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HOMOEOPATHIC KEYNOTE PRESCRIPTION IN CHRONIC GINGIVITIS: A CASE REPORT

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ABSTRACT

Gingivitis is inflammation of the gingiva most commonly due to a bacterial infection with the attachment of the connective tissue to the tooth without attachment loss. Inadequate oral hygiene leads to bacterial plaque accumulation which, if not removed, triggers an acute inflammatory response. Mostly, gingivitis may be unnoticed, If symptomatic, the patient may give a history of bleeding, swelling, flossing, and bad breath. Case Summary: A 42-year-old female presented with swelling and bleeding gums for 4-5 years (on and off), a complete case history was taken and repertorization was done. Based on the pathological totality of symptoms *Mercurius Solubilis* in 30 potency was selected and a single dose was given. The case was followed by *Carbo Vegetabilis* in 30 potency. The case was closely followed for 5 to 6 months, which shows the effectiveness of *Carbo Vegetabilis* in the case of gingivitis.

KEYWORDS: Homoeopathy, Keynote approach, Gingivitis, *Carbo Vegetabilis.*

INTRODUCTION

Gingivitis (Gingiva: gums & -itis: inflammation) is inflammation of the gingival complex, the collagenous extension of the oral mucosa that surrounds and secures the teeth. The

complex consists of the gingival margin (the visible edge of the gingiva); the gingival sulcus (or crevice); the free gingiva (the mobile edge of the gingiva that lies above the alveolar crest) and the attached gingiva, which is bound to the underlying bone and cementum by collagen fibres.[1] Inflammation of the gingiva is most commonly due to a bacterial infection with the attachment of the connective tissue to the tooth without attachment loss.[2][3]

Etiology

Based on etiology, gingivitis can be classified into five types

1. Plaque-Induced Gingivitis- This is the most common cause of gingivitis. Due to poor oral hygiene, a thin film of plaque is formed on the tooth surface. As plaque contains a large number of bacteria, inflammation can occur in the gingival tissue.[3]
2. Infectious Gingivitis- This occurs due to the presence of any other infection in the oral cavity, such as dental caries. A hypersensitive reaction to an allergen can trigger the infiltration of plasma cells in the gingiva and cause plasma cell gingivitis. The allergens can be chewing gum, certain components of toothpaste, mint, etc.[3]
3. Nutritional Gingivitis- This may occur due to a deficiency of vitamin C. Intake of an increased amount of refined carbohydrates and an increased ratio of omega-6 to omega-3 fatty acids can promote the inflammatory process.[3][4]
4. Hormonal Gingivitis- This occurs during pregnancy, puberty, or steroid therapy. It has been documented that in pregnancy, there is an increase in the level of circulating female sex hormones that are responsible for causing pregnancy gingivitis. In puberty, gingival inflammation occurs even without the presence of plaque which is referred to as puberty gingivitis.[3][5][6]
5. Drug-Induced Gingivitis- Various drugs used for systemic conditions can cause gingivitis as a side effect such as phenytoin (used for epileptic seizures), calcium channel blockers (used for angina, high blood pressure), anticoagulants, and fibrinolytic agents, oral contraceptive agents, vitamin A, etc.[3][7]

Some other risks and exciting factors that contribute to the development of gingivitis that is smoking and tobacco chewing, systemic conditions, genetic factors, and local conditions such as dry mouth and crowded teeth.[3]

Epidemiology[3][8]

Gingivitis is the most common periodontal disease that is found to be more prevalent in Males as compared to females as it has been found that females tend to follow better oral care regimes and thus maintain oral hygiene.

Low socioeconomic status- As people with high socioeconomic status tend to show a more positive attitude towards the maintenance of oral hygiene and also, they have better access to health care options.

Pregnant women as compared to non-pregnant women.

Pathophysiology

Inadequate oral hygiene leads to bacterial plaque accumulation which, if not removed, triggers an acute inflammatory response within less than a week.[1][3]

This is the initial stage of gingivitis characterized by an increase in gingival crevicular fluid and the number of neutrophils. The collagen fibres start destroying along with the deposition of fibrin. At one week, gingivitis proceeds to an early stage with the transition from neutrophilic to lymphocytic infiltration predominantly. Further progression into the chronic stage leads to an established lesion with predominantly plasma cells and B lymphocytes. As it progresses, pocket formation occurs, resulting in the separation of gingiva from the tooth. The persistent inflammation leads to the breakdown of the periodontal ligament and resorption of the adjacent alveolar bone, which may ultimately result in tooth loss.[3]

Grading[3]

Mostly, gingivitis may be unnoticed by the patient as the disease may exist and progress without any symptoms. If symptomatic, the patient may give a history of bleeding from the gingiva while brushing, flossing, and sometimes eating particularly hard food (apples) along with bad breath that does not resolve even after brushing. The Gingival swelling can be graded into four types:

Grade 0: No signs of gingival swelling

Grade I: Swelling that is confined to the interdental papilla region

Grade II: Swelling involving both the interdental papilla and the marginal gingiva

Grade III: Swelling that covers three-fourths or more of the crown structure.

