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Mandoor Shodhana - A Bird Eye Review

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ABSTRACT

Mandoor (Iron Oxide) is important in *Rasashastra* as a *Dravya* from *Upadhatu Varg*. It is widely used in *Ayurveda* therapeutics for the treatment of *Pandu Roga*, *Kamala Roga*, *Rajakshaya* and *Raktakshaya*. *Mandoor* is found buried inside the earth's land and is said to be of mineral origin. Thus, it becomes important to get rid of physical and chemical impurities in *Mandoor* and make it potent for using it in therapeutics. To serve the necessity, *Shodhana* procedure is mentioned in classical texts of *Ayurveda*. The physical and chemical changes occurring during *Shodhana* make *Mandoor* suitable for the therapeutic use. In the classical texts of *Ayurveda* and *Rasashastra* numerous *Shodhana* procedures for *Mandoor* are found mentioned. So here an attempt was made to review various *Shodhana* procedures for *Mandoor*. In this context eighteen *Vishesh Shodhana* methods and a *Samanya Shodhana* found mentioned in different texts. A thorough review was carried out for the *Shodhana* procedures.

Key words: *Mandoor*, *Iron Oxide*, *Shodhana*, *Rasashastra*, *Gomutra*, *Triphala Kwath*

INTRODUCTION

Rasashastra is a branch of *Ayurveda* pharmaceutics which deals with the therapeutics prepared with herbal, minerals, metals, toxic herbs, and animal origin products.

Metallic products and its oxides are divided into *Dhatu* and *Upadhatu Vargas* (categories) respectively. *Mandoor* (Iron oxide) is a metallic oxide cum silicate of iron. It occurs as lumps, boulders, or aggregates at areas where smelting activity is carried out. Thus, it is a need to use *Shodhit* (purified) form of *Mandoor*.^[1,2]

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Sanskaras are mentioned in *Ayurvedic* texts for emphasizing quality-control of finished and in-process products. *Shodhana* is one of the methods of *Sanskaras*. *Shodhana* detoxifies and enhances therapeutic efficacy of *Dravya*.

Shodhana is broadly divided into two types, namely, *Samanya Shodhana* and *Vishesh Shodhana*.

Nirvaapa, process of *Shodhana* is mainly integrated for *Mandoor*. *Nirvaapa* literally means to extinguish a red-hot heated *Dravya* into some *Shodhana* liquid media.^[3] *Swarasas* (herbal juices), *Godugdha* (milk), *Gomutra* (cow's urine) and *Kwathas* (decoction) are used to serve the purpose of liquid medias in *Shodhana*.

Classical text *Rasatarngini* has mentioned the use of *Mandoor* in wide spectrum. *Mandoor* is used in various types of *Pandu Roga*, *Kamala*, *Sosha Roga*, *Sotha Roga*, *Halimaka*, *Yakrit- Pleeha Rogas*. Consumption of *Ashuddha* (impure) *Dravya* causes many diseases in body.^[4]

A reference from *Rasendra Chudamani* states that use of *Ashuddha* (impure) *Mandoor* causes *Ashmari Roga*.^[5]

Combining references from various classical texts, use of *Ashuddha* (impure) *Mandoor* can lead to *Panduta* (Anaemia), *Kustha* (Skin diseases), *Hridroga* (heart diseases), *Shoola* (Pain), *Ashmari* (Renal calculii), *Hrillas* (Emetamesis), and even *Mrityu* (Death).

METHODS

The present study is a literary study. Sources for this study were obtained from several classical Ayurvedic texts, commentaries and articles.

OBJECTIVES OF SHODHANA

1. To purify the *Dravya*
2. To get rid of unnecessary parts in the *Dravya*
3. Balancing *Doshas* within the *Dravya*
4. Increasing efficacy of *Guna* in *Dravya*
5. Making *Dravya* potent for particular use

Types of Shodhana^[6]

Shodhana is mainly of two types:

1) *Samanya Shodhana*

- It refers to the removal of general impurities found in a group of *Dravyas*.
- Drugs that fall into same group or category (*Maharasa*, *Upasrasa*, *Sadharan Rasa*, *Dhatus*, *Upadhatus*) possess similar kind of impurities. *Samanya Shodhana* is performed on drugs possessing similar kinds of impurities.
- It refers to the removal of general impurities found in a group of *Dravyas*.
- Example - *Dhatu Samanya Shodhana*.
- According to a reference from *Rasaratnasamucchaya*, *Samanya Shodhana* is carried out by *Nirvaapa* procedure. For it, pieces of raw and impure *Dravyas* are heated until they are red hot and extinguished into five different liquid medias- Sesame Oil (*Til Taila*), Buttermilk (*Takra*), Cow's Urine (*Gomutra*), Sour Gruel (*Kanji/ Arnala*) and Horse gram Decoction (*Kulattha Kwath*) respectively.^[7]

