



**TO STUDY THE EFFICACY OF "HARIDRA KWATH" GANDUSH IN POST
TONSILLECTOMY WOUND HEALING**

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INTRODUCTION

Ayurved is a great medical science of the world which deals with the health of mankind. It was evolved thousand years ago, probably was the first medical science evolved.

Ayurved is the science which explains each & every aspect of life, anatomy, physiology, all types of diseases & their management.

Sushruta was one of the great scholars in Ayurved. He is known as the pioneer of Indian Surgery (Shalya Chikitsa). He had developed the branches of Surgery - Shalya & Shalaky (ENT & OPHTHALMOLOGY).

Since out of five Dnyanendriyas (organs of senses) four are situated in urdhwanga. Shalakyatantra is called as Uttamanga Chikitsa.

Gilayu (Tonsillitis) is one of the most common diseases in our country and all over the world. Sushruta and Vagbhata have described this disease as 'Gilayu' in Mukha Roga.

Because of new life style, changing eating habits such as fast food, oily and spicy food, increasing pollution and population, incidence of Upper Respiratory Tract infections is increasing.

Major sufferers are from school going children and young adults. Common cold, Allergic rhinitis and especially infections of tonsils are very common. If not properly taken care diseases become chronic.

Among all these, tonsillitis and hypertrophy of adenoids are found to be the most common affection. For chronic tonsillitis tonsillectomy is the treatment of choice in modern medicine and Ayurved.

As a routine in modern medicine antibiotics coverage is given to avoid its post operative complications,

especially sepsis, which in turn causes post operative bleeding. So along with systemic administration of antibiotics patients are advised gargles with Hydrogen peroxide weakened solution for its cleaning, antimicrobial and haemostatic action so that sepsis of wound can be avoided.

Hydrogen peroxide if used by mistake in the concentrated form can cause tissue damage and makes the wound still worse. So here, in my project an attempt was made to find substitute to Hydrogen Peroxide (H₂O₂) by renowned Ayurvedic drug Haridra which is described as 'Jantughni'.

Haridra is described to have properties of antimicrobial as well as antiviral action and haemostatic action and so I have selected this drug for Gandush (Gargles) purpose.

In Ayurved, Vagbhat has described four types of Gandush and 'Ropan'. Gandush is one of them for Mukhaj Vrana and so, in this project Ropan Gandush was chosen for the trial study.

The study of the project was totally based on the clinical observations and the patient's narration. The patient taken for drug trial were treated systemically with Sookshma triphala and Gandhak rasayana.

AIMS AND OBJECTIVES

- 1) To study the efficacy of "Haridra Kwath" Gandush in post tonsillectomy wound healing.
- 2) To conduct comparative study of Haridra Kwath Gandush & Hydrogen Peroxide (H₂O₂) gargles in post tonsillectomy wound healing.

MATERIALS

Ayurveda considers that all treatment is governed by Chikitsa Chatushpada i.e. four basic pillars of treatment. Dravya has been designated the second place quoting that it is major tool in treating the disease.

Constituents of Kwath

- I) Haridra (*Curcuma longa*)
- II) Water

Method of Preparation — Quantity or volume of water to hold in oral cavity for gandush vidhi. 40-100 ml Fresh Haridra Kwath was prepared as per standard method mentioned in Sharangadhar Samhita. One part of coarsely powdered drug is boiled with 16 parts of water in a pot over mild fire till liquid is reduced to 1/8 of the original quantity

Means –

Drug = 1 part

+

Water = 16 parts



Boiled upto 1/8th of quality.

For making 100ml Haridra Kwath 50gm Haridra powder was boiled with 800ml water and boiled upto 100ml.

HARIDRA

GUNA- Kushtaghna, Kandughna, Vishghna, Tikta shandh, Naktamal, Dwirajani, Mustadi, Shirovirechana (Charak), Haridradi, Shleshma sanshman (Sushruti)

Family - Zingiberaceae

Name –

Latin - *Curcuma longa*

English – Turmeric

Sanskrit - Haridra

Nirukti -

Harim N.Tarnam Drati – Gives good colourations.

Kanchani - makes skin precious as gold.

Nisha - Beautiful like as starful night.

Varvarnini- of good colours.

Krumighna - kills microbial, parasitic riarrifectartion.

Hattavilasini – make market valuable.

Synonyms –

Hindi - *Haldi*

Gujrati – *Haldar*

Tamil – *Mancal*

Malayalam – *Mannal, Paccamannal*

Telgu – *Pasupa*

Kannada – *Arishina*

Distribution – Throughout India especially in Maharashtra, Tamil Nadu & Bengal. It is propagated by rhizomes.

Description – It is perennial herb 50-60 cm in height with short stem & tufts of erect leaves.

- Rhizomes cyindric, ovoid, orange coloured & branched.
- Petioles as along as blade oblong lancolate tapering to the base upto 45 cm long.
- Flowers pale yellow in spikes concealed by the sheathing petioles flowering bracts-pale green.
- Flowering - Fruiting - January to April

Types –

- 1) Hard & bright coloured — used in dying.
- 2) Softer & larger used as condiment.

Parts used — Rhizomes or tuber is the useful part of turmeric. Good turmeric should be a reddish orange in appearance, when a broken or cut in to two should have moist feeling.

ACTION & USES —

I) Guna - Ruksha, Laghu

II) Rasa - Tikta, Katu

III) Vipaka - Katu

IV) Virya - Ushma

As it is of Ushna Viryatinka, it acts as a Kapha-Vatshamak. It is pittashamaka with tiktarasa. It is used topically in the traumatic inflammation & is an antisept & wound healing agent. It gives good coloration of the skin & used in 'Kushta' as well. Its Dhoop (Smoke) is of tikshna guna & it reduces the pain in scorpion bite.

SYSTEMIC USE —

I) Nadi Sanstha — Vedna sthapaka.

II) Pachan Sansthan — It is digestive hence used in Vibandha & Aruchi.

III) Raktavaha Sanstha - Rakta prasadak, Rakta vardhak, & Rakta stambhak.

IV) Shwaswaha Sanstha — It is aam, meda & kaphapachak hence useful in prameha (MEHESHU DHATRI NISHE)

V) Prajanan Sanstha — Garbhashaya shodhan, Stanya shodhan, & Shukra shodhan used in purpural period & in Shukrameha.

VI) Skin — It gives good coloration to skin & useful in various dermatological disorders. It is having Vishaghna property-

Chemical constituents — The rhizome contains carbohydrate, Vit A, Iron, Resin, Yellow pigment, Curcumin. Essential oil consisting of sesquiterpenes, zingiberene D-a-phellandrene, turmerone,

dehydroturmerone, yanaa-alanto lactone, curcumene cineol.