Staging[3][9]

The condition of gingivitis undergoes four different stages before progressing to periodontitis if not treated. The different stages of gingivitis were first explained by Page and Schroeder in 1976.

1. **Initial lesion:** Characterized by the response of resident leukocytes and endothelial cells to the plaque. This stage is devoid of any clinical signs of inflammation.
2. **Early lesion:** In this stage, the clinical signs of gingivitis, such as redness and bleeding from the gingival start appearing and increase in the gingival crevicular fluid. An increase in the number of neutrophils can be seen.
3. **Established lesion:** This stage is marked by a shift from an innate immune response to an acquired immune response. There is increased collagenolytic activity in this stage along with an increase in the number of macrophages, plasma cells, and T and B lymphocytes. Clinically, changes in the colour and contour of the gingival can easily be seen along with gingival bleeding.
4. **Advanced lesion:** This stage is a transition to periodontitis which is characterized by irreversible attachment loss. The inflammatory changes and the bacterial infection start affecting the supporting tissues of the teeth and the surrounding structures resulting in their destruction and, eventually, tooth loss.

CASE REPORT

A 42-year female presented at OPD at Dr. M.P.K Homoeopathic Medical College, Hospital and Research Centre, Station Road, Sindhi Camp, Jaipur, OPD No.7484 on 21/4/2023 with the following complaints:

Duration- 4-5 years

Location- Gingiva

Sensation and Complain- Swelling; Bleeding during brushing; Unable to close mouth and difficulty in chewing. Pain is moderate.

Modalities– Aggravation: Cold water, sour things, spicy food, after eating food especially in the evening, speaking.

Amelioration: Hot water, milk, buttermilk, curd.

Physical generals

Thermal reaction: Hot.

Aversion: Sweets

Aggravation: Sour things

Perspiration: Scanty

Menstrual history: LMP-3/4/23,1-2 days/27-28 days, Scanty, short duration for 1-2 days, clotted, blackish- reddish.

Mental generals

- Weeping disposition^{+}
- Emotionally sensitive^{+}
- Shy in nature
- Consolation amelioration^{+}
- Feels better after talking to someone esp. with her daughter and husband.
- Anger- becomes silent, then weeps out.
- Restlessness
- Brooding

Sexual history: Married for 25 years, sexual desire present, frequency 2-3times a week

Obstetric history: $G_2P_2A_0L_2$, Vaginal delivery, last delivery 22 yrs back

General examination

1. Pallor: Present
2. Tongue: Clean, moist

Analysis of case

Mental generals	Physical generals	Particular general
• Weeping disposition^{+}, • Emotionally sensitive+ • Shy in nature • consolation amelioration+ • Feel better after talking to someone esp. with her daughter and husband. • Anger- becomes silent, then cries. • Restlessness • Brooding	• Thermal Reaction: Hot • Aversion: Sweets • Aggravation: sour things • Perspiration: Scanty • Menses: Scanty, short duration, clotted, blackish-reddish.	• Gingiva swelling; bleeding during brushing; unable to close mouth & difficulty in chewing. • Aggravation: cold water, sour things, spicy food, after eating food especially in the evening, speaking. • Amelioration: hot water, milk, buttermilk, curd.

Evaluation of case

- Weeping disposition^{+}
- Emotionally sensitive^{+}
- Shy in nature
- Consolation amelioration^{+}
- Feels better after talking to someone esp. with her daughter and husband.
- Anger- becomes silent, then weeps out
- Restlessness
- Brooding
- Thermal Reaction: Hot
- Aversion: Sweets
- Aggravation: sour things
- Perspiration: Scanty
- Menses: Scanty, short duration, clotted, blackish-reddish.
- Gingiva swelling; bleeding during brushing; unable to close mouth and difficulty in chewing. Pain is moderate. Aggravation: cold water, sour things, spicy food, after eating food especially in the evening, speaking. Amelioration: hot water, milk, buttermilk, curd.

Totality of symptoms

- Weeping disposition^{+}
- Consolation amelioration^{+}
- Anger- becomes silent, then weeps out
- Restlessness
- Thermal reaction: hot
- Aversion: sweets
- Aggravation: sour things
- Menses: scanty, short duration, clotted, blackish-reddish.
- Gingiva swelling; bleeding during brushing; unable to close mouth and difficulty in chewing. Pain is moderate. Aggravation: cold water, sour things, spicy food, after eating food especially in the evening, speaking. Amelioration: hot water, milk, buttermilk, curd.

