



A REVIEW ON PHARMACEUTICAL AND THERAPEUTIC ASPECTS OF *NARIKEL LAVANA* - AN AYURVEDA REMEDY FOR DIGESTIVE DISORDER

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ABSTRACT

Digestive disorders are on rise now a days due to sedentary life styles and unhealthy eating pattern. In spite of using high antacids and anti-flatulence drugs there is no sure cure for these ailments. Ayurveda has unique remedies which are palatable, easily available and cost effective. *Narikel Lavana*(NL) is one such remedy having good therapeutic as well as nutritious values but not so popular. So present paper aimed to explore pharmaceutical and therapeutic properties of *Narikela Lavana*. NL is easily prepared with very few ingredients i.e. *Narikela*(Coconut) and *Saindhava* (Rock Salt). Review through Ancient classics of Ayurveda found that it has been prepared in two different way. It may be prepared by using *Jala*(water) or without *Jala* inside the cavity of raw coconut. Therapeutic properties of NL shows wide indications on hyper Acidity and related side effects. It is also used in gall stones and related pain. Various research work on the topic claimed presence of active Charcoal and important element contents such as Na, K, and Mg etc. As this remedy has minimal ingredients and short processing technique with wider therapeutic potential on digestive disorders it need to explore by Ayurved physician with frequent use and document more clinical success stories in order to get a popularity to this remedy.

Keywords:*Narikel Lavan, Jala, Charcoal, digestive disorders.*

INTRODUCTION: Ayurveda has been gaining popularity for various day to day remedies. It has a hidden gems in the form of unique formulations. But sometimes due to cost factors in case of *Rasaushdhies* (Mineral Based medicines) and palatability in case of herbal remedies it is been sidelined over modern medicine. It also has a myth that Ayurveda medicines are only used in chronic disorders. So it is a challenging task on part of Ayurveda fraternity to convince people regarding the medication which are palatable, easily available and cost effective also. Hence it's time to explore such medication which has not been used often and not popular among common public.

In today's scenario it is observed that life style changes has a big impact on health issues leads to common digestive problems such as Acidity, Indigestion, Constipation etc. So it needs a sure short remedy to treat such ailments. *Lavan kalpana* is such a medication which can cure such ailments without side effects. *Lavan Kalpana* is mentioned in *Bhaishjya Kalpana*(Science of Ayurvedic Pharmacology) under various dosage form. Its contents are very cheap and easily available. However, many *Lavana kalpas* are mentioned in the literature of Ayurveda Pharmaceutics only few *Lavana* are in practice and hence there remains a wide scope for research in this dosage form. As well as natural *Lavana* described in Ayurvedic science and their

chemical composition in modern parameter.¹

Narikel and *Arka Lavana* are well-known *Lavana* in Ayurveda pharmaceuticals. In *Narikel Lavana*, *Supakwa Narikel* (Coconut having water) and *Saindhav* (Rock Salt) are two important contents in *Narikel Lavana*. Its pharmaceutical processing is not as tedious as compare to other dosage form. It is a two day process with easily available contents.

As there are number of pharmaceutical preparation for gastrointestinal tract disorders in Ayurveda, *Narikel Lavan* is quite unexplored in terms of its therapeutic potential for gastric disorders. Few pharmaceutical companies market it. Therefore, it is an attempt to explore such significant assets of Ayurveda, which will ensure cost effective medication to people suffering from digestive disorders. Hence, in present paper pharmaceutical and therapeutic aspects are reviewed in order to stress over its importance in GI disorders.

METHODS AND MATERIALS

For present Study various Ancient Classics of Ayurveda were referred. Also various National and International Journals were reviewed.

Lavana Kalpana: *Lavana Kalpas* is one where *Lavana* (salt) is the main ingredient in the formulation. It is prepared by combining *Lavana* along with different herbs and then subjected to heat. *Narikela lavana* has been in use since 11th century. *Acharya Chakarapani* has described it first time in “*Parinaam shool Chikitsa*”² i.e. in pain related to gastric disorders.

Lavanas is widely described in Ayurvedic classics. There are mainly five varieties of

Lavanas used frequently in Ayurveda. It is categorized under *Lavantraya* and *Lavan panchaka*. Amongst them *Saindhava Lavana* is the best.³ *Saindhava Lavana* is considered as Sodium chloride/Rock salt.