Properties — Rhizomes — bitter acrid, astringent, pungent, aromatic, thermogenic, emollient, blood purifier, anodyne, anti-inflammatory, vulnerary, depurative, antiseptic, appetiser, carminative, anthelmintic, diuretic, expectorant, stimulant, ophthalmic & tonic.

Microscopic — Transverse section of rhizome shows epidermis with thin walled cubical cells of various dimensions cortex characterized by the presence of mostly thin walled round parenchyma cells scattered collateral vascular bundles, a few layers of cork developed under epidermis & scattered oleo-resin cells with brownish contents. Cork generally composed of 4-6 layers of thin walled, brick shaped parenchyma cells of ground tissue contain starch grains of 4-15µ in diameter. Oil cells with suberised wall containing either orange yellow globules of volatile oil or amorphous resinous matter, vessels mainly spirally thickened, a few reticulate & annular.

SOOKSHMA TRIPHALA

This is an "Anubhoot Yog" & a proprietary Ayurvedic medicine which is manufactured by a standard company Ayurved Rasashala, Pune.

Contents — 250mg tablet contains

Triphala - 200mg

Samagandhak kajjali — 10mg

It contains Haritaki, Bibhitaka, Amalaki. These are useful in Shotha (Saaqa). It is tridoshanashak. So I have used Sookshma Triphala systemically after tonsillectomy.

Preparation — Haritaki, Amalaki, Bibhitaka are taken in equal amounts i.e. Triphala Churna 16 parts + 1 part Samagandhak Kajjali with Triphala Kwath bhavanas. 250mg tablets are prepared.

Quantity — 120mg to 1gm.

Anupan — Water

Sevan Kala — after meal three times a day.

Uses - Shotha (oedema), Kotha, Skin diseases, Raktadosh & Galarog.

This drug is used as alternate medicine to modern antibiotics. It is having antibacterial & anti inflammatory action. It increases the immunity of the body by the Rasayan property.

Triphala is very effective compound made by mixing equal parts of powder *Emblica officinalis*, *Terminalia bellerica* & *Terminalia chebula*. Each of the ingredients having antiviral action. Triphala rejuvenates cells of the body, tissues of body, prevents cancer. It helps to improve the general absorption of all nutrients & vitamins contained in our body.

Traditional Ayurvedic Qualities & Uses of Triphala

Taste — sweet, sour, pungent, astringent, bitter.

Veerya — Ushna.

Vipaka — sweet (**maQaur**)

Guna — Laghu, Ruksha.

Doshaghnta — Tridoshaghna meaning it balances all the constituents. Pharmacology — Adaptogenic, antibacterial, anti-viral, anti-fungal, anti-yeast, anti-histaminic, anti-inflammatory, anti-oxidant, blood pressure lowering, cholesterol lowering, digestive, diuretic, laxative.

Indications — Anaemia, bowel-toxicity, irregularity of bowel, chronic lung diseases constipation, diarrhoea, eye diseases, high cholesterol, hypertension, skin disorders, yeast infection.

Terminalia chebula — Haritaki (Hirda)

Gana — Triphala, Amalakyadi, Parushak, Trivrutta, Prajasthapan, Jwarghna, Kushthaghna, Kasaghna, Arshoghna.

Kul — Combrataceae.

Latin name — *Terminalia chebula*.

Guna — Laghu, Ruksha.

Rasa — Panchrasa (Lavana rasa varjit, Kashaya rasa pradhan).

Veerya — Ushna.

Vipak — Madhur.

Prabhav — Tridoshhar.

Upayuktanga — Fruit (Pakwafal)

Karma — External use — Shothahar, Vednasthapan, Vranaropan, Vranashodhan.

Systemic use —

- I) Nadisansthan Balya, Medhya, Indriya balya.
- II) Pachansansthan — Deepaniya, Pachaniya, Yakrut uttejak, Anuloman, Mrudurechan, Krumighna, Vibhandhanashak.
- III) Raktawahasansthan — Hridya, Shonitasthapan, Shothahar, Rasashudhikarak.
- IV) **Shwasansansthan** - Kasghana
 - Shothaghana
 - Prajasthapan, Mutrala, Jwaraghna, Rasayan

Haritaki is a drug, which is also advised to be used a routine dietary product as it improves the immunity of body

Modern science has found that *Terminalia chebula* has a strong effect against Herpes Simplex Virus (HSV) having antibacterial activity & exhibits strong cardiogenic properties.

Emblica officinalis (Amalaki)

Gana — Vayasthapan, Virechanopaga, Triphala, Parushakadi.

Kula — Euphorbiaceae (Erandakula).

Latin name — *Emblica officinalis*.

English name — Emblica myrobalan.

Guna — Laghu, Ruksha, sheet.

Rasa — Pancharasa (lavan varjit, amla rasa pradhan).

Veerya — Sheet.

Vipak — Madhur.

Karma — Tridoshar.

External use — Dahashamak, Keshya, Twachya.

Systemic use -

1) **Pachan Sansthan** — Deepan, Ruchikar, Sransan, Amlatanashak, Yakrutotejak.

2) **Shwasansansthan** — Kaphaghna

3) **Prajanansansthan** - Vrushya, Garbhasthapak

4) **Mutravahasansthan** — Mutrala, Twacha, Kushthaghna, Jwarghna, Dahaghna, Rasayan

It is useful agent in wound healing process & also acts as haemostatic agent by its sheet guna. Its amlata (Vitamin C content) is useful in reducing inflammation of the tonsillar fossa & also acts as haemostatic agent avoiding any oozing from the wound

Terminalia bellerica (Bibhitak)

Gana - iwarhar, Virechanopaga. Triphala. Mustadi

Family - Combretaceae

Latin name - *Terminalia bellerica*

Gunn -- Rooksha, Laghu

Rasa -- Kashaya

Veerya - Ushna

Vipak - Madhura

Karma — Kaphapittaghna

External use — Shothahar, Vedanahar, Rakta Stambhak.

SYSTEMIC USE

1) **Nadisansthan** — Majjamadak, Vedna Sthapak

2) **Pachansansthan** — Deepan, Anulomna, Krumighna, Chardinigrahak

3) **Raktawahsansthan** — Raktastambhak

4) **Shwasanasansthan** — Kasashwasghna, reduces the mucosal oedema of the upper respiratory tract.

5) **Tapkarma** — Jwarghna

6) **Satmikaran** — Dhatuwardhak

Usefulness in Sookshma Triphala Yog.

