

MANAGEMENT OF MUCORMYCOSIS THROUGH AYURVEDA – A CASE STUDY

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ABSTRACT

Mucormycosis is a serious fungal infection that often requires aggressive treatment including surgery and antifungal drugs. Ayurvedic approaches may offer complementary benefits, especially when conventional treatment is limited. A 55-year-old female patient developed Headache, Ptosis, Peri-orbital swelling and Nasal congestion following COVID-19 recovery. Due to financial constraints and treatment hesitancy, She opted for Ayurvedic management instead of Surgery. Treatment was planned based on Ayurvedic principles of *Dosha-Dushya* involvement and *Yukti Pramana*. The patient was treated with *Nasya Karma*, *Dhumapana*, *Kaval*, *Jalaukavacharan* and *Shamana chikitsa*. After 2 weeks of Ayurvedic therapy, the patient showed marked improvement in symptoms. This case suggests that Ayurvedic treatment may be a valuable adjunct or alternative in managing mucormycosis, particularly in early

stages or where conventional treatment is surgical and expensive.

KEYWORDS: Mucormycosis, *Krumija Shiroroga*, *Nasya*, *Jalaukavacharan*.

INTRODUCTION

The COVID-19 pandemic has not only affected the lungs and immune system but has also increased the risk of other infections, especially mucormycosis, also known as "black fungus." This is a rare but dangerous fungal infection caused by molds from the *Mucorales*

group. It most commonly affects the sinuses, eyes, brain, and lungs, and spreads rapidly if not treated early.^[1]

During the second wave of COVID-19, especially in India, there was a sharp rise in cases of post-COVID mucormycosis, also called COVID-associated mucormycosis (CAM). Many patients were affected even if they did not have major health problems like diabetes or cancer. This increase has been linked to weakened immunity after COVID-19, the use of steroids, and sometimes poor hygiene of oxygen support systems.^[2]

The most common form of this infection was rhino-orbital-cerebral mucormycosis (ROCM), which started in the sinuses and sometimes spread to the eyes and brain. Patients usually reported symptoms like facial pain, blocked nose, blackish nasal discharge, swelling around the eyes, and vision changes. Without early treatment, this infection can become life-threatening.^[3]

The reference to Mucormycosis or disease like Mucormycosis is not directly mentioned in Ayurveda, so it is an *Anukta Vyadhi*.^[4] Based on Signs and Symptoms of mucormycosis we can correlate it with different Ayurvedic *Vyadhis* like, *Krumija Shiroroga* and *Raktaja Pratishyay*. According to *Charak Samhita Lakshana* of *Krumija Shiroma* are *Vyadha-Cheda Ruja* (Stabbing and Cutting Pain), *Kandu* (Itching), *Shopha* (Inflammation), *Daurgandhya* (Foul smell), *Durgati* (Sense of Discomfort) and *Krimi Darshana* (Visible Pathogenic Organisms).^[5] According to *Susruta Samhita Lakshana* of *Krumija Shiroroga* are Severe pricking pain and eaten away (by organism) as if being shattered inside with bloody discharge from nose, it is severe head-disease caused by organisms.^[6] According to *Susruta Samhita Lakshana* of *Raktaja Pratishyay* are bleeding from nose, the patient has coppery eyes, has foul smell in breath and mouth and develops anosmia and other features are same as *Krumija shiroroga*.^[4]

On the basis of Vitiated *Dosha* and *Dushya* it is treated with *Nasya Karma*, *Dhumapana*, *Lepa*, *Kavala*, *Jalaukavacharna* and *Shamana chikitsa*.

CASE REPORT

A 55 year old female patient came in opd with chief complain of,

- Severe Headache Since 10days
- Swelling and Numbness in left side of face Since 5days.

- Swelling around left eye Since 5 days.
- Nasal congestion Since 5 days.
- Foul smell Since 4 days.
- Ptosis Gradually increasing.

History of Present Complaint

A 55 year old female patient was healthy before 6 weeks. Then she was diagnosed with COVID – 19 pandemic. She recovered from that with medicine. Before 2 weeks She suddenly developed severe head ache, swelling and numbness in left side of face and eye, Foul smell, Nasal congestion, Ptosis. She visited near by hospital for contemporary medical science treatment. ENT doctor recommended for surgery. But it is costly, so that after 2 days she Preferred *Ayurvedic* treatment and did not go for surgery. Then she came to Government Akhanadanad Ayurveda hospital, Ahmedabad for Ayurvedic treatment.

Personal History Diet – Vegetarian Addiction – No any. Past history –

Diabetes type -2 Since 10 year [In Control with Medicine] Hypertension - since 10 year [In Control with Medicine] Family History – No any relevant Family History

On General examination patient was having normal Vitals. B.P- 120/80 mmHg, Pulse rate- 70/min and Respiratory rate was 20/min.

Systemic Examination –No any abnormalities were detected in Respiratory, Cardiovascular and Nervous Examination.

Asthavidha pariksha

1. *Nadi* (pulse) - 82/min
2. *Mala* (stool) - 1 time / day
3. *Mutra* (urine) - 6 time / days, 2 time/ nights
4. *Jihva* (Tounge) - Nirama
5. *Shabda*(sound) - Samyaka
6. *Sparsha* (touch) - Samyaka
7. *Drik* (eye) - Sopha
8. *Akruti* (Built) - Madhyam. Specific Examination

On Inspection Periorbital Swelling with Ptosis in left eye. Patient having mild Blurring in Vision.

