederkorn .A. A Treatise on Belladonna, Lloyd Bros Publisher. 1983:1-16.