- The Shothahar, Vednahar qualities reduces the inflammation, pain & helps in wound healing.
- The Raktastambhak guna & the Kashaya rasa acts as haemostatic agent & reduces the oozing from post operative wound.
- The Krumighna quality acts as bactericidal drug.
- Bibhitak reduces mucosal oedema of upper respiratory tract & hence heals the tonsillar fossa faster.
- The Dhatuwardhak quality improves immunity of patient.
- The Swarya quality improves the voice of the patient & reduces the Kanthashotha. Tatlut
- The Triphalas are mainly Kashayrasatmak which act as shothanashak & haemostatic agents which helps in wound healing process.
- They enhance dhathushodan prakriya & remove dhatumala which reduce the slough Ibimalion & enhance the granulation tissue formation.

- Kajjali & Triphala kwath hhavanas increases the action of the drug & increases sookshma strotogamitwa of the drug. These qualities reduce the amount of drug required & prolong the action of drug.

- Sookshma triphala is a best raktashodhaka which helps in faster wound healing.

GANDHAK RASAYANA

This is an "Anubhoot Yog" and a proprietary Ayurvedic medicine which is manufactured by Ayurved Rasashala, Pune and is proved to be effective as anti-inflammatory and also having rasayan effect which improves immunity of patient. There are total seven references of Gandhak Rasayana out of which two are composed of bhasma and choorna and in the remaining five gandhak is mixed with choornas. The reference that is taken in this project is the one that has been given bhavnas

Contents - Shudha Gandhak I part

Bhavana - Godugdha

Dravyas - Guduchi Kwath, Sunthi Kwath, Ardraka Swarasa, Chaturjat Phant Triphala Kwath, Maka Swaras

Method - Shudh Gandhak is given eight bhavans of cow milk, then dalchini, tamolpatra, veldoda, nagkeshar phant, each 8-8 bhavanas are given. Then guduchi kwath, triphala kwath, makaswaras each 8-8 bhavana are given.

Lastly 8 bhavans of ardraka swaras are given. Total 96 bhavans are given to gandhaka and its khal is made. The

formed drug is Sanskarit with bhavanas and inardan prakriyas. Then khalit product is dried in an airtight jar and tablets are made. Whenever it has to be used it

should be taken with equal amounts of Khadisakhar Churna.

Quantity - 120mg to 1gm.

Anupan - sugar & water.

Sevankal - morning, on empty stomach.

Kalmoryada - 7 days to 6 months.

Pathya - Sugar, ghee bhavana, rock salt, mango, bettle nut, pan, khadir, dugdha.

Apathya - Physical exercises, exertion, maithun, oily, hot, salty foods.

Uses -

Diseases — Urakshata, pama, skin disorders, jeemajwara, prameha, shukrakshaya, atisar, grahani, pradar, dhatukshaya, arsha, vata-pitta-kapha vikar, mandagni.

Gunn - Budhivardhak, Ayushyavardhak, Rasayana.

Doshagnata — Tridoshghna.

Rogmarga Karyasthan — All the three Rogmargas, seven dhatus, Mastishka

Action — Deepan, Pachan, Rasayan

CONTENTS & THEIR ACTION

1) GANDHAK-

Rasa	-	Tikta, Katu
Vipak	-	Katu
Veerya	-	Ushna
Qualities	-	Ushna, sar
Doshagnata	-	Vata, Kapha

Action - Deepan, pachan, yogwahi

2) Godughdha —

Rasa - Madhur
 Veerya - Sheet
 Qualities - Snigdha,
 Guru
 Doshghnata - Vatapittahar, Shleshmakar
 Action - Balya, Jeevaniya, Rasayan,
 Medhya, Deepan.

It reduces the adverse action of gandhaka & makes it easily digestible.

3) Dalchini —

Rasa - Katu, Tikta, Madhur
 Vipak - Madhur
 Veerya - Ushna
 Doshghnata - Kapha, Vataghna
 Qualities - Deepan, pachak, shoolghana, raktastambhak, kasaghna, hrudya.

4) Velchi —

Rasa - Katu
 Veerya - Ushna
 Doshghnata - Vatakaphaghna
 Qualities - Kandughna
 Vyadhipratyanikta - Shwas, Kasa, Arsha

5) Tamalpatra —

Rasa - Madhur
 Veerya - Ushna
 Qualities - Teekshna, Laghu,
 Picchila, Deepak, pachak.
 Vyadhipratyanikta - Vatarog, Arsha,
 Peenas, Hrullas, Aruchi

6) Nagakeshar—

Rasa - Kashaya, Katu
 Vipak - Katu
 Veerya - Ushna
 Doshpratyaniakta - Kaphapittaghna
 Vyadhipratyanikta - Deepak, Panchan,
 Hrudya, Vishaghna, Kandughna, Raktastambhak

7) Guduchi —

Rasa - Katu, Tikta
 Vipak - Madhur
 Doshpratyaniakta - Tridoshghna
 Qualities - Vrushya, Deepak,
 Pachak,
 Vyadhipratyanikta - Kushta, Meha,
 Raktadosh

8) Triahala —

Rasa - Pancharasa
 Veerya - Ushna
 Vipak - Madhur
 Guna - Laghu, Ruksha
 Qualities - Ruksha, Laghu
 Doshpratyaniakta - Tridoshghanta

PROERTIES –

Molecular formula	H ₂ O ₂
Appearance	very pale blue color, and colorless in solution.
Density	- 1.44 gm / cm ³
Melting point	-0.46 °C for 99.6% water solution

Prabhav -Rasayan, which means it builds ojas.

Pharmacology - Adaptogenic, anti-bacterial, anti-viral, anti-fungal, anti-histaminic, anti-inflammatory, anti-oxidant, blood-pressure lowering, cholesterol lowering, digestive.

Indication — Anaemia, bowel toxicity, bowel irregularity, chronic lung disease, constipation, diarrhea, eye disease, hypertension, skin disorders, yeast infection.

9) Maka-

Rasa - Tikta
 Vipak - Katu
 Qualities - Ampachak,
 Vishaghna

10) Ardraka —(Sunthi)

Rasa - Tikta
 Vipak - Katu
 Qualities - Deepak,
 Pachak, Sugandhi, Hrudya

GANDHAK RASAYAN: Bhavana dravyas reduces bad qualities of Gandhak & make it Rasayan, hence it activates all physiological activities. It increases the appetite & improves the metabolism of the digestive system.

Qualities — Veeryavardhak, Ayurvedhak, Kandunashak, Kushtaghna, Keshya, Vishdosimashak.

Vyadhipratyanikta — Atisar, Grahani, Vatarakta, Jeerna jwar, Prameha, Vatarakar. The main action of Gandhak Rasayan is deepan-pachan which improves digestion. Gandhak rasayan avoids infections & destroys process of pus formation.

