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Effect Of Priyangvadi CHOORNA Lepa in SHEETADA - A Case Report

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ABSTRACT
Mukha is considered as one of the most important part of Urdhwajatru because it works as the reflection of the body health by acting as the gateway of alimentary canal. According to Ayurvedic perspective of diseases related to oral cavity, Acharyas have explained Nidana, Samprapti, Lakshana, Chikitsa of all the Avayava of Mukha in detail. According to Sushrutha, Sheethada is one of Dantamoolagata (Periodontal) disorder under the classification of Mukha roga (Oral diseases). It is a **Kapha Rakta** pradoshaja vyaadhi. It can be correlated to Gingivitis in contemporary science based on its signs and symptoms.

Need for the study: The prevalence of gingivitis is 80-90% in our country. Gingivitis is a non-destructive periodontal disease, when it is untreated, it progress to periodontitis, which is a destructive form of gum disorder , it involves the deeper structures of the periodontium. Hence prevention and control of gingivitis at the earliest is essential in every case.

Aims & Objectives- To evaluate the effect of Priyangvadi Choorna Lepa in Sheetada.

Materials and Methods: Patient is treated with Priyanguvadi Choorna Lepa. Rakthasrawa (Bleeding gums), Krishnatha (Discoloration), Shotha (Edema), Mukha daurgandhya (halitosis), Mrudutha (Spongy gums), Prakledatha (Moistness) are considered as subjective criteria and as objective criteria assessment of Gingival Index & Gingival bleeding index are studied before and after treatment.

Observation & Conclusion-The subject had significant reduction in Akasmath Rakthasrava, Krishnatha, Shotha, Mukha Daurgandhya, Mrudutha, Gingival index & Gingival bleeding index.

Keywords- Sheetada; Gingivitis; Periodontium; Priyangvadi choorna.

INTRODUCTION

The Mukha i.e. Oral cavity, works as reflector of the body health by acting as gateway of the alimentary canal and in that way it is considered to be one of the most important part of the Urdhwa – jatru[(1)] . In Sutra Sthana, Charaka and Sushruta have given guidelines for daily care of oral cavity under the heading 'Dinacharya' [(2)]. Negligence of oral care give rise to different oral diseases. In Nidāna Sthāna, Suśruta has described the Mukharogas (diseases affecting the oral cavity) & classified the disease of Mukha, according to the seven sub sites .ie. Oshta, Danta, Dantamula, Jihwa, Taalu, Kantha and Sarvasara. One group of the Mukha Roga, known as'Dantamulagata Roga', is responsible for tooth loss by altering the border and position of Dantamula(gums). According to Sushrutha, Sheethada is one of Dantamoolagata (Periodontal) disorder under the classification of Mukha roga (Oral diseases)[(3)]. Gingivitis is known as inflammation of gums usually caused by bacterial infection. It can become a more serious infection known as Periodontitis. The prevalence of gingivitis is 80-90% in our country[(4)].According to American Dental Association gingivitis and periodontitis are major cause of tooth loss in adults [(5)] . Gingiva attaches to the teeth at a lower point than the gum edges that we see. This forms a small space called as sulcus. Food and plaque (bio-film) can get trapped in this space and cause a gum infection or it may leads to gingivitis on chronic accumulation of food or plaque.

Plaque is a thin film of bacteria which is continuously formed on the surface of teeth , as plaque advances it hardens and gets converted into tartar, when plaque extends below cervical line it leads to bacterial infections like Gingivitis, Gingivitis is reversible. With successful treatment and good oral hygiene, gingival harmony can be restored. In modern dentistry basic line of treatment includes scaling, mouth wash & mouth gel. In this case Priyangvadi Choorna Lepa[(6)] is given to apply on gingival surface.

MATERIALS AND METHODS

A case of signs and symptoms of Sheetada came to our OPD. Detail history of the patient is taken, examined thoroughly and given Lepa with Priyangvadi Choorna for 21 days. Assessment is done before and after the course of treatment.

