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SYSTEMIC REVIEW OF KAVAL DRUGS AGAINST ORAL CARE W.S.R. TO ASHTANG HRUDAYA

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Abstract: Oral health is related to general health of human, mouth is mirror of general health. Oral health problems are increases day by day in world wide. In day today life oral cavity is exposed to external environmental pollutions, cold drinks, smoking, chewing tobacco and alcohol intake, so oral health problems are increasing. Therefore to maintain the oral health Ayurveda introduces to procedures is Kaval. Taking lesser amount of medicated fluid which can be move in the mouth is called Kaval. This procedure makes jawbone strengthens. It enhances interest in food. It makes tine sweet n sharp. It reduces the cracks on lips. It avoids dryness of throat and mouth. Oral diseases continue to be major health problem world wild there for it is very important to maintain oral hygiene for maintenance of health and longevity of human Being in particular age group .

Keywords: Kaval, Gandush, oral health, mouth. Stomatitis

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INTRODUCTION

Ayurveda is an Ancient Science and holistic system of medicine which evolved in Indian some 3000-5000 years ago, a system of traditional native to the Indian Subcontinent.⁽¹⁾ The Sushrut Samhita and Charak Samhita are its earliest authorize text.⁽²⁾ Over the centuries, Ayurvedic Practitioners developed large numbers of medicinal preparations.⁽³⁾ The main aim of Ayurveda is to preserve the healthy person remains as healthy and also treat or cure the person who is suffered from any diseases in such way that the disease is snatch away from its root cause.⁽⁴⁾ Ayurveda gives prime importance to "Swasthya Samrakshana". So, Ayurveda explains some vidhi (procedure) mainly used as a preventive aspects like Dincharya, Ratricharya, Ritucharya, Sadvritta, Achar Rasayan etc. So such routine has helped to maintain the health of the person. There are various methods for maintaining oral hygiene which is explained in Ayurvedic text. Methods includes such as Dantdhavan (tooth brushing) pratisaran (local application), jivha nirlekhan (tongue scraping), kaval. Among this kaval and gandush have more efficacy to maintain oral health.^(5,6) The techniques which should follow on daily bases is called "Dincharya". In Ayurveda Gandush and Kaval are explained as one of the routine procedure under the context of daily regimen (Dincharya)^(7,8) for the maintenance of good oral health. It can be done in both healthy and disease person. Gandush and kaval are the two specific therapies for cleaning the mouth. In Gandush you fill the liquid or oil in the mouth fully so there is no movement in your mouth and so your mouth is completely distend, and it is held until there is lacrimation, nasal discharge and then patient is spit this out. This process is very good for teeth and it vanishes all the impurities and toxins, it stretches your cheek muscles therefore several reasons why you do that.⁽⁹⁾ Kaval is a process where you take oil or liquid in your mouth and movement around and gargle it all the way to back of throat for specific amount of time.⁽¹⁰⁾ The

difference between the two is only in the composition of drugs, dosage and procedure of using the drug.

We are tried to review the various Kaval drugs and its benefits as well as action on oral disease of oral cavity. So there are many formulations for kaval and are available in Ayurvedic text, we are focusing on only 2 formulations which are explained in Ashtang Hridaya.

Aims- To evaluate Doshagana Properties in formulation of Kaval.

Objective – To find out the drug efficacy with the help of their properties like Rasa Virya Vipak

Material and Methods

Schedule for kaval : The 3/4th medicated fluid or medicated paste is kept in mouth with concentrated mind along with swiss movement till the collection of kapha in mouth⁽¹¹⁾

Indication for kaval: Shiro rog (disease of head), manya roga (disease of neck) mukha roga (disease of lips , teeth, gums , tongue, soft palet , pharynx larynx), Akshi roga (disease of eye) , karna roga (disease of ear) praseka (excessive salivation), kantha roga (disease of throat) , vaktrashosh (dryness of mouth), hrullas (nausea), Tandta (stupor), aruchi (anorexia) pinasa (rhinitis) , are specially by kaval .⁽¹²⁾

Benefits of kaval : Swarabhed (strength of voice), hanubalam (strength of jaws), strength of face, better teast perception , strong & healthy teeth, Resistance again Doshaja or Agantuja Mukharog ,⁽¹³⁾