HYDROGEN PEROXIDE

Hydrogen peroxide was first isolated in 1818 by Louis Jacques Thenard by reacting barium peroxide with nitric acid. 100% pure Hydrogen peroxide was first obtained through vacuum distillation by Richard Wohrensten in 1894. Hydrogen peroxide (H₂O₂) is a very pale blue, liquid which appears colorless in a dilute solution, slightly more viscous than water. It has strong oxidizing properties, disinfectant, oxidizer. Hydrogen peroxide is naturally produced as a by product of oxygen metabolism, and virtually all organisms possess enzyme known as peroxidases, which harmlessly catalytically decompose low concentrations of hydrogen peroxide to water and oxygen. Hydrogen peroxide is a simple chemical compound. Its water with an extra atom of oxygen attached to it. H₂O₂ Hydrogen peroxide is valuable as an oxidizing agent.

Other names — Dioxidodihydrogen, Dihydrogen dioxide,

Boiling point	150.2 °C
Solubility in water	Miscible
Acidity	11.65
Viscosity	1.245 cP at 20 °C
Dipole moment	2.26 D

Most of the microbes that cause infections (and are associated with Cancerous Tumors) don't like an oxygen rich environment. Some types of bacteria (anaerobic) can't survive at all if oxygen is present, while other bacteria can tolerate in low concentrations. Newer research indicates we need hydrogen peroxide for a multitude of other chemical reactions that take place throughout the body. For e.g., we now know that Vitamin C helps in fighting infections by producing hydrogen Peroxide, which in turn stimulates the production of prostaglandins. Also lactobacillus found in the Colon and Vagina produce hydrogen peroxide. This destroys harmful bacteria and viruses, preventing colon disease, virginitis, bladder infections and a host of other common ailments. Father Richard Willhelm is the pioneer in promoting peroxide use.

HYDROGEN PEROXIDE

Hydrogen Peroxide

Grade of Hydrogen Peroxide - Hydrogen Peroxide is available in various strength and grades.

- A. **3.5% Pharmaceutical Grade** - This product is not recommended for internal use.
- B. **6% Beautician Grade** - This is used in beauty shops to color hair and is not recommended for internal use.
- C. **30% Reagent Grade** - This is used for various scientific experimentation and also contains stabilizers. It is also not for internal use.
- D. **30% to 32% Electronic Grade** - This is used to clean electronic parts and not for internal use.
- E. **35% Technical Grade** - This is more concentrated product than the Reagent Grade and differs slightly in that phosphorus is added to help neutralize any chlorine from the water used to dilute it.
- F. **35% Food Grade** - This is used in the production of foods like cheese, eggs, and whey containing products. It is also sprayed on the foil lining of aseptic packages containing fruit juices and milk products. This is the only grade recommended for internal use. It is available in pints, quarts, willow, or even drums.
- G) **90%** - This is used as an oxygen source for rocket fuel. Only 35% Food Grade hydrogen peroxide is recommended for internal use. At this concentration however, hydrogen Peroxide is a very strong oxidizer and if not diluted, it can be extremely dangerous or even fatal.

20 volume of Hydrogen peroxide in much diluted form is used for gargles purpose. One volume of 20 volume H₂O₂ solution releases 20 - volume of nascent oxygen.

Properties –

- It is a cleansing agent.
- It destroys anaerobic organism and therefore used for cleaning the infected and contaminated wounds.
- It produces frothing and brings out the debris from the depth of wound.
- It produces heat when it comes in contact with tissue so it prevents capillary oozing and hence it is used as haemostatic solution.
- As Hydrogen peroxide is having oxidizing, haemostatic, antiseptic, antibacterial properties. It is used for gargles purpose after tonsillectomy.
- It also removes slough and debris and helps in granulation.
- Thus it is helpful in wound healing

GANDUSH

In all mukha roga local treatment plays a vital role.

The important types of local treatments given are –

- i. Pratisaran - (p`itsaarNa)
- ii. Kawal - (kvala)
- iii. Gandush - (gaNDUYa)
- iv. Nasya - (nasya)

Gandush is a procedure in which medicinal liquid is kept in a mouth for a certain period of time without movement inside, whereas Kawal is that which allows movements of the liquid. Gandush is usually done with liquids & kavala done with Kaika (paste of drug mixed with little water) For Gandusha One Kola of either a liquid or a powder is taken while for "Kawala" kalka is taken one Karsh. Gandush & Kavala are advocated after the age of 5 years. The person to lie given this therapy should be seated comfortably his forehead, neck & shoulder given mild fomentation, asked to take liquid in mouth hold it till his mouth get cleared of accumulated Kapha or other doshas or till he get secretion inside his nostrils or tears in eyes.

At a stretch 3, 5 or 7 gargles can be done to get rid of doshas. Vagbhata has described same four types.

- i) **Snehik** - containing Snigdha (isnagQa) & Ushna drugs used for Vatavikars (vaativakar).
- ii) **Shaman** — containing Tikta (it>), Kashay (kYaaya), Madhur (maQaur) drugs used for Pittavikaras (ip<aivakar).
- iii) **Shodhan** — containing Katu (kTU), Tikta (kYaaya), Amla (Amla), Lavan (lavaNa) & Ushna (JYNa) drugs used for Kaphavikaras.
- iv) **Ropan** – Containing Kashay (kYaaya), Tilta (it>), Katu (kTU), drugs are used for healing purpose.

Kankshi jal is used as Shodan & Ropan Gandush because Kankshi is having kashaya, Katu, Tikta rasa, i.e. having

Shodhan & Ropan property. It is also having haemostatic property & Shothaghna property therefore can be used for Gandush helping in wound healing.

Samyaka Lakshanas - A proper therapy of gandusha, brings about alleviation of diseases, deans mouth & stimulates sense organs.

Gandush Ayoga - Inadequate gargling therapy causes profuse salivation loss of taste perception & anorexia whereas excessive therapy produces ulcers, dryness, thirst & exhaustion

METHODOLOGY

The study of this project was totally based on clinical observations and the patient's narration.

Place of work — Ayurvedic Hospital of the College (Institute).

Selection criteria for patient's:- Total 60 patients undergoing tonsillectomy surgery were selected.

I) Inclusion criteria —

- Age 6-16 years.
- Patients ready for Gandush Trial.

II) Exclusion criteria —

- Patient below 6 years and above 16 years.
- Patients not willing for Gandush Trial.

The study was performed as an open, comparative and randomized trial on patients undergoing tonsillectomy surgery.

The study was performed in two groups:-

1) Group A — Trial Group Total 30 patients were selected in this group.