- *Ayurved Prakash* has laid down another reference for *Samanya Shodhana* of *Dhatus* by performing *Nirvaapa* into *Kadalimoola Rasa* for seven times.^[8]

2) *Vishesh Shodhana*

- It is performed to remove specific impurity and produce specific property in a substance.
- It refers to the *Shodhana* prescribed for a particular *Dravya*.
- *Vishesh Shodhana* is performed after *Samanya Shodhana*.
- It is performed to remove impurities specific to the substance which cannot be removed by *Samanya Shodhana*.
- After *Vishesha Shodhana*, there are considerable physical changes in the chemical structure of the substance.
- Example- *Shodhana* of *Abhraka* by *Nirvaapa* procedure into *Triphala Kwath* (Decoction made of *Emblica Officinalis*, *Terminalia Belerica* and *Terminalia Chebula*).^[9]

The above procedures can be further divided into *Saagni* and *Niraagni*. *Saagni* means the processes which employ the use of *Agni* (fire) and *Niraagni* means the processes that do not make use of *Agni* (fire).

Saagni Examples - *Nirvaapa*, *Bharjana*, *Putapaka*, *Swedana*, *Paatana*, *Dhalana*.

Niraagni Examples - *Bhavana*, *Shoshana*, *Prakshalana*, *Nimajjana*, *Sinchana*, *Gharshana*.

Mandoor Shodhana

1. *Mandoor Samanya Shodhana*

Mandoor's Samanya Shodhana is carried out by *Nirvaapa* procedure. Pieces of impure *Mandoor* are heated until they are red hot and extinguished into five different liquid medias- Sesame Oil (*Til Taila*), Buttermilk (*Takra*), Cow's Urine (*Gomutra*), Sour Gruel (*Kanji/ Arnala*) and Horse gram Decoction (*Kulattha Kwath*) respectively. The process of extinguishing is repeated for seven times in each media.

However, *Mandoor's Vishesh Shodhana* is described by various *Granthakaras* into their specific *Granthas*. After thorough review, the following processes were compiled for *Mandoor Shodhana*.

2. Mandoor Shodhana By Nirvaapa Procedure

- Classical text, *Rasendra Saar Sangraha* mentions *Vishesh Shodhana* like that of *Samanya Shodhana*; which states- *Nirvaapa* of *Ashuddha Mandoor* into *Til Taila, Takra, Gomutra, Kanji, Kulattha Kwath* for 7 times in each liquid media.
- Rasaratnasamucchaya* suggests, heating pieces of raw *Mandoor* over high temperature flames created by wood of *Bibhitaki (Terminalia belerica)* tree until it is red hot and extinguishing into *Gomutra* (Cow's Urine) and repeating the process for a total of 7 times gives *Shuddha Mandoor*.
- Similar process of *Shodhana* was laid down by various traditional texts such as - *Rasatarangini, Yogratnakara, Rasamitra, Brihat Rasaraj Sundar, Yogendra Chintamani, Rasakamdhenu, Rasendra Chintamani* and *Basavrajivam*.
- However, *Rasaratnasamucchaya* has also laid down another procedure for *Shodhana* in which quenching of red-hot pieces of raw *Mandoor* is done into *Triphala Kwath*, in which the *Kwath* (decoction) is prepared using *Gomutra* as liquid media.
- Traditional text *Rasayansaar* explains *Shodhana* by quenching red hot pieces of *Mandoor* into *Triphala Kwath* prepared using *Gomutra* for about seven times.
- Classical texts *Rasamanjiri, Ayurved Prakash* and *Chakraduttah* mentioned *Mandoor Shodhana* by eight times *Nirvaapa* into *Gomutra*.
- Two traditional references of *Mandoor Shodhana* for twenty-one times into *Gomutra* as liquid media were found in texts of *Siddha Yoga Sangraha* and *Rasamritam*.
- Rasa Jala Nidhi* (Ocean of Indian Chemistry, Medicine & Alchemy Volume-3) has laid down three different procedures for *Mandoor Shodhana*

- Quenching into *Gomutra* for 7 times;
- Quenching in *Triphala Kwath* prepared using *Gomutra* and repeating the procedure until it attains powder form;
- Mandoor* is powdered and *Pachana Sanskara* is performed into eight times its weight of *Gomutra* (cow's urine) and powdering it again.