Pharmaceutical processing of *Narikel Lavana* (NL)

According to *Rasatarngini*⁴

Contents

1. *Supakwa Nirikel*-1
2. *Saindhav Lavan*-10 tola (Approx 100gms)

Procedure: Remove external hard fibrous material from outer surface of *Supakwa* (Fully ripened) *Narikel*, then make a hole at one intended side to fill powdered rock salt. Before that water should be removed from the cavity of coconut. After tight packing of rock salt inside, the hole should be packed properly. It is then smeared with mud (*Multani Mitti*) of one *Angule* (one cm) thickness. It is then allowed to dry in sunlight. It is then again smeared with cow dung and then exposed to fire in *Mahaputa* (Capacity of 1500 Cow dung). After cooling it is removed from ash and removed external stuffing. Hard coconut shell should be removed and collect soft mass including *Lavana* and grounded in *Kalwa* to get Black colored fine powder. It is then preserved in glass airtight container.

According to *Bhavprakash –Shulroga*⁵

Acharya Bhavmishra has followed the same procedure of *Rasatarngini* only difference is; the procedure should be done with *Sajala Narikela* i.e. *Saindhava* should be filled in presence of water inside the cavity of coconut.

According to *Ayurved Sarsangraha*⁶

In Ayurveda *Sarsangraha* the procedure was same as *Rasatarngini*. It advocates removing of *Narikel Jala* from cavity

before filling *Lavana*. Only difference is that after completion of process while collecting of *Narikel Lavana*, mere *Lavana* part is collected and grounded. Here soft black part was not taken for therapeutic purpose.

With the advent of technology modern machineries are employed in the preparations and research works have been carried out to analyze the *lavana kalpas* prepared with conventional and modern techniques.⁷

So now a day's according to convenience Electric furnaces is used in place of conventional *putas*. Few researches regarding comparative study in modern and conventional methods is carried out to find difference.

Golecha Paras D et al. (2016)⁸ in the study on "Comparative Analytical Study of *Sajala* and *Nirjala Narikel lavana*" has concluded that implementation of either of the methods for obtaining *Narikel Lavana* showed remarkable difference in majority of the physico- chemical properties. XRF analysis has shown that *Nirjala*(without water) *Narikel Lavan* contains higher amount of elemental Calcium as compared to *Sajala Narikel Lavana*. The pH of *Sajala Narikel Lavana* is higher than that of *Nirjala Narikel Lavana*.. Preparation of *Sajal Narikel Lavan* required comparatively lesser heat, i.e. lesser amount of fuel is consumed during the entire procedure as compared to *Nirjala Narikel Lavana*.

Yadav S. et al. (2017)⁹ has concluded in the study on "Characterisation of *Narikela lavana*." that *Narikel Lavana* is basically a nanocrystalline material which consists of activated carbon and other elements like Na, K, Cl, Mg etc. The porous surface of activated charcoal has a negative electric

charge which will attract the positive charged unwanted toxins and gas and help to remove them. It also helps in moving unwanted bacteria through the digestive tract faster so that before they multiply and spread, they are eliminated from the body. Study also noticed alkaline nature of *Narikela Lavana*.

Vasavdutta et al.(2015)¹⁰; in the study on "Activated charcoal- In *Narikela lavan*?" has tested *Narikel Lavana* with the help of Modern chemistry and concluded that at such temperature activated charcoal is produced. So *Narikela Lavana* was tested by common test of methyl orange and iodine solution for presence of activated charcoal. Discoloration was observed in both the tests which indicate that activated charcoal is formed in *Narikela Lavan*.

Niteen M. Khamkar et al. (2017)¹¹ in a Pharmaceutical and Analytical Study of *Narikela Lavana*, has concluded that maximum temperature required for the process is between 800-820⁰C. *Narikela Lavana* prepared without its water contains less percentage of Potassium (K) as compared to *Narikela Lavana* with water. Yield of *Narikela Lavana* by taking *Narikela* without its water is more as compared to *Narikela* taken with its water for pharmaceutical preparation.

Balkrishan Acharya et al.(2016)¹²,in the study of "Structural and Optical studies of Traditional Indian Medicine: *Kajjali* & *Narikela Lavan*" it has been observed that both *kajjali* and *Narikela Lavan* are highly crystalline in nature and are also showing significant optical properties. Smooth surfaces of small grains of *Narikela Lavan* helps in better absorption and hence concluded that herbo-mineral drugs are conceived to be more effectual than any other healing systems because these

nanocrystalline drugs can enter into the blood stream and are more biocompatible as compared to any chemically prepared entity, similar to biologically prepared nanoparticles.

Therapeutic Dose and uses of Narikel Lavana

Dose-2 Masha (2gms)

Indication: *Pittanashana*(Pacify Pitta), *Amlapitta* (Hyperacidity), *vatajapittaja-kaphaja-sannipataja Shula* (colic).

