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Effect of *Gunja Lepa* in *Nasarshas* (Nasal Polyp) - A Case Series

Sneha P K, Deeraj B C[2], Deeksha R[3], Anuja K Simon[4]

[1,3,4]*Post Graduate Scholar, Department of Shalakya Tantra, Sri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Hassan, Karnataka, India.*

[2]*Head of the Department, Department of Shalakya Tantra, Sri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Hassan, Karnataka, India.*

ABSTRACT

Background - *Nasarshas* is a mass in nasal cavity which creates breathing difficulty, sneezing and snoring and can be correlated to Nasal polyps. **Materials & Methods -** A case series was done in 5 patients using *Gunja Lepa* as nasal application in patients of *Nasarshas*. Size of the polyp and Symptoms like *Nasavarodha* and *Kshavatu* were assessed. **Result -** In more than 50 % of the polyps, there were reduction in size. Rather than statistical significant, subjective relief of the patient was more significant in nasal obstruction.

Key words: *Nasarshas, Nasavarodha, Kshavathu, Gunja Lepa, Anubhuta, Upavisha, Nasal Polyp*

INTRODUCTION

Nasarshas is a mass in nasal cavity which look like tip of *Aja Sthana*[1] (teat of goat breast) which create nasal obstruction, sneezing and snoring. Sign of nasal polyp are pedunculated hypertrophied edematous mucous membrane of nose and paranasal sinuses.[2] *Nasarshas* should be treated like general *Arshas*, which include *bheshaja*, *Shastra*, *Kshara*, and *Agnikarma.*[3]

Management of nasal polyp include both medical therapy and surgery. There is evident use of corticosteroids as primary treatment to control allergy. But prolonged course of the disease and adverse effect of steroids limits their use. Nowadays endoscopic sinus surgery is mostly used for treating nasal polyp even though no single surgical technique has proved to be entirely curative and the recurrence rate is around 5-10 %.[4] Even though the etiology of nasal polyp is uncertain, allergy has an important role in manifestation of it. Allergic reactions produce inflammation in nasal mucosa, which subsequently presents as a polypoidal mass.[2]

In early stages surface of nasal polyp will be covered by ciliated columnar epithelium similar to nasal mucosa but later undergoes a metaplastic change to transitional and squamous type when exposed to constant atmospheric irritation.[5] The utmost aim of the treatment is to reduce inflammation of nasal mucosa and the size of the nasal polyp significantly, which will result in relief of the nasal obstruction, improvement in sinus drainage, and restoration of olfaction and taste.

Gunja Lepana in *Nasarshas* is an *Anubhuta Yoga* which is being practised by many *Vaidyas*. *Gunja*[6] comes under *Upavisha Varga* and Its *Bheeja* have *Kaphavatahara* property. Abrin is one of the active ingredients which inhibit protein synthesis and causes agglutination, haemolysis and cell destruction.[7]

Address for correspondence:
Dr. Sneha P K
Post Graduate Scholar, Department of Shalakya Tantra, Sri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Hassan, Karnataka, India.
E-mail: pg19164@sdmcahhassan.org