Samyak lakshana of kaval : vyadhiapachaya (disease subside) Trushti (feeling of freshness) Vaishadya (cleansing effect) Vaktralaghuta (lightness of mouth) , Indriyaprasada (clarity of sense Organ)⁽¹⁴⁾

Hinayoga lakshana of kaval : stiffness, excitation of kapha , loss of test⁽¹⁵⁾

Atiyog lakshana of kaval : mukhapak (stomatitis), sosa (dryness of mouth) , Trushna (thirst) arucchi (anorexia) , klama (exhaustion)⁽¹⁶⁾

Formulation 1: Ashtang hridaya; Uttar tantra, 22/97. The ingredients of 1st formulation: Kantkari, Guduchi, Chameli, Daruharidra, Jawasa, Triphala, Madh⁽¹⁷⁾.

Formulation 2: Ashtang hridaya; Uttar tantra, 22/103. The ingredients of 2nd formulation: Saptaparna, Ushir, Patol, Mustha, Haritaki, Kutki, Madhuyashi, Amlatas, Chandan⁽¹⁸⁾.

OBSERVATION -

FORMULATION: 1

1. KANTKARI: Kantkari is belongs to Solanaceae family and which is include in Dashmool and commonly used in Ayurveda. Dashmool is an important compound formulation of Ayurveda has been advocated with promising result in various diseases.⁽¹⁹⁾Kantkari is mostly used in Respiratory diseases in Ayurveda.⁽²⁰⁾The plant is useful in Fever, Cough, Asthma etc.⁽²¹⁾Vedanasthapana (pain reliever), Shothahara (reduces swelling), Swedajanana (increases sweating), Jwaraghna (Anti-pyretic), Deepana (appetizer), Pachana (digestive), Rechana (purgative), Bhedana, Krimighna (anthelmintic), Amadoshanashaka (indigestion), Raktashodhaka (blood purifier), Kasahara (relieves cough), Shwasahara (Asthma), Kanthya (throat), Hikkanigrahana (anti-hiccups), are the therapeutic activities of kantakari.⁽²²⁾

2. GUDUCHI: Guduchi mentioned in Ayurvedic text of Ayurvedic system of medicine like Charak, Sushrut, Ashtang Hridaya and other varies text like Bhavprakash, Dhanvantari Nighantu.^(23,24)Tiktaa- saka varga (vegetables) and claimed to be useful in treating fever, asthma, anorexia.⁽²⁵⁾ Indicated in fever, gout, jaundice.⁽²⁶⁾ Skin infections, chronic diarrhoea, and dysentery like G.I.T infection.⁽²⁷⁾ To cure bleeding piles, curing itching, erysipelas.⁽²⁸⁾

Guduchi mainly contains alkaloids, glycosides, steroids, sesquiterpenoids, aliphatic compounds, essential oils, mixture of fatty acids and polysaccharides. The alkaloids

include berberine, bitter gilonin, non-glycoside gilonin gilosterol.⁽²⁹⁾

3. CHAMELI: Leaves are chewed in a stomatitis, toothache, ulcer in the mouth and leaf-juice or oil obtained from it is dropped into the ear⁽³⁰⁾. A decoction of the leaf was also used as a gargle⁽³¹⁾. The plant is bitter, astringent, acrid, thermogenic, aphrodisiac, antiseptic, anodyne, depurative, emollient, diuretic, anthelmintic, deobstruant, dentifrices, suppurative and tonic⁽³²⁾

4. DARUHARIDRA: Berberis aristata DC . Commonly knowns as Daruharidra are a popular drug which has been used globally. *Charak Samhita* prescribed that the extract of the plant be taken internally for treatment of hemorrhage, piles, pruritus, shotha (Inflammation), eye disease and alopecia. Described it as being useful internally in indigestion, deficiency of breast milk, and in uterine and vaginal disorders.⁽³³⁾ Treat allergies, metabolic disorders, ophthalmic, and other eye diseases, treat bleeding piles, anti-osteoporosis, treat skin diseases, menorrhagia, fever, diarrhea, dysentery cholera, jaundice, ear infections, anti-bacterial, anti-fungal, anti-inflammatory analgesic, anti-pyretic, anti-diabetic, and anti-hepatopathic⁽³⁴⁾

5. JAVAS: Javas have Antimicrobial⁽³⁵⁾, expectorants⁽³⁶⁾, inflammatory, antipyretic activity.⁽³⁷⁾ Pharmacological activity Rheumatism, bronchitis, ulcers, liver disorders and jaundice, asthma and gallbladder problems, antibacterial, antifungal, antioxidant, antiproliferative, hepatoprotective spasmolytic and ureter-relaxing effects⁽³⁸⁾.

