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A Jal Neti: A Public Hygiene in Covid-19

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ABSTRACT:

Corona virus disease 2019 is an infectious disease caused by a newly discovered corona virus. most people infected with the covid-19 virus will experience mild to moderate respiratory illness and recover without special treatment, while co morbid patients are more likely to develop serious illness. The best way to prevent its spread is to be well informed in general public. The virus spreads primarily through droplets or discharge from infected person. The nose and mouth represents entry portals for the covid 19 and also it is the place where viral load is highest. Many systemic medications, treatments and measures have been proposed. *Neti karma* mentioned as a *shatkarma* in yoga as a way of body cleansing from toxins can be and additional measures for the current public health to reduce the viral load in nasal cavities and may prevent and control this pandemic.

Key words: Covid 19, Precautions, *Jala Neti*, *Neti*, Public health.

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INTRODUCTION:

All over the globe this pandemic has changed so many things; peoples activity, working styles, health facilities and what not. Even though after so many months there is no treatment or vaccine however several clinical trials are going in different countries with the aim of testing some promising drugs. While waiting for the treatment, preventive measures are the key to prevent further transmission of the disease. Self hygiene regimen is seen as key in terms for prevent spread from infected person to the community. When every single person will practice safety measures then only whole community will be in disease free environment. Infectious disease have wreaked havoc on human communities since ancient times and meantime various methods were

adopted and practiced by people to control deadly situations. In yoga, hygiene is given lots of importance because it is very clear that we can do many things as treatment but if hygiene is not maintained person can get into trouble, so first we do certain hygienic activity that is called *Shudhikriya*, mentioned in our ancient *yoga* text and *granthas* that can be proven very beneficial during this pandemic time, if used properly. Bunch of these *kriya* are named as *Shatkarma*¹ in texts. *Shat* means six and *karma* means work that is six types of different way to cleanse and detoxify whole body in simple *yogic* manner. *Jal Neti*² is one of these *Shatkarma* that is used to cleanse whole nasal passage. As this is active airway and it need to be taken care hygienically because if somebody has infection after coughing sneezing and

talking, this air goes to the atmosphere and from here into the normal person body through same nasal passage and cause disease. This can also decrease viral shedding in upper respiratory infections helping patients feel better resolving symptoms in less time and potentially reducing transmissibility of the virus. Most of the focus early in the fight against virus centered on hand hygiene, hardly anyone talked about nasal hygiene. Several studies have identified the nasal cavity and nasopharynx as the primary sites of viral entry, replication and expulsion. It is also the place where viral load is highest and where the virus is most likely to exit the body when a person coughs sneezes or breathes.

AIMS

This article aims to give brief information about general public health regimen for preventing spread of disease and to avoid further prognosis if infected.

MATERIALS AND METHODS:

To review *Jal neti kriya* described in Ayurveda and yoga various available information in Samhitas, textbook, journal's articles , research paper, trials and websites

all are gathered here to make it optimum to understand the full concept.

RESULT AND DISCUSSION

The corona virus disease pandemic has ignited interest in viral transmission and prevention owing to the significant morbidity and mortality associated with the severe acute respiratory syndrome³. Many Pathophysiologies suggest that similar to other respiratory infections, infection primarily occurs in the nasal and nasopharyngeal mucosa with high viral load early in diseases. Jal neti kriya may serve as panacea for helping in covid spread if done properly with mindful in reducing viral severity and further transmission. Many people in this modern time knew it as nasal irrigation or nasal cleansing also but its originality is same. Neti kriya is considered as one of the simplest yet powerful process for nasal hygiene traditionally used in yoga. It is one of the six purification procedures or *shatkarma* mentioned in *Hath Yoga Pradipika*. In yoga it is advised in most respiratory related problems, the area above clavicle *Urdhwajatrugata Roga* and supraclavicular region including sinus infection, cold tinnitus, asthma, bronchitis, headache, sleep apnea and allergies. In this process the nasal passage, nasopharynx and