Treatment was given as follows:-

Systemic Treatment —

Drug	Dosage	Duration
Tab Sookshma Triphala	250mg for 6-12yrs age group 500mg above 12yrs age group	3 times a day for 7days
Tab Gandhak Rasayana	250mg for 6-12yrs age group 500mg above 12yrs age group	3 times a day for 7days
Anupana	Jal	
Local Treatment		
Haridra Kwath Gandush	40-100ml	3-4 times a day for 7 days

2) Group B — Control Group In this group 30 patients were selected undergoing Tonsillectomy surgery. Treatment received by this group was as follows:-

Systemic Treatment —

Drug	Dosage	Duration
Tab Sookshma Triphala	250mg for 6-12yrs age group 500mg above 12yrs age group	3 times a day for 7days
Tab Gandhak Rasayana	250mg for 6-12yrs age group 500mg above 12yrs age group	3 times a day for 7days
Anupana	Jal	
Local Treatment		
Hydrogen Peroxide 20- weak solution (5 ml in 100 ml)	40-100ml	3-4 times a day for 7 days

Follow up was done every day for 7 days and clinical observations were recorded in tabular form. The subjective gradation of symptoms was done. Intensity of each sign was calculated and was compared with control group. A special case paper formal was prepared for the study project.

The subjective gradations of symptoms was done as follows:-

Visual Analog scale was applied for gradation.

Visual Analog scale

0 mm ----- 100 mm

1) Throat Pain:-

0	No pain
+	Less pain
++	Moderate pain
+++	Severe pain
++++	Extreme pain

2) Dysphagia

0	No dysphagia during swallowing
+	0-25% dysphagia during swallowing

++	25-50% dysphagia during swallowing
+++	50-75% dysphagia during swallowing
++++	75-100% dysphagia during swallowing

3) Fever

0	No fever (Normal Temperature)
+	Low grade fever (99 to 100°F)
++	Medium grade fever (100 to 103°F)
+++	50-75% dysphagia during swallowing
++++	High grade fever (more than 103°F)

4) Speech with pain :-

0	Normal
+	Mild pain during speech
++	Moderate pain during speech
+++	Severe pain during speech
++++	Extreme pain during speech

5) Otagia:-

0	No pain
+	Mild pain
++	Moderate pain
+++	Severe pain

6) Foul smell :-

0	No smell
+	Foul smell

Slough:-

0	No slough
+	Whitish slough (Initial stage)
++	Yellowish white slough
+++	Whitish yellow slough

Congestion:-

0	No congestion
+	Mild congestion
++	Moderate congestion
+++	Severe congestion
++++	Extreme congestion

Bleeding or Clot:-

0	No bleeding
+	Present

All Clinical observations made recorded in a tabular form as follows:-

Signs/Symptoms	Shastrakarma	Shashtrakarmottar (Post Operative)					
		Day	Day	Day	Day	Day	Day
Temperature	Day	Day	Day	Day	Day	Day	Day
Throat Pain	1	2	3	4	5	6	7
Dysphagia							
Speech with pain							
Otagia							
Wound							
Slough							
Congestion							
Bleeding or clot							
Foul Smell							

The Subjective gradation of symptoms done as follows:-

- 0 - No pain
- + - Mild pain
- ++ - Moderate pain
- +++ - Severe pain
- ++++ - Extreme pain

OBSERVATIONS AND RESULTS

Group A — Trial Group

Group B — Control Group

Table 1: Age and Sex wise distribution of cases in Group A and Group B

Age (Yrs)	Group A			Group B		
	Male	Female	Total	Male	Female	Total
6— 12	12	12	24	10	15	25
>12	1	5	6	4	1	5
Total	13	17	30	14	16	30

In trial group A there were 24 patient in age group of 6-12 yrs. In group B (control) there were 25 patients between age group of 6-12 yrs. Age having > 12 there were 6 patients in trial group A and in control Group B there were 5 patients.

Table2: Comparison of Mean age between Group A and Group B

	Group A	Group B	t	P
	Mean ± sd	Mean ± sd		
Age in yrs	9.5 ± 2.5	10.1 ± 2.1	1.0	P > 0.05

In group A mean age is 9.5 and in Group B mean age was 10.1 indicating no significance difference (P>0.05) in both groups according to age.

Sex wise distribution of cases in Group A and Group B

Sex	Group A	Group B
Males	13	14
Females	17	16
Total	30	30

$$X^2 - 0.067, P > 0.05$$

In Group A there were 13 male patients while in Group B 14 male patients.

In Group A there were 17 Female patients while in Group B 16 Female patients indicating no significant difference (P > 0.05)

Table 3: Religion wise distribution of cases in Group A and Group B

Religion	Group A	Group B
Hindu	26	22
Muslim+ others	4	8
Total	30	30

In trial Group A there were 26 Hindu patients while 4 of other religion. In control Group B 22 Hindu patients and 8 patients of other religion. Wilcoxon signed rank test and Mann-Whitney test was applied for statistical data.

Table4: Day wise comparison of Fever in Group A

Day	Fever				Z	P
	0	+	++	+++		
I	20	10	0	0	-	-
II	29	1	0	0	2.7	P<0.01
III	29	0	0	0	3.1	P<0.01
IV	30	0	0	0	3.1	P<0.01
V	30	0	0	0	3.1	P<0.01
VI	30	0	0	0	3.1	P<0.01
VII	30	0	0	0	3.1	

In Trial Group A —

On first day 10 patients were having low fever.

On 2nd day there was significant change i.e. P < 0.01 only one patient was having fever. On 3rd day all patient had relief from fever.

Table 5: Day wise comparison of Fever in Group B

Day	Fever				Z	P
	0	+	++	+++		
I	16	14	0	0	-	-
II	28	2	0	0	3.4	P<0.01
III	30	0	0	0	3.7	P<0.001

IV	30	0	0	0	3.7	P<0.001
V	30	0	0	0	3.7	P<0.001
VI	30	0	0	0	3.7	P<0.001
VII	30	0	0	0	3.7	P<0.001

In Control Group — B: 14 patients were having low fever on 1st day. From 2nd day there was significant change i.e. P < 0.01 only 2 patients were having low fever. On 3rd day all patients had relief from fever.

Table -6: Day wise comparison of Fever in Group A and Group B

Day	Group A				Group B				Z	P
	0	+	++	+++	0	+	++	+++		
I	20	10	0	0	16	14	0	0	1.04	P>0.05
II	29	1	0	0	28	2	0	0	0.58	P>0.05
III	30	0	0	0	30	0	0	0	0	P>0.05
IV	30	0	0	0	30	0	0	0	0	P>0.05
V	30	0	0	0	30	0	0	0	0	P>0.05
VI	30	0	0	0	30	0	0	0	0	P>0.05
VII	30	0	0	0	30	0	0	0	0	P>0.05

In compression of both groups: - Both drugs are effective in reducing fever but trial drug has slight earlier effect.