6. TRIPHALA:

a) AMLA: Pharmacological activity on amla: Antioxidant⁽³⁹⁾ hypoglycemic, anti-inflammatory, Antihyperglycemic, Antihyperlipidemic⁽⁴⁰⁾ antipyretic, analgesic, antitussive, antiatherogenic, adaptogenic, cardioprotective, gastroprotective, antianemic, anti-hypercholesterolemia, wound healing, anti-atherosclerotic, hepatoprotective,. In

addition, experimental studies have shown that amla and some of its phytochemicals such as Gallic acid, ellagic acid, pyrogallol, some norsesquiterpenoids, corilagin, geraniin, elaeocarpusin, and prodelphinidins B1 and B2 also possess antineoplastic effects. Amla is also reported to possess radio modulatory, Antimutagenic effects decreases lipid peroxidation decreases ornithine decarboxylase radio protective agent chemo preventive agent ⁽⁴¹⁾.

b) BIBHITAK: Pharmacological effects as follows: Analgesic activity ⁽⁴²⁾, Antihypertensive effect ⁽⁴²⁾, Antispasmodic and Bronchodilator properties ⁽⁴³⁾,

Antimicrobial activity ⁽⁴⁴⁾ Antioxidant activity ⁽⁴⁵⁾, wound healing activity ⁽⁴⁶⁾, immunological activity ⁽⁴⁷⁾, Acute – subacute toxicities ⁽⁴⁸⁾ Hepatoprotective activity ⁽⁴⁹⁾,

c) HARITAKI: Haritaki is used to treat Ophthalmic, itching, edema ⁽⁵⁰⁾ it is used as an Antioxidant and neuroprotective drug ⁽⁵¹⁾. This plant is also used for treating piles, dropsy, diarrhoea, biliousness, headaches, dyspepsia and ascites ^[52]. It is also used for heart disease, inflammation, brain dysfunction ^[53] .

7. MADH: Pharmacological Effects: Madh have antioxidant activity ⁽⁵⁴⁾, Antimicrobial activity ⁽⁵⁵⁾, Antifungal effect, Antiviral activity ⁽⁵⁶⁾, Anti-inflammatory activity ⁽⁵⁷⁾.

Table 1 showing Ingredients in detail-

| Content | Quantity | Rasa (taste) | Virya | Vipak | Guna | Doshaghna | Indication |
|--|----------|-----------------------------------|-------|--------|--------------------------|------------------------------|---|
| Kantkari ⁽⁵⁸⁾ (solanum Xanthocarpiu m) | Equal | Tikta, Katu | Ushna | Katu | Laghu, ushna ruksh | Kapha,vataha r, kushtghna | jwar, kandu, daah, raktisaar |
| Guduchi ⁽⁵⁹⁾ (tinospora Cardifolia) | Equal | Tikta ,kashay | ushna | Madhur | Guru, snigdha | Tridoshaghna | Jwar, krumi, pandu |
| Chameli ⁽⁶⁰⁾ (Jasminum Grandiflorum) | Equal | Tikta, kashay | Ushna | Katu | Laghu | Vaatpittahar | Shirorog, mukhrog, gantarog, visha, kushtha |
| Daruharidra ⁽⁶¹⁾ (Berberis Aristata) | Equal | Tikta ,kashay | ushna | Katu | Laghu, ruksh | Kaphahar | kandu |
| Jawas ⁽⁶²⁾ (Linum Usitatissimu m) | Equal | Madhur, Tikta | Ushna | Katu | Snigdha , guru | Tridoshaghna | nertrashus hkta |
| Haritaki ⁽⁶³⁾ (T erminalis Chebula) | Equal | Madhur,Tikt a,kashay,kat u, | Ushna | Madhur | Laghu, ruksh | Tridoshaghna | Rasayan |
| Amalaki ⁽⁶⁴⁾ (Embllica offcinalis) | Equal | Madhur,Tikt a,kashay,kat u, | Shit | Madhur | Guru, ruksh, shit | Tridoshaghna | Pramehhar rasayan,vay asthapan |