oropharynx are cleaned with saline water via a Jal neti or sutra neti. Jal neti is done with the help of a “neti pot” filled with lukewarm saline water although some people have used milk also. sutra neti is little inconvenient as thread is used for cleansing and its good if done under expert supervision so Jal neti is widely promoted and can be more beneficial in preventing and managing covid cases. The nasal lining serves an important role in the innate immune system, providing a primary defense against inhaled viruses, bacteria and other particulate.⁴ This lining, consist of a superficial mucus layer top an aqueous base, traps inhaled particulates that are propelled by underlying cilia into the nasopharynx. They are ultimately driven into gastrointestinal system where they are destroyed. Topical nasal rinses physically disrupt the viscous surface layer, removing the mucus and its associated particulate matter also its helps to increase hydration of the deeper aqueous layer, improving the underlying ciliary beat frequency and reducing local inflammatory mediators. Possible mechanism of action of hypertonic saline gargles and nasal wash is same the chlorite ion⁵, which the cells in nasal and pharyngeal mucosa convert into hypochlorous acid which has anti viral

properties as well as found in bleaching powder as an active component for disinfection. Saline is also used in washing and cleaning wounds traditionally may also act similarly in providing relief in inflamed upper airways. Epithelial cells mount on antiviral effect by producing hypochlorous acid and have the innate antiviral immune mechanism to clear viral infection and some range of DNA and RNA enveloped or non enveloped were inhibited in presence of chloride ions supplied via salt.⁶ It also help in Clearance of excess mucus, improving ciliary function thereby mucocilliary clearance, decongestion, improving breathing and reducing cough. Many research concludes that saline nasal cleansing removes all the dirt and pathogens filled mucous from the nasal cavity, this process improves the mucocilliary functions in the nasal and sinus cavity, thereby effectively removing inflammatory mediators also help in reduction of the congestion and washing of the thick secretions.

Preparations⁷

Neti pot is a small ceramic, plastic, brass, stainless steel pot or any other metal which does not contaminate water is used for nasal cleansing, rinsing, washing or douching

with lukewarm salty water. It resembles a small teapot with a long tapered spout. This pot has approx capacity of 200 ml. Firstly, boil one litre of water later cooled down 38-40°C or use distilled water to make saline solution. Before starting process neti pot is sterilized, boil the device in water for five minutes, rinse the inside of the device and clean rest of it with isopropyl alcohol. Leave open to air dry. Add 1 tsp of salt in one litre of water to make saline.

- This process is done very calmly and in stable position. Person have to sit down in *kagasana* or can also stand straight with feet 1-foot apart and bend towards the front to let the water flow in the right position
- Place the neti pot spout gently in nostril little inserted and Tilt head in the opposite direction of the active nostril.
- Let the mouth open throughout the neti process and slowly breathe through it.
- Water is allowed to flow in through one nostril and out through the other.
- After done with half of the water approximately, put the pot down , stand erect and forcefully breathe out to clear both the nostrils.
- Now use the remaining water to practice the same on the other nostril.
- After finishing the process on both the sides, firstly stand erect and exhale forcefully three five times from both the nostril in all directions to get all the water out right, left, top and bottom nostrils while holding the other nostril shut, secondly bend forward from the waist so that the trunk is horizontal and repeat the same process described above.
- This helps to drain trapped water from the sinus cavities.
- If necessary , perform shashankasana for several minutes to allow the drainage of any remaining water.

Precautions⁸

- After performing the Jal neti, either *bhastrika* or *kapalbhati* for 25-30 times should be performed to take out remaining water or *kapha*.
- While performing the above breathing process, one should avoid blowing very hard as it may push the water into the ears.
- The proportion of salt to water should be taken care of every single time and not mess it up.

- Gently breathe through the mouth while performing the neti kriya.

Practice time⁹

- The best time is either in morning or evening.
- During this pandemic time one can do it at anytime once or twice a day.
- Doing after completing job or coming back at evening from work place will be more beneficial

Contraindications

Any person who has stable hand and mind from 18 to 100 year can perform this karma except people having cleft palate, Parkinson's disease, cleft lips, deviated nasal septum, ear infections, chronic bleeding nose and during colds, flu or sinusitis, when nose is totally blocked neti should be avoided¹⁰.

CONCLUSION

Shatkarma is a very precise and systemic science of purification process as described in early yoga Upanishads and aim is to attain physical, mental purification and balance. This pandemic has created very huge effect on life style and day to day activities. Many studies suggest that viral RNA levels are higher and more frequently detected in nasal specimens as compared to oral samples. Therefore recommendation of Jal neti like can help in decreasing viral load. Cells in throat and nasal mucosa convert chloride ion to hypochlorous acid having antiviral effect. It also have potential of helping patients to fight against the severe acute respiratory syndrome corona virus.

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