Table 7: Day wise comparison of Throat Pain in Group A

Day	Throat Pain				Z	P
	0	+	++	+++		
I	0	7	15	8	-	-
II	0	4	17	9	0.94	P<0.05
III	0	14	15	1	2.7	P<0.01
IV	3	24	3	0	4.3	P<0.001
V	14	16	0	0	4.5	P<0.001
VI	28	2	0	0	4.8	P<0.001
VII	30	0	0	0	4.8	P<0.001

In Trial Group A –

On 1st day all patients were having throat pain

On 2nd day no significant change i.e. P> 0.05

On 3rd day significant change i.e. P< 0.01

On 4th day onward highly significant change i.e. P< 0.001

All patient had relief from throat pain on 7th day.

Tables 8: Day wise comparison of Throat Pain in Group B

Day	Throat Pain				Z	P
	0	+	++	+++		
I	0	2	17	11	-	-
II	0	0	18	12	0.60	P<0.05
III	0	5	21	4	2.35	P<0.01
IV	1	23	6	0	4.42	P<0.001
V	9	21	0	0	4.80	P<0.001
VI	27	3	0	0	4.89	P<0.001
VII	30	0	0	0	4.91	P<0.001

In Control Group B —

On 1st day all patients were having throat pain

On 2nd day there was no significant change i.e. P> 0.05

On 3rd day there was significant change i.e. P< 0.05

On 4th day onward highly significant change i.e. P< 0.001

All patient had relief from throat pain on 7th day.

Table 9: Day wise comparison of Throat Pain in Group A and Group B

Day	Group A				Group B				Z	P
	0	+	++	+++	0	+	++	+++		
I	0	7	15	8	0	2	17	11	1.46	P>0.05
II	0	4	17	9	0	0	18	12	1.37	P>0.05

III	0	14	15	1	0	5	21	4	2.63	P>0.01
IV	3	24	3	0	1	23	6	0	1.39	P>0.05
V	14	16	0	0	9	21	0	0	1.31	P>0.05
VI	28	2	0	0	27	3	0	0	0.46	P>0.05
VII	30	0	0	0	30	0	0	0	0	P>0.05

In Both Groups :- On 3rd day of treatment – Trial drug has significant effect on throat pain compared to control drug i.e. P<0.01.

Table10: Day wise comparison of Dysphasia in Group A

Day	Dysphasia				Z	P
	0	+	++	+++		
I	0	12	18	0	-	-
II	0	6	22	2	1.78	P<0.05
III	0	22	8	0	2.13	P<0.05
IV	9	21	0	0	4.50	P<0.001
V	22	8	0	0	4.98	P<0.001
VI	30	0	0	0	4.94	P<0.001
VII	30	0	0	0	4.94	P<0.001

On 1st day all 30 patients were having dysphasia.

On 3rd day there was significant change i.e. P<0.05 so trial drug has significant role in reducing dysphasia.

On 6th day all patients had relief from dysphasia.

Table 11: Day wise comparison of Dysphasia in Group B

Day	Dysphasia				Z	P
	0	+	++	+++		
I	0	3	19	8	-	-
II	0	3	22	5	0.68	P<0.05
III	0	19	9	2	3.64	P<0.001
IV	4	24	2	0	4.50	P<0.001
V	16	14	0	0	4.80	P<0.001
VI	27	3	0	0	4.87	P<0.001
VII	30	0	0	0	4.94	P<0.001

All patients were having dysphasia on 1st day.

On 3rd day of treatment there was significant change i.e. P<0.001.

All patients had relief from dysphasia on 7th day of treatment.

Table12: Day wise comparison of Dysphasia in Group A and Group B

Day	Group A				Group B				Z	P
	0	+	++	+++	0	+	++	+++		
I	0	12	18	0	0	3	19	8	3.5	P<0.001
II	0	6	22	2	0	3	22	5	1.48	P<0.05
III	0	22	8	0	0	19	9	2	0.96	P<0.05
IV	9	21	0	0	4	24	2	0	1.88	P<0.05
V	22	8	0	0	16	14	0	0	1.59	P<0.05
VI	30	0	0	0	27	3	0	0	1.76	P<0.05
VII	30	0	0	0	30	0	0	0	0	P<0.05

In Both Groups :- There was highly significant change i.e. P<0.001 on 1st day of treatment.

In Group A all patients had relief from dysphasia on 6th day and in Group B all patients had relief from dysphasia on 7th day.

It shows significant role of trial drug.

Table 13: Day wise comparison of Speech with pain in Group A

Day	Speech with pain				Z	P
	0	+	++	+++		
I	0	12	18	0	-	-
II	0	8	19	3	1.46	P<0.05
III	2	21	7	0	2.70	P<0.01
IV	13	17	0	0	4.49	P<0.001

V	30	0	0	0	4.94	P<0.001
VI	30	0	0	0	4.94	P<0.001
VII	30	0	0	0	4.94	P<0.001

In Group A –

On 1st day all patient were having speech with pain

On 3rd day of treatment there was significant change i.e P<0.01

All patient's speech was normal on 5th day of treatment.

Table 14: Day wise comparison of Speech with pain in Group B

Day	Speech with pain				Z	P
	0	+	++	+++		
I	0	12	17	1	-	-
II	0	5	24	1	1.60	P<0.05
III	0	24	6	0	2.71	P<0.01
IV	12	17	1	0	4.01	P<0.001
V	26	4	0	0	4.75	P<0.001
VI	29	1	0	0	4.85	P<0.001
VII	30	0	0	0	4.92	P<0.001

In Group B - All patient were having speech with pain on day 1st On 3rd day of treatment there was significant change i. e. P < 0.01 All patient's speech was normal on day 7th day of treatment.

Table15: Day wise comparison of Speech with pain in Group A and Group B

Day	Group A				Group B				Z	P
	0	+	++	+++	0	+	++	+++		
I	0	12	18	0	0	12	17	1	0.15	P<0.05
II	0	8	19	3	0	5	24	1	0.34	P<0.05
III	2	21	7	0	0	24	6	0	0.17	P<0.05
IV	13	17	0	0	12	17	1	0	0.40	P<0.05
V	30	0	0	0	26	4	0	0	2.05	P<0.05
VI	30	0	0	0	29	1	0	0	1.0	P<0.05
VII	30	0	0	0	30	0	0	0	0	P<0.05

In Both Group –

There was significant change on 5th day i.e P<0.05

In trial Group all patient's speech was normal on 5th day and in control Group on 7th day all patient's speech was normal.

It shows that trial drug has significant role.