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Case Study

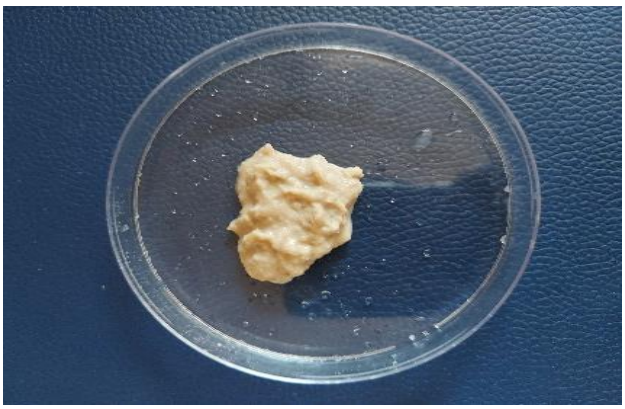
Materials & Methods

A case series including 5 patients was done using *Gunja Lepa* in patients of *Nasarshas*. The patients included were those who had *Nasarshas* and presented to outpatient department of *Shalakyatantra*, SDM Hassan from April 2020 to December 2021. The patients included in this study were having *Nasarshas*, only ethmoidal polyp diagnosed clinically either unilateral or bilateral with anterior rhinoscopy. The patients of either gender having age group 18-60 years both fresh and treated cases were included. The patients excluded from the study were under steroid treatments, those having history of epistaxis and patients with antrochoanal polyp. The patients were included using random sampling technique. Informed written consent was taken after explaining the purpose and procedure of the study. The size of the polyp was assessed using anterior rhinoscopy findings.[8]

Staging according to size

- Grade I - Limited to the extent of middle turbinate.
- Grade II - Extending beyond the limit of middle turbinate.
- Grade III - Approaching to the inferior turbinate.
- Grade IV - Going up to the floor of nose.

Gunja (*Abrus precatorius* Linn.), comes under *Upavisha Varga* in which *Shweta* variety is chosen for this study and purification done by soaking it in milk for 24 hours. It is having *Kaphavatahara* and *Shothahara* properties.



Gunja Lepa was done in the morning time, 4 applications on alternative days and on 15th and 30th day. Each time freshly prepared *Lepa* was applied and retained for 30 minutes and was removed with cotton tipped probe.

Size of the polyp was assessed on 1st day and 45th day, and nasal blockage assessed in 5 intervals. Data analysis was done using SPSS version 23.0.

Result

In this study out of 5 patients 2 were having polyp in both nostrils. Out of 7 polyps 4 were in grade 3 stage (57.1%), after treatment polyps in grade 3 stage were 2 (only 28.6%). 3 polyps were in grade 4 stage out of that 2 remained same after treatment; whereas size of 3 polyps reduced from grade 3 to grade 2 as presented in table 1 and 2

Table 1: Size of the polyp before treatment

Size of the polyp	Frequency	Percentage
Grade 3	4	57.1

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Grade 4	3	42.9

Table 2: Size of the polyp after treatment

Size of the polyp	Frequency	Percentage
Grade 2	3	42.8
Grade 3	2	28.6
Grade 4	2	28.6

Nasal blockage of 3 persons remained unchanged whereas 2 patients had significant improvement in nasal obstruction.

Polyp size before application

Polyp size after 30 days

Discussion

Nasarshas or Nasal polyp is a non-neoplastic mass of edematous nasal or sinus mucosa with symptoms like nasal obstruction, persistent cold, sneezing, clear or purulent discharge, and anosmia. Nasal mucosa particularly in the region of middle meatus and turbinate becomes oedematous due to collection of extracellular fluid causing polypoidal changes. It commonly arises from ethmoid labyrinth and sometimes from antrum. Polyp is of 2 types antrochoanal and ethmoidal. Ethmoidal polyp is multiple, arises from the numerous ethmoidal sinuses. They tend to protrude forwards and occur at any age.[5]

Application of *Gunja Lepa* to nasal polyp may have a *Shothahara* action. *Gunja* seeds comes under *Upavisha Varga*, so for *Shodhana* it was soaked in milk for 24 hours.[9]

Abrin is one of the active principle of *Gunja* which inhibit protein synthesis and causes cell destruction. The subunit A of abrin has got N-glycosidase & depurinating action of 28-S RNA of ribosome, thereby arresting protein synthesis.[10]

So in turn enhances cell destruction so will help in reduction of size of nasal polyp.

Nasal obstruction was manifested due to presence of polyp and also inflammation of nasal mucosa. In Ayurvedic view *Nasarshas* is caused from *Kapha Vata Doshas. Gunja* is having *Kaphavatahara* and *Sothahara* properties which help in reduction of size of the polyp and inflammation of nasal mucosa.[11]

Conclusion

Application of *Gunja Lepa* over *Nasarshas* or nasal polyp is useful in reducing its size and inflammation of nasal mucosa. Rather than statistical significant, subjective relief of the patient was more significant. This may be a new hope in the management of nasal polyp where we can avoid surgical intervention.

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