

Nasal Irrigation as a Complementary Strategy in Preventing COVID-associated Mucormycosis: Standardizing the Technique can have Far-reaching Implications

Sanjeev Rastogi¹, Rajiv Rastogi²

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Sir,

This was highly gratifying to read the editorial “Can Nasal Irrigation Serve as a Complementary Strategy for Preventing COVID-associated Mucormycosis?” in the recent issue of JCDP.¹ This much needed editorial was in time focused and with right emphasis upon saline nasal irrigation popularly known as *jala neti* (JN) in Yoga and Ayurveda as a simple measure to prevent rhino-orbital-cerebral mucormycosis in vulnerable population. Similar sentiments have earlier been shared by the authors by emphasizing that the use of saline nasal irrigation (*jala neti*) in SARS-CoV-2 infection and its complications like mucormycosis should be given a serious consideration.² This was rightly pointed out in the editorial that this simple, low cost, and by and large safe technique of JN may have substantial applications in the prevention of many nasal conditions of infective origin and can play decisively in the prevention of complications of deadly conditions like rhino-orbital-cerebral mucormycosis where real cures are still far from sight.

The editorial has given scientific reasoning about why NaCl solution can act as a good broad-spectrum antimicrobial agent even when used for wetting of the nasal cavity and how the large amount of saline (as is used in JN) can be used effectively to wash the microbes and inflammatory exudates from nasal mucosa and can restore mucociliary function. The editorial also took the cognizance of solutions other than saline which could have been used for nasal irrigation purpose. Baking soda irrigation seems promising in cases of diabetes acidosis.

Authors also presented their view upon how future researches including *in vivo* and *in vitro* models can be used to define the mechanistic details of JN. The idea of doing pooled researches in JN by duly involving every stakeholder including Ayurveda, yoga, naturopathy, ENT, oromaxillary and dental practitioners would be most rewarding as it will help creating a greater pool of patients suitable for JN and will help making the uniform observations based upon standard clinical or investigational parameters.

Classical JN technique has often been criticized for its cumbersome methodology and potential of possible mechanical harm either through the mechanical tip of the neti pot or through higher temperature of the saline water used. Caution has also been raised for potential contamination of water or salt if not used judiciously in making the saline solution. Use of filtered or boiled water was recommended by the authors as a measure to minimize water contamination-related issues. We wish to bring the attention here toward the attempts which were made to

¹PG Department of Kaya Chikitsa, State Ayurvedic College and Hospital, Lucknow, Uttar Pradesh, India

²CCRYN, Ministry of AYUSH, New Delhi; Panchatatva Medical College and Research Centre of Naturopathy and Yogic Sciences, Samalkha, Haryana, India

Corresponding Author: Sanjeev Rastogi, PG Department of Kaya Chikitsa, State Ayurvedic College and Hospital, Lucknow, Uttar Pradesh, India, Phone: +91 9415022955, e-mail: rastogisanjeev@rediffmail.com

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standardize the JN procedure by eliminating all such possibilities of harm. Standardization and simplification of JN was first attempted by Rastogi et al. in 2009³ where the use of isotonic saline plastic squeezable bottle for JN instead of conventional Neti Pot was proposed. This proposition had the convenience of using pre-sterilized isotonic saline solution in a squeezable bottle with a modest tip incapable of causing any mechanical trauma to nasal mucosa. The process has additional convenience of portability and disposability of single use bottle used for one sitting. It is important to note that similar standardized procedure of JN was used recently to manage a case of rhino-orbito-cerebral mucormycosis.⁴

While taking the cognizance of traditional health care wisdom for all its goodness and employability, we need to reiterate that in many cases, the traditional procedures and techniques are needed to be redefined and redesigned in order to maintain safety to minimize the application variability and to ensure the desired benefits each time it is used. Eventually, this will go a long way in generating uniform results with minimal fuss every time such procedures are used.

AUTHOR CONTRIBUTIONS AS PER CREDIT GUIDELINES

SR was involved in conceptualization, methodology, resources, supervision, and writing the original draft. RR carried out the visualization, writing of review and editing.

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