| | | | | | | | |
|---|-------|-------------------|-------|--------|-----------------|-------------------|------------------------------------|
| Bibhitak (⁶⁵)Terminalia Bellirica) | Equal | Kashay | Ushna | Madhur | Ruksh, Laghu | Tridoshaghna | Kaas, jwar |
| Madh(⁶⁶) (honey) | Equal | Kashay, Madhur | Shit | Madhur | Ruksh, guru | Kapharaktah ar | Shwitra, kushthaghn a, krumi |

FORMULATION 2 :

1. SAPTAPARNA: It is useful in abdominal disorders, fevers, leprosy, skin diseases, chronic and foul ulcers, asthma, bronchitis and helminthiasis. It is used to treat diarrhoea (⁶⁷) wound and earache (⁶⁸) The plant have antioxidant activity (⁶⁹) antiproliferative activity (⁷⁰) anticarcinogenic and antimutagenic activity (⁷¹)

2. USHIR : Ushir is used to treat mouth ulcers, headache, malaria, fever, acidity, boil, burn, epilepsy, inflammation.⁽⁷²⁾ Varnya (complexion or color of skin) , Stanyajanan (galactagogue) , Chardinighraha (Antivomiting) , Dahaprashaman (cooling agent) , Pittasanshaman , Swedopanayan (that substance over sweating of body).⁽⁷³⁾

3. PATOL: Pharmacological activity : Patol have chemo preventive activity, Antihyperglycemic and Antihyperlipidemic activity, laxative activity, anti-inflammatory and anti-nociceptive activity, cholesterol lowering activity.⁽⁷⁴⁾

4. MUSTHA: Pharmacological effects: Mustha have Anti-inflammatory activity (⁷⁵), wound healing activity (⁷⁶), antimicrobial activity (⁷⁷), anticonvulsant activity (⁷⁸), hepatoprotective activity (⁷⁹), anti-obesity activity (⁸⁰) Antidiabetic activity (⁸¹) antioxidant activity (⁸²), antiplatelet activity (⁸³) antimalarial activity (⁸⁴).

5. HARITAKI: As mentioned in formulation 1

6. KUTKI: Kutki is used as medicine for cough, cold; fever (⁸⁵).It is used to cure jaundice, diarrhoea and dysentery. (⁸⁶) Pharmacological activity: Kutki have Antimicrobial activity (⁸⁷),

antibacterial activity (⁸⁸), cytotoxicity, anti-mutagenic activity (⁸⁹), nephroprotective activity (⁹⁰), anti-inflammatory activity (⁹¹), and antioxidant activity (⁹²).

7. MADHUYASHTI: Pharmacological activities of Yastimadhu are demulcent, expectorant, anti-allergic, anti-inflammatory, spasmolytic, mild laxative, anti-stress, anti-depressive, antiulcer, liver protective, estrogenic, and anti-diabetic. It is widely used in bronchitis, dry cough, respiratory infections, catarrh, tuberculosis; genitourinary diseases, urinary tract infections; abdominal pain, gastric and duodenal ulcers, inflamed stomach, mouth ulcer; and for adrenocorticoid insufficiency.⁽⁹³⁾

8. AMLATAS: Pharmacological activities of Amlatas are anti-inflammatory (⁹⁴) antioxidant (⁹⁵), antidiabetic (⁹⁶) as well as hepatoprotective activity (⁹⁷).Antioxidant (⁹⁸) Antipyretic (⁹⁹)

9. CHANDAN: Chandan is used as a medicine in diarrhoea with bleeding, intrinsic hemorrhage, bleeding piles, vomiting, poisoning, hiccoughs, urticarial, eye infections and inflammation of umbilicus.^[100, 101] Chandan is mostly used as a Diuretic (¹⁰²) and in urinary infection (¹⁰³)Chandan and its bark possessed abortifacient, hepatoprotective, urinary antiseptic, stomachic, anti-viral and anti-herpetic activities.^[104]