Samprapti Ghataka

- *Dosha – Pitta, Kapha*
- *Dushya – Rasa, Rakta, Mamsa, Meda, Majja*
- *Agni – Jatharagnimandhya*
- *Srotas – Pranavaha srotas*
- *Srotodushti – Sanga, Vimargagaman*
- *Adhisthan – Nasa, Akshi, Shira*
- *Swabhava – Asukari*
- *Rogmarga – Madhyama*

Treatment Schedule**Table 1: Treatment Schedule.**

No.	Date	Treatment	Dose
1.	9/6/2021 to 15/6/2021	<i>Nasya Karma</i> (With <i>Vidanga Churna</i> + <i>Gomutra</i>) ^{viii}	6-6 Drops in each nostril for 7 days
2.		<i>Dhumapana</i> (<i>Dhumvarti</i> made by <i>Trikatu</i> , <i>Erandamula</i> , <i>Vidanda</i> , <i>Devadarupiplli</i> , <i>Kustha</i> , <i>Ingudi</i> , <i>Kantkaribeeja</i> , <i>Trivruta</i> , <i>Tuttha</i> , <i>Agnimantha</i> , <i>Pilu</i> , <i>Shigrubeeja</i>)	2 times/day
3.		<i>Lepa</i> (<i>Rasanjan</i>)	3 time per day
4.		<i>Kavala</i> (<i>Pitaka Churna</i>)	3 times per day
5.	8/6/2021 and 12/6/2021	<i>Jalaukavacharan</i> (<i>Apang evum Gandpradeshe</i>)	2 times /week
6.	8/6/2021 to 22/6/2021	<i>Shamana Chikitsa</i> with 1) <i>Bilwadi Gulika</i> 2) <i>Chandraprabha vati</i> 3) <i>Triphala gugullu</i>	Each 2 tab/3 time a day

RESULT**Table 2: Showing Improvement in Symptoms.**

Symptoms	B.T.	After 6 days	After 15 days
Headache	+++	+	-
Swelling on left side face and eye	+++	-	-
Numbness	+++	++	+
Nasal congestion	+++	+	-
Foul smell	++	-	-
Ptosis	+++	++	-

DISCUSSION

Mucormycosis, an aggressive angio invasive fungal infection, saw a notable resurgence during the COVID-19 pandemic, particularly among patients with uncontrolled diabetes, prolonged corticosteroid use, or post-viral immunosuppression. While mucormycosis as an entity is not directly mentioned in *Ayurvedic* classics, It can be primarily correlated with *Krimija Shiroroga* (head disorders caused by microbial agents) and *Raktaja Pratishyay* (Bloody catarrh).

In *Ayurveda* it is said that “*Nasa Hi Shirasho Dwaaram..*” . Thus here *Nasya Karma* was given in the patient with *Vidang* and *Gomutra*. *Vidang* is having *Krumighna* Property. Thus it helps in treating the *Krumija shiroroga*. *Gomutra* is having *Tikshna* and *Ushna Guna* which irritates and kills the Microbes. *Vairechanik Dumapana* is given with the *Dhumavarti* made with the *Aushadha Dravya* like *Trikatu*, *Erandamula*, *Vidanda*, *Devadarupiplli*, *Kustha*, *Igudi*, *Kantkaribeeja*, *Trivruta*, *Tuttha*, *Agnimantha*, *Pilu*, *Shigrubeeja*. These all *Dravya* is having *Ushna*, *Tikshna* , *Kledanashana*, and *Srotoshodhana* Properties. Thus it helps in treating the *Krumija shiroroga*. *Peetak churna* is described in the *Astang Hrudaya*. *Kavala with Peetak Churna* helps in the treating the infection that is spreaded in the mouth in mucormycosis.

Here *Jalaukavacharan* is done 2 times a week. *Jalauka* sucks the only Vitiated *Rakta* from the Body and helps in reducing pain and swelling immediately. Mucormycosis patient have severe pain and it is one emergency condition thus here *Jalauka* is applied 2 times in week and it has given excellent result by reducing the signs and symptoms of Mucormycosis.

Shamana medicine that are *Bilwadi Gulika*, *Chandraprabha Vati* and *Triphala guggulu* helps relieving pain and quick healing. Overall This *Ayurvedic* treatment helps in the Reducing sign and symptoms of mucormycosis.

CONCLUSION

Although mucormycosis is not directly described in *Ayurveda*, it can be understood and treated based on *Yukti Pramana* and the involvement of *Dosha* and *Dushya*. *Ayurvedic* treatment provides a promising and cost-effective approach in the management of mucormycosis. This traditional system of medicine emphasizes healing by the different *Ayurveda* Procedure like *Nasya*, *Dhumapana*, *Jalaukavacharan* and other *Shamana chikitsa*. In comparison to expensive and invasive surgical treatments, *Ayurveda* offers a gentler, more

accessible option, especially in the early stages of the disease. surgery and modern antifungal drugs may still be necessary in severe cases, Ayurvedic care can reduce dependency on such interventions and support faster recovery.



Figure 1: Day by Day improving in condition of patient.

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