Table16: Day wise comparison of Otolgia in Group A

Day	Otolgia				Z	P
	0	+	++	+++		
I	1	29	0	0	-	-
II	10	19	1	0	2.30	P<0.05
III	26	4	0	0	5.0	P<0.001
IV	30	0	0	0	5.38	P<0.001
V	30	0	0	0	5.38	P<0.001
VI	30	0	0	0	5.38	P<0.001
VII	30	0	0	0	5.38	P<0.001

In Trial Group A :-

On 1st day 29 patient were having otalgia

On 2nd day there was significant change i.e P<0.05

On 3rd day onward there was significant change i.e P<0.001

On 4th day of treatment all patients had relief from Otolgia.

Table 17: Day wise comparison of Otolgia in Group B

Day	Otolgia				Z	P
	0	+	++	+++		
I	0	30	0	0	-	-
II	3	27	0	0	1.73	P<0.05

III	16	14	0	0	4.0	P<0.001
IV	27	3	0	0	5.19	P<0.001
V	30	0	0	0	5.47	P<0.001
VI	30	0	0	0	5.47	P<0.001
VII	30	0	0	0	5.47	P<0.001

In Group B- All patients were having otalgia.

There was significant change on 3rd day of treatment i.e P<0.001.

All patients had relief from Otagia on 5th day.

Table 18: Day wise comparison of Otagia in Group A and Group B

Day	Group A				Group B				Z	P
	0	+	++	+++	0	+	++	+++		
I	1	29	0	0	0	30	0	0	1.0	P<0.05
II	10	19	1	0	3	27	0	0	1.84	P<0.05
III	26	4	0	0	16	14	0	0	2.79	P<0.01
IV	30	0	0	0	27	3	0	0	1.76	P<0.05
V	30	0	0	0	30	0	0	0	0	P<0.05
VI	30	0	0	0	30	0	0	0	0	P<0.05
VII	30	0	0	0	30	0	0	0	0	P<0.05

In Both Groups –

On 3rd day of treatment there was significant change i.e. P < 0.01 suggesting more efficacy of trial drug.

In Group A patient had relief from Otagia on 4th day and in Group B on 5th day suggesting efficacy of trial drug.

Table 17: Day wise comparison of Slough in Group A

Day	Slough				Z	P
	0	+	++	+++		
I	10	20	0	0	-	-
II	0	11	19	0	5.38	P<0.001
III	0	1	16	13	5.03	P<0.001
IV	0	3	12	15	4.68	P<0.001
V	0	11	16	3	4.13	P<0.001
VI	0	27	3	0	2.91	P<0.01
VII	19	11	0	0	2.06	P<0.05

In Group A – There was highly significant change on 2nd day onward of treatment.

On day 7th 19 patient were having no slough suggesting good healing properties of trial drug i.e. Haridra

Table 20: Day wise comparison of Slough in Group B

Day	Slough				Z	P
	0	+	++	+++		
I	11	19	0	0	-	-
II	0	11	19	0	5.30	P<0.001
III	0	0	18	12	5.0	P<0.001
IV	0	0	5	25	4.92	P<0.001
V	0	1	22	7	4.81	P<0.001
VI	0	20	10	0	3.52	P<0.001
VII	13	17	0	0	0.40	P<0.05

In Group B – There was highly significant change on 2nd day of treatment i.e. P < 0.001

Table 21: Day wise comparison of Slough in Group A and Group B

Day	Group A				Group B				Z	P
	0	+	++	+++	0	+	++	+++		
I	10	20	0	0	11	19	0	0	0.26	P<0.05
II	0	11	19	0	0	11	19	0	0	P<0.05
III	0	1	16	13	0	0	18	12	0.10	P<0.05
IV	0	3	12	15	0	0	5	25	2.82	P<0.01
V	0	11	16	3	0	1	22	7	2.98	P<0.01
VI	0	27	3	0	0	20	10	0	2.17	P<0.05
VII	19	11	0	0	13	17	0	0	1.54	P<0.05

In Both Groups – On day 4th & 5th of treatment there is significant difference i.e. $P < 0.01$ Indicating good wound healing properties of trial drug i.e. Haridra. On 7th day of treatment 19 patients were having no slough in Group A and in Group B 13 patients were having no slough indicating good efficacy of trial drug.

Table 22: Day wise comparison of Congestion in Group A

Day	Congestion				Z	P
	0	+	++	+++		
I	0	19	11	0	-	-
II	0	10	20	0	1.67	$P < 0.05$
III	2	27	1	0	3.0	$P < 0.01$
IV	16	14	0	0	3.94	$P < 0.001$
V	29	1	0	0	4.98	$P < 0.001$
VI	30	0	0	0	4.96	$P < 0.001$
VII	30	0	0	0	4.96	$P < 0.001$

In Group A –

On 1st day all patients were having congestion in throat

On 4th day onward there was highly significant change in congestion i.e

$P < 0.001$ All patients had relief from congestion on 6th day of treatment.

Table 23: Day wise comparison of Congestion in Group B

Day	Congestion				Z	P
	0	+	++	+++		
I	0	27	3	0	-	-
II	0	3	27	0	4.53	$P < 0.001$
III	1	26	3	0	0.44	$P < 0.05$
IV	6	23	1	0	2.30	$P < 0.05$
V	21	9	0	0	4.52	$P < 0.001$
VI	30	0	0	0	5.26	$P < 0.001$
VII	30	0	0	0	5.26	$P < 0.001$

In Group B – On 5th day onward of treatment there was highly significant change in congestion i.e $P < 0.001$ All patients had relief from congestion on 6th day of treatment.

Table 24: Day wise comparison of Congestion in Group A and Group B

Day	Group A				Group B				Z	P
	0	+	++	+++	0	+	++	+++		
I	0	19	11	0	0	27	3	0	2.42	$P < 0.05$
II	0	10	20	0	0	3	27	0	2.17	$P < 0.05$
III	2	27	1	0	1	26	3	0	1.12	$P < 0.05$
IV	16	14	0	0	6	23	1	0	2.74	$P < 0.01$
V	29	1	0	0	21	9	0	0	2.74	$P < 0.01$
VI	30	0	0	0	30	0	0	0	0	$P < 0.05$
VII	30	0	0	0	30	0	0	0	0	$P < 0.05$

In Both Groups — On 4th and 5th day of treatment there was highly significant difference i. e.

$P < 0.01$ suggesting good efficacy of trial drug.

Table 25: Day wise comparison of Bleeding in Group A

Day	Bleeding				Z	P
	0	+	++	+++		
I	28	2	0	0	-	-
II	30	0	0	0	1.41	$P < 0.05$
III	30	0	0	0	1.41	$P < 0.05$
IV	30	0	0	0	1.41	$P < 0.05$
V	30	0	0	0	1.41	$P < 0.05$
VI	30	0	0	0	1.41	$P < 0.05$
VII	30	0	0	0	1.41	$P < 0.05$

In Group A — 2 patients were having clot on 1st day which dislodged on 2nd day of treatment.