Narikel is an important ingredient in NL. It has enormous medicinal properties apart from nutritional values. The kernel of fruit contains nitrogenous substances' glucose, and other similar substances. Coconut milk contains protein, sucrose, and vitamin A and B". It is *Madhur*, *Shitviryā* and *Madhurvipaka*. It is indicated in various digestive disorders such as *Amlapitta* (Acidity), *Parinamashula*(Pain due to Duodenal Ulcer), *Gulma* (Distention due to *doshas*, *Atisara-raktatisara*(Diarrhoea and Dysentery)¹³

Saindhava Lavana has been considered as a medicinal qualities as compare to other salts and is compatible with everybody. It has medicinal properties such as *Hridya* (Good for heart), *Netrya*(Good for eyes), *Vrishya*(Good for fertility), *Dipan-Pachana* (Improve appetite and digestion)and Pacify all three *Doshas*. As it increase gastric secretion it is helpful in relieving constipation.¹⁴

In therapeutic activity of NL is a good for *digestion* and *Pitaashamana*(Pacify Pitta).It relieves acidity and related pain. It alleviates Pain induced due to gastric and duodenal ulcers. It is mainly mentioned for choly-lithiasis and choly-cystitis Hence NL is prescribed with *Nousadar* and *Javashkar* powder with water with dose of 2gms.¹⁵ *Narikel Lavana* is taken with

Pippali Churna in *Vataj, Pittaja, Shleshmic* and *Sannipataja Shula*.¹⁶

The probable mode of action of NL is due to its alkaline nature. Mostly in its therapeutic activity it acts on disturbances of gastric acid and its complication. In hyperacidity it neutralize excessive acid in stomach. Gastric ulcer and duodenal ulcer both are the complication of extreme acidic conditions. Gall stone formation is most common among patients having frequent Acidity. *Vishyandi* and *Bhedan* properties of *Saindhava* might help to dissolves the stones in Gall Bladder. Mahajan rashi et al (2016)¹⁷ in the study of *Narikela Lavana* in *Amlapittaa*(Acidity)has concluded with statistically significant result on various symptoms of Acidity with use of *Narikel Lavana* 250 mg twice daily for two months.

DISCUSSION

Lavan Kalpana one such formulation in *Bhaishjya Kalpana*, which is been easily prepared with less, affords. It is mentioned since ancient times for *Parinam shula* but rarely practiced by physicians for therapeutic purposes. It's clear pharmaceutical techniques are mentioned in *Bhavprakashā, Rasatarangini* and *Ayurved Sarasangraha*. While reviewing its pharmaceutical aspects it is observed that there are few disagreements over selection of *Sajala* and *Nirjala Narikel* and the part to be collected by the end of the process. As *Narikela Jala* has nutritious and medicinal properties, it is taken in use by some *Acharyas*. Others for convenience and fear of breaking of coconut at the time of Procedure, removes water before packing Salt. In analytical study it got higher PH with *Sajala Narikel* with less fuel consumption but higher elemental

calcium with *Nirjala Narikel*. In another analytical study about Characterization of *Narikela lavana* confirmed active charcoal formation which may help to adsorb Poisonous substances and extra acid in GI tract. Various important elements such as Na, K, Mg etc. are also observed in the study. Hence elemental contents in salt as well as in Coconut boost therapeutic potential of NL. Less Potassium content was observed in *Nirjala Narikela* in another study but the yield is more. In structural and Optical study of NL, Nano crystalline form was observed which advocates easy absorption of drug in blood stream. Most of the observation in these study help to guide further study but major factors such as temperature, use of fuel sources, size of *Narikel*, width of packing material will decide yield ,elemental analysis, formation of activated charcoal or not and final product estimation. So there need a repeated study on various pharmaceutical features of NL.

In therapeutic aspects it can be said that due to colossal properties of both *Saindhava* and *Narikela*, its preparation is beneficial in Various ailments. Apart from relieving acidic conditions and related pain due to its alkaline property it is also indicated in *Pittashoshaja shula* which capture the attention for this medication. There is only symptomatic relief in modern medicine and final treatment is surgry.so there need to study of NL along with proper vehicle on choly-lithiasis i.e. Gallstones in order to get promising medicine which could save patients from surgery. Regarding controversy over collection of only *Lavan* or Charred Coconut with *Lavana* will be the part of research. It could be proved by analytically and therapeutically. There is also need to

rule out role of *Anupana* with NL for its synergistic action.

CONCLUSION

Ayurvedic Pharmaceutics has enormous strength in healing mankind with the help of its precious formulation. *Narikel Lavan* is such a remedy which is easy to prepared , palatable and cost effective.

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Source of support: Nil Conflict of interest: None Declared

Cite this Article as : [Dongre Sushma et al : A Review on Pharmaceutical and Therapeutic Aspects of Narikel Lavana - An Ayurveda Remedy for Digestive Disorder] www.ijaar.in : IJAAR VOLUME IV ISSUE IV SEP - OCT 2019 Page No: 361-366