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CASE REPORT
A 20 year old female, named XYZ, from middle class family came with complaints of Bleeding gums, Bad breath and mild blackish discolouration of gums since one month and the symptoms aggravated from the past 2 weeks.
On examination - Bleeding on probing the gingiva, Yellowish stains on teeth surface, Moderate Gingival swelling and Halitosis was also present.
HISTORY OF PAST ILLNESS-Nothing significant.
TREATMENT HISTORY- Patient used mouth washes (? details), but didn't get any kind of relief.
FAMILY HISTORY- None of the other family members had similar complaints.

PERSONAL HISTORY
Diet – Vegetarian
Appetite – Good
Micturition – 4-5 times a day; Regular
Bowel – Regular
Sleep – Sound
Habits – Nil
Menstrual History –NAD

ASSESSMENT CRITERIA
The signs & symptoms of Sheetada are assessed based on gradings[(7)](Table no 1)
- Akasmath Rakthasrava
- Shotha
- Krishnata
- Mukhadaurgandhya
- Vedana
- Dantamamsa Mriduta
- Dantamamsa Prakledata

ASSESSMENT OF SUBJECTIVE PARAMETERS
Above mentioned symptoms are assessed on-
0th day (Before treatment),
07^{th} day, 14^{th} day & 22^{nd} day (After treatment).
Follow-up on 42^{nd} day .

OBJECTIVE PARAMETERS:
Gingival Index (GI-S) [(8)] (Table 2)
Gingival bleeding index (GBI-S) [(9)] (Table 3)

TREATMENT
Ultrasonic scaling on 0^{th} day
Priyangvadi Choorna lepa for twice daily for 21days
Adverse Reaction- No adverse reactions found during the course of treatment.
LEPA PREPARATION- Priyangu, Mustha, Amalaki, Haritaki & Bibhitaki are taken in equal quantity and converted to fine powder form (Choorna) in JSS Ayur Pharma, Mysuru(GMP Certified) under asceptic conditions and stored in air tight container.
LEPA PROCEDURE - Patient is advised to sit in upright posture. Quantity sufficient Priyangvadi Choorna is mixed with plain water to make the Choorna in paste form. This paste is taken on index finger and applied all over the gingiva in Lepa form. The lepa is retained till the oral cavity is filled with saliva then washed with water.

RESULT
Observations seen on 0th day, 07^{th} day, 14^{th} day, 22^{nd} day and 42^{nd} day are recorded in Table- 4 (A&B)
Lepa is given for 21 days and significant reduction of symptoms was observed after 1 week, Symptoms like bleeding gums, inflammation and pain got resolved completely after 21 days of treatment.

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Figure 1 (before treatment)

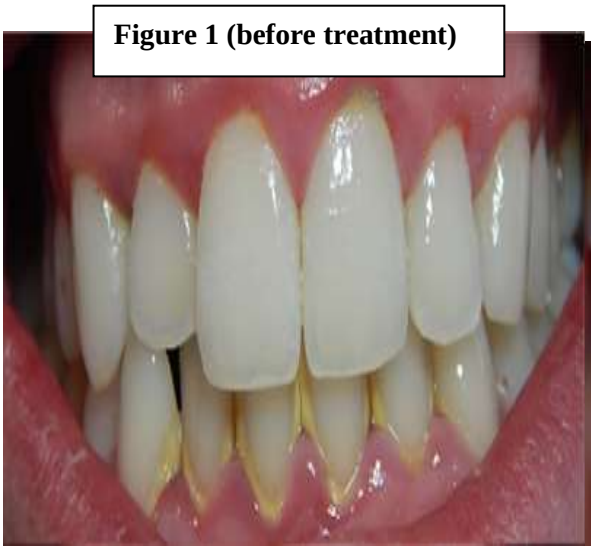

Figure 2 (After treatment)

DISCUSSION

Gingivitis can occur at any age group. The epidemiological studies show that the prevalence rate is high among children and adolescences [(10)].Sheetada is one among the Dantamoolagata Roga mentioned by Acharyas. Sushruta has described the disease Sheetada, characterized by spontaneous bleeding from the gums, foul smell from the mouth, blackish discoloration of gums, softening of gums, increased fluid flow in the gums,destruction of the gingival tissue. It is caused by the vitiation of **Kapha** and **Rakta** due to nidana sevana like more intake of fibrous foods, improper oral hygiene etc. According to the Ayurvedic principles of disease management any disease has to be treated by destructing the aetio-pathogenesis (samprapti vighatana). Priyangvadi choorna has Priyangu, Musta, Amalaki, Haritaki & Bibitaki , these are mainly having **kapha-pitta hara** property.