Table 26: Day wise comparison of Bleeding in Group B

Day	Bleeding				Z	P
	0	+	++	+++		
I	26	4	0	0	-	-
II	29	1	0	0	1.73	P<0.05
III	30	0	0	0	2.0	P<0.05
IV	30	0	0	0	2.0	P<0.05
V	30	0	0	0	2.0	P<0.05
VI	30	0	0	0	2.0	P<0.05
VII	30	0	0	0	2.0	P<0.05

In Group B – 4 patients were having clot in fossae on 1st day of treatment. All patient had relief from clot on 3rd day.

Table 27: Day wise comparison of Bleeding in Group A and Group B

Day	Group A				Group B				Z	P
	0	+	++	+++	0	+	++	+++		
I	28	2	0	0	26	4	0	0	0.85	P<0.05
II	30	0	0	0	29	1	0	0	1.0	P<0.05
III	30	0	0	0	30	0	0	0	0	P<0.05
IV	30	0	0	0	30	0	0	0	0	P<0.05
V	30	0	0	0	30	0	0	0	0	P<0.05
VI	30	0	0	0	30	0	0	0	0	P<0.05
VII	30	0	0	0	30	0	0	0	0	P<0.05

In Both Group – There was no significant difference in both groups.

Table 28: Day wise comparison of Foul Smell in Group A

Day	Foul Smell				Z	P
	0	+	++	+++		
I	30	0	0	0	-	-
II	30	0	0	0	-	-
III	30	0	0	0	-	-
IV	30	0	0	0	-	-
V	30	0	0	0	-	-
VI	30	0	0	0	-	-
VII	30	0	0	0	-	-

In Group A- No Patient was having foul smell.

Table 29: Day wise comparison of Foul Smell in Group B

Day	Foul Smell				Z	P
	0	+	++	+++		
I	30	0	0	0	-	-
II	30	0	0	0	-	-
III	30	0	0	0	-	-
IV	30	0	0	0	-	-
V	30	0	0	0	-	-
VI	30	0	0	0	-	-
VII	30	0	0	0	-	-

In Group B - No Patient was having foul smell.

DISCUSSION

With the given observations, now it is a time to draw some conclusions. In this Chapter I am trying to discuss on observation to draw conclusions.

1) **Fever:-** In trial Group 'A' 10 patients were having low fever on 1st day of treatment, all of them had relief from fever on 3rd day. Even 29 patients had relief from fever on 2nd day. So Haridra Kwath Gandush along with Sookshma Triphala & Gandhak Rasayana plays important role in reducing fever. The disease is

characterized by obstruction to sweating, rise in body temperature & bodyache is called 'Jwara' Agnimandya, amotpatti & transit of ama preceded by pitta from amashaya to rasadhātu gives rise to jwara i.e. fever. Haridra is having tikta, katu rasa & ushna viiya therefore increases tissue fire of rasa dhatu or rasagni & digests ama .Sookshma Triphala & Gandhak rasayan have antipyretic action when used systemically.

2) **Throat pain:-** Patient in trial group on 5th day 14 patients had relief from throat pain while, in control

group 9 patients had relief from throat pain on 5th day of treatment. Pain is always aggravated by Vata. The drug Haridra is having Ushna Virya, acts as analgesic. It also pacify Kappa & digest Kappa causing Vatanulomana & reduces pain. Hence. Haridra reduces throat pain earlier than Hydrogen Peroxide by reducing inflammation.

3) Dysphagia:- In trial Group all patients had relief from dysphagia on 6th day of treatment while in control group all patients had relief from dysphagia on 7th day. Even in trial group on 5th day 22 patients had relief from dysphagia. while in control group only 16 patients had relief from dysphagia. Dysphagia means difficulty in swallowing may be due to local pain or due to odyphagia. Haridra digests ama & pacify cough by their Ushna, Ruksha, Laghu gunas & by Katu Vipak. Thus it relieves dysphagia earlier by reducing pain & inflammation & thereby reducing impeded movements of palate due to inflammation.

4) Speech with pain:- In trial group all patients speech was normal on 5th day, while in control group on 7th day of treatment all patients speech was normal. Haridra is having tikta, katu rasa & ushna virya, anti-inflammatory (Shothaghna) property therefore it is effective in reducing pain & excessive salivation.

5) Otagia:- Otagia is referred pain from gloss pharyngeal nerve which runs along the -bed of tonsillar fossa. In trial group A on 3rd day 26 patients had relief from otagia while in control group B only 16 patients had relief from otagia Haridra is effective in reducing pain by its anti-inflammatory property. Its also faster in healing of wounds therefore reducing referred pain.

6) Slough:- In trial Group A 19 patients were not having slough on 7th day while in control group 13 patients were not having slough. Haridra Kwath Gandush gives healthy granulation which reduces slough formation. It is having katu, tikta rasa & ushna virya. It is also having lekhan property therefore it is described having Vranaghna, Krimighna, Vamya properties helpful in wound healing.

7) Bleeding or Clot:- The bleeding in post operative period occurs mainly due to primary haemorrhage immediate to operation & secondary haemorrhage due to infection. In trial Group 'A' only 2 patients were having clot on 1st day which dislodged on 2nd day while in control Group 'B' 4 patients were having clots which dislodged on 3rd day. Haridra is having haemostatic property due to its ruksha guna, ushna virya.

8) Congestion:- Congestion is due to tissue damage during operation. Inflammation causes Congestion. In trial group 29 patients had relief from congestion on day 5th while in control group only 21 patients had relief from congestion on day 5th of treatment. Haridra having Vranaghna, Lekhana, Ropana properties as well as Kaphaghna properties thus it acts as anti-inflammatory drug.

9) Foul Smell:- It is caused by infected wound & sepsis. In both groups there was no foul smell.

CONCLUSION

From all observations & discussion made it can be concluded that —

- 1) Tonsillitis is common in female patients.
- 2) It is common in age group 6-16 years.
- 3) Haridra Kwath gandush in post operative tonsillectomy is found to be very effective in wound healing. Healing is faster without any complications
- 4) Throat pain, dysphagia were definitely less in trial group as compared to control group.
- 5) Speech came to normal in patients earlier in trial group as compared to control group.
- 6) Hydrogen peroxide gargles are also effective in post operative wound healing but symptoms were relived earlier in trial group as compared to control group.
- 7) Haridra is used domestically everywhere especially in food products so cheap, easily available easy to use & safe in children. On other hand Hydrogen peroxide if taken in higher concentration can be fatal especially not safe for children.
- 8) So results are definitely encouraging & should be used post operative wound healing routinely in everyday practice for faster & safe recovery with better immunity.

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