Table 2 showing Ingredients In detail-

| Content | Quantity | Rasa (taste) | Virya | Vipak | Guna | Doshagh nata | Indication |
|---|----------|--------------------------------|-------|--------|------------------------|-------------------------------|-------------------------------|
| Saptaparna ⁽¹⁰⁵⁾ (Alstonia Scholaris) | Equal | Tiktaa, kashay | Ushna | Katu | Laghu, Snigdha | Tridosha ghna | kushtha |
| Ushir ⁽¹⁰⁶⁾ (Verivera Zizanoidis) | Equal | Tiktaa, Madhur | Shit | Katu | Ruksha, Laghu, sthambh | Kapha, pittagn a | Kushtha, daah |
| Patol ⁽¹⁰⁷⁾ (Trichosanthus Dioica) | Equal | Tiktaa, Katu , kashay | Shit | Katu | Laghu, ruksh | Tridosha har, Kapha | Jwar, daah |
| Mustha ⁽¹⁰⁸⁾ (Cyperus Rotundus) | Equal | Tiktaa, Katu , kashay | Shit | Katu | Laghu, Ruksha | Kaphapit tahar | Krumi. Jwar, pratisaar |
| Haritaki (Terminalis Chebula) | Equal | Madhur, Tik ta, kashay, k atu, | Ushna | Madhur | Laghu, Ruksha | Tridosha har | Rasayan |
| Kutki ⁽¹⁰⁹⁾ (Picrorhiza Kurroa) | Equal | Tiktaa | Shit | Katu | Ruksha, Laghu | Kapha pittahar | Jwar, kushtha, krumi |
| Madhuyashti ⁽¹¹⁰⁾ (Glycyrrhiza glabra) | Equal | Madhur | Shit | Madhur | Guru, Snigdha | Vaathar, pittahar, raktahar | vranshoth |
| Amlitas ⁽¹¹¹⁾ (cassia Fistula) | Equal | Madhur | Shit | Madhur | Guru, mrudu, Snigdha | Pittahar, vaathar | Koshthashu dhi, kushathagh na |
| Chandan ⁽¹¹²⁾ (Santulum Album) | Equal | Tiktaa, Madhur | Shit | Katu | Laghu, Ruksha | Vaathar, pittahar, raktahaa r | Visha, daah, trushna, kandu |

Mode of action Kavala

The saliva consists of lysozyme, an enzyme and antibody IgA, which are bacteriostatic and antimicrobial in nature. The Gandush and Kavala increase the pressure in the mouth, which stimulates the stretch reflex i.e. the presso receptors resulting in stimulation of the salivary nuclei in brain stem. This results in increased activity of parasympathetic motor fibers of facial and glossopharyngeal nerves and increases the salivary output, which is further stimulated by the chemical

constituents stimulating the oral chemo receptors and hence the Gandush and Kavala maintains and cures the oral environment.^[113]

DISCUSSION:

Formulation 1: The entire drug in this formulation acts on Respiratory tract infection. The drugs having Antiseptic, anti-oxidant anti-inflammatory properties. Mostly they are Kapha dosha dominant, they have Ushna, Virya, Laghu and Ruksha properties according to Ayurveda. These drugs are Kapha dominants so mostly used in Urdhwajatrugat Vikar upper respiratory tract infections.

Formulation 2: All the drugs in this formulations having antioxidant, wound healing, anti-inflammatory properties. They act on Fever, URTI, and Bleeding disorder. Maximum drugs are shit Virya, Tiktaa and Madhur ras and Madhur Vipak so they mostly act on piitaj vikar.

CONCLUSION: Above formulations are based on dosh samprapti. So according to Doshaghnata we can use the drugs. This is our small efforts how these drugs will be act by their Doshaghnata as well by their qualities. Simple and economical procedure to preserve positive health as well as cures the disease of the person . bioactive ingredients present in the drug.

Acknowledgement –

There is need of further clinical study. In Ayurveda Text so many formulations are present it need to further evaluation

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