PRIYANGU - Several flavonoids isolated from medicinal plant have been discovered to possess significant analgesic effects [11]. The analgesic activity of ethanolic, aqueous extract of roots of Callicarpa macrophylla Vahl. may be due to the presence of flavonoids compound. Anti-Inflammatory Activity The ethanolic and aqueous extracts of leaves of Callicarpa macrophylla showed significant anti- inflammatory effect in the acute phase of the inflammation process. Further, the ethanolic and aqueous extracts were found to contain carbohydrates, steroids, flavonoids and tannins, through preliminary photochemical screening. The anti-inflammatory activityis due to presence of Phytoconstituents which cause inhibition of histamine, serotonin or prostaglandin synthesis.[12]

MUSTHA- Biradar et. al evaluated the effect of Anti-Inflammatory Activity of Mustha and concluded that essential oil posses a good anti-inflammatory property due to the presence of beta- Sitosterol and flavonoids. [(13)]

AMALAKI- It has property of Shonitasansthapana (Styptics). The Anti-inflammatory and antipyretic action are attributed for tannins, alkaloids, phenolic compounds, amino acids and carbohydrates it has. Fruit extracts from Emblica officinalis have strong antipyretic and analgesic properties. It has antibacterial properties as well. Escherichia coli, Klebsiella pneumoniae, Proteus mirabilis, Pseudomonas aeruginosa, K. ozaenae, S. paratyphi A, S. paratyphi B, and Serratia marcescens have all been reported to be sensitive to the plant's powerful antibacterial properties. Vitamin C and low molecular weight hydrolysable tannins are abundant in Amalaki fruit. Amalaki becomes a good source of antioxidants as a result of these contents. Tannins like punigluconin, pedunculagin, embelicanin-A, and emblicanin-b protect from hematolysis caused by oxygen radicals.[(14)]

HARITAKI- It has the property of Vranaropana (wound healing). It has mainly anti-inflammatory and analgesic effect [(15)]**.** The potential anti-bacterial activity of T. chebula has been investigated in several studies. Antibacterial activity was found in T. chebula against both gram-positive and gram-negative human pathogenic microorganisms [(16)]. Salivary bacteria called Streptococcus mutants were severely constrained in their growth by the aqueous extract of T. chebula [17]. Dr. Shalu Sharma et al. has examined Anti-ulcerogenic & wound healing activity on the animals pre-treated with hydro alcoholic extract of Terminalia chebula showed reduction in lesion index, total affected area and percentage of lesion in comparison with control groups in the aspirin, ethanol and cold restraint stress induced ulcer models.[(18)]

VIBITAKI- Anti-biofilm Activity, The ethanolic extract of the plant Vibitaki was tested for its antimicrobial activity against the oral plaque forming bacteria i.e. Streptococcus mutans. It helps in a inhibition of formation of biofilm. Sharma et al in his study concludes that the plant extract showed activity against Streptococcus mutans. The extract also prevents in the formation of biofilm with the help of bacteria. The study explains the benefits of this herbal preparation which inhibits the biofilm formation by streptococci, oral pathogens. [(19)]