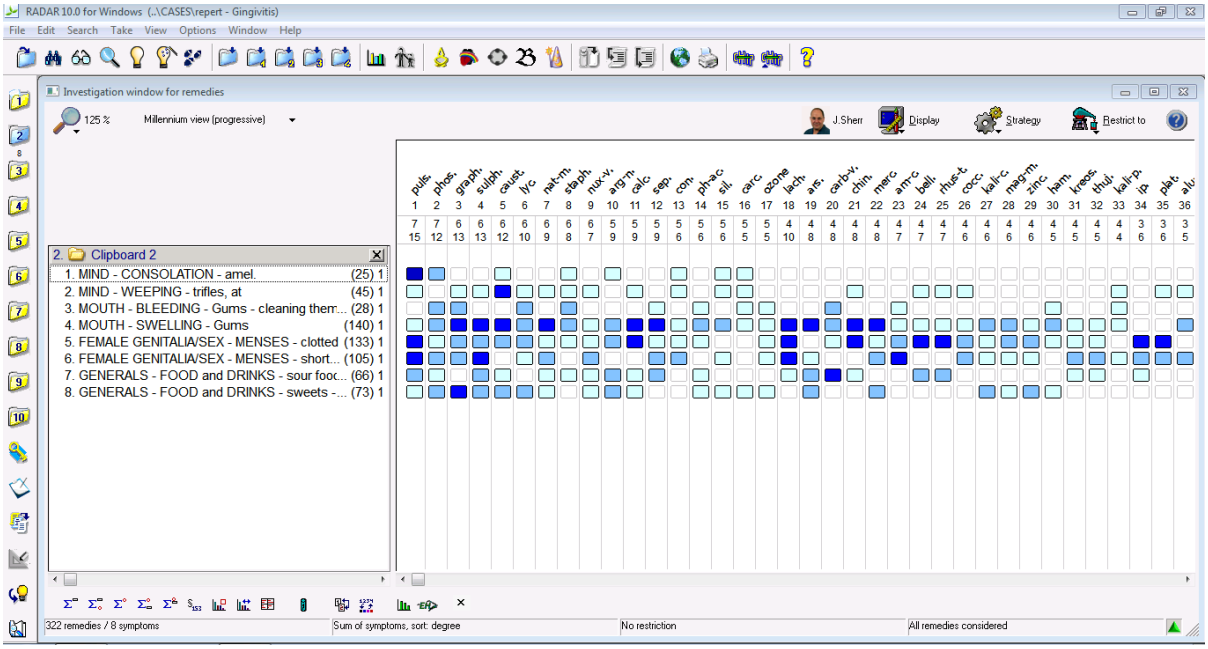

Fig. 1: Repertorization sheet.

Prescription with justification

- The first prescription was on 14/04/23 *Mercurius Solubilis* 30/1Dose/HS &Phytum 30/TDS for 7 days. (Justification of remedy selection: According to the presenting totality and based on symptoms given in W. Boericke Materia Medica- Gums spongy, recede, bleed easily. Sore pain on touch and from chewing).[10]
- The next prescription was *Carbo vegetabilis* 30/TDS. (Justification of remedy selection: Acc. to W. Boericke gums retracted and bleed easily, blood oozing from gums when cleaning teeth.)[10]

Follow-ups

Date	Follow-ups	Prescriptions
28/04/23	SQ is in Pain & swelling in her gums, also unable to close mouth <night, morning, >warm water Bleeding gums during brushing	Nihilium 200/1 Dose/stat Carbo Veg 30/TDS* 7 days
05/05/23	Slight Better in swelling gums and pain.	Phytum 200/1Dose/stat Carbo Veg 30/TDS* 21 days
26/05/23	10% better in swelling and bleeding in gums pain in gums- SQ	Phytum 200/1Dose/stat Carbo Veg 30/TDS* 21 days
23/06/23	Swelling increased SQ in pain in gums No bleeding	Rubrum 1M/1Dose/stat Carbo Veg 30/TDS* 7 days
30/06/23	Swelling, pain & bleeding- absent Redness present from 2-3 days	Phytum 1M/1 Dose/stat Carbo Veg 30/TDS* 7 days
07/07/23	Better^{+}	Nihilium200/1Dose/stat

	Swelling, pain & bleeding- absent Redness present	Carbo Veg 30/TDS* 7 days
14/07/23	Better^{2+} Swelling, pain & bleeding- absent Redness present	Nihilium200/1Dose/stat Carbo Veg 30/TDS* 7 days
21/07/23	Better^{3+} Swelling, pain & bleeding- absent Redness decreased	Nihilium200/1Dose/stat Carbo Veg 30/TDS* 15 days
11/08/23	Better but slight pain from 2 days. Swelling, pain & bleeding- absent Redness absent	Phytum 30/1 Dose/stat Carbo Veg 30/TDS*15 days
1/09/23	Better^{3+} Swelling, pain & bleeding- absent Redness-absent	Phytum 30/1 Dose/stat Carbo Veg 30/TDS*15 days Calendula Q: for gargles

CONCLUSION

Homoeopathy is a specialized system of medicine that treats the patient as a whole and not just the disease. In this case, the patient improved symptomatically gradually after the prescription of *Carbo Vegetabilis*. This case shows the effective role of Homoeopathy in the treatment of Gingivitis. This case reflects the role of Keynote approach in the improvement of the patient's presenting complaints by improving her quality of life than before. Now the patient is happy as she got rid of her complaints.

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