3. Mandoor Shodhana by Pachana and Abhisheka Procedure^[10]

- As per references in *Sharangdhar Samhita, Mandoor Shodhana* is carried out by *Abhisheka* and *Pachana* method for about 7 times using *Gomutra* and *Triphala Kwath* (Decoction made of *Emblia Officinalis, Terminalia Belerica* and *Terminalia Chebula*).^[11]
- Charaka Samhita* mentions *Mandoor Vishesh Shodhana* by *Pachana* method.
- One of the three *Shodhana* processes said by *Rasa-Jala-Nidhi* has performed *Mandoor Shodhana* by *Pachana* method, into 8 times its weight of cow's urine and powdering it after.

Tabular Representation

Samanya Shodhana of Mandoor

SN	Reference	Media Used	Process	Repetition
1.	<i>Rasaratnasamucchaya</i>	<i>Taila</i>	<i>Nirvaapa</i>	7 times in each mentioned media
		<i>Takra</i>		
		<i>Gomutra</i>		
		<i>Kanji (Sour Gruel)</i>		
		<i>Kulattha Kwath</i>		

▪ Vishesh Shodhana of Mandoor by Nirvaapa Procedure

SN	Reference	Media - Gomutra	Media - Triphala Kwath prepared using Gomutra	Repetition
1.	Rasaratnasamucchaya (Reference-1) ^[12]	+		7
2.	Rasaratnasamucchaya (Reference-2) ^[13]		+	Repeat Until Mandoor Attains Powder Form
3.	Rasatarangini ^[14]	+		7
4.	Yogratnakara	+		7
5.	Rasamitara ^[15]	+		7
6.	Brihat Rasarajsundar	+		7
7.	Yogendra Chintamani	+		7
8.	Rasakamdhenu ^[16]	+		7
9.	Basavrajivam ^[17]	+		7
10.	Rasayansaar ^[18]		+	7
11.	Rasamanjiri ^[19]	+		8
12.	Ayurved Prakash ^[20]	+		8
13.	Chakraduttah	+		8
14.	Siddha Yoga Sangraha	+		21
15.	Rasamritam ^[21]	+		21
16.	Rasa-Jala-Nidhi (Reference-1) ^[22]	+		7
17.	Rasa-Jala-Nidhi (Reference-2) ^[22]		+	Repeat Until Mandoor Attains Powder Form
18.		Taila	Nirvaapa	7 times in each

Rasendra Saar Sangraha ^[23]	Takra	mentioned media
	Gomutra	
	Kanji (Sour Gruel)	
	Kulattha Kwath	

DISCUSSION

Mandoor has wide applications in *Pandu Roga*, *Pleeharoga*, *Shotha Vyadhi*, and *Kamala*. Traditional text, *Rasamritam* suggests Mandoor as, "Balanam Atishasyate;" which means Mandoor is of great importance in paediatric patients. This creates need for using pure and *Shodhit* form of *Mandoor Dravya*. Mandoor becomes purified and detoxified by *Shodhana* process.

Considering all the above reviewed references from various classical texts- Mainly *Nirvaapa* process was found to be preferred mode for *Shodhana*. *Nirvaapa* can be divided into three smaller processes - Heating → Quenching → Post quenching interaction of solid hot material and liquid media used for quenching.

The liquid media act as cooling media during the process of *Nirvaapa*. They may serve as favourable conditions for various chemical and structural changes occurring during *Nirvaapa*. When a *Dravya* is quenched, the liquid media may enter the *Dravya* through the spaces created on surface and may create a film over them. When reheating for further process it may lead to the breaking of *Dravya*.

Here, predominantly, *Gomutra* and *Triphala Kwath* were found to be the most preferred quenching medias. These medias bring about considerable changes in *Mandoor*. They alleviate the *Doshas* and impurities in *Mandoor*. They must be entering the expanded area created after quenching, causing dissolution of water-soluble impurities which make *Mandoor* brittle.

The quenching repetition stands out to be of seven times as per majority of traditional texts. It was found

out that few texts mentioned quenching repetition for eight and twenty-one times as well.

Furthermore, methods stated for *Shodhana* of *Mandoor* are *Abhisheka & Pachana* by few *Acharyas*.

CONCLUSION

In the study conducted