TRIPHALA- Numerous controlled clinical trials have shown that Triphala significantly reduces the abundance of oral bacteria, dental plaque, and gingivitis in human subjects [(20-21)]. The researchers concluded that Triphala is as effective as 0.2% chlorhexidine mouthwash given that the results of the Triphala treatment were similar to the chlorhexidine-treated

group [22] .a double-blind, randomized human clinical trial reported that Triphala (10%) mouthwash is effective against dental plaque and gingivitis in teenagers, The study reported Triphala as equally effective in antiplaque and antigingivitis activity compared with chlorhexidine [23]. A double-blind, randomized clinical trial in young adults also compared the efficacy of Triphala (0.6%) and chlorhexidine (0.12%) mouthwash for 21 days and reported a similar reduction in both plaque and gingival scores for both the Triphala- and chlorhexidine-treated groups [24]. In periodontal diseases, matrix metalloproteinases (MMPs) degrade extracellular matrix proteins in a spectrum of processes that include tissue remodeling such as the connective tissue destruction observed in periodontitis. Ex vivo Triphala studies using extracted gingival tissue have demonstrated a greater reduction of MMP-9 activity in patient-derived white blood cells treated with Triphala compared with patient derived cells treated with the standard antibiotic drug [25].
Hence the drugs in Priyangvadi Choorna possess anti-microbial, antioxidant, antiplaque, analgesic effect, Vranaropana (wound healing), Shonitasansthapana (Styptics) and anti-inflammatory action. By applying Priyangvadi Choorna Lepa, Due to above mentioned properties it acts as antiplaque agent and reduces gingival inflammation.

CONCLUSION

Sheetada correlated to Gingivitis, is one of the Dantamoolagata roga diseases of high prevalence rate. Management of this condition is important since it has negative impact on patient's health & social life. This case showed significant improvement in most of the parameters according to the assessments done during and after treatment which was retained till the follow ups. Priyangvadi choorna lepa is proved an efficient way in this study by preventing its progression and managing the features of Sheetada effectively.

TABLE 1- GRADINGS OF SUBJECTIVE PARAMETERS

SI NO	SYMPTOMS	0	1	2	3
1	Akasmath rakthasrava	Absence of bleeding	Slight bleeding	Moderate	Severe
2	Shotha	Absence of Inflammation	Mild	Moderate	Severe
3	Mukhadaurgandhya	Absence of Halitosis	Slight odour	Moderate odour	Persistant odour
4	Vedana	Absence of Pain	Occasional Pain	Frequent Pain	Continuous Pain
5	Dantamamsa mridutha	Absence of Spongy Gums	Slight	Moderate	Severe
6	Danthamamsa prakledata	Normal Moist Gums	Slight	Moderate	Severe
7	Krishnata	Normal	Slight Discolouration	Moderate	Severe

TABLE 2-GINGIVAL INDEX

SCORE	**SYMPTOMS**
1-Mild Inflammation	Slight change in colour, Slight edema,No BOP
2-Moderate Inflammation	Redness, Edema & Glazing, BOP
3- Severe Inflammation	Marked Redness & Edema, Ulceration Tendency to Spontaneous bleeding

TABLE 3-GINGIVAL BLEEDING INDEX

SCORE	**SYMPTOMS**
0	Normal Gingiva
1	Mild inflammation, No BOP, Change in colour & edema
2	Moderate inflammation, BOP, Redness edema & glazing
3	Severe Inflammation, Spontaneous bleeding, Marked Redness & Edema

TABLE 4 A -ASSESSMENT OF SUBJECTIVE PARAMETERS

SI NO	SYMPTOMS	Day 0	Day 7	Day 14	Day 22	Day 42
1	Akasmath rakthasrava	3	2	1	0	0
2	Shotha	2	1	0	0	0
3	Mukhadaurgandhya	2	1	0	0	0
4	Vedana	2	2	1	0	0

5	Dantamamsa mridutha	1	1	0	0	0
6	Danthamamsa prakledata	1	1	0	0	0
7	Krishnata	1	1	0	0	0

TABLE 4 B -ASSESSMENT OF OBJECTIVE PARAMETERS

SI NO	SYMPTOMS	Day 0	Day 7	Day 14	Day 22	Day 42
1	GINGIVAL INDEX	2	2	1	0	0
2	GINGIVAL BLEEDING INDEX	3	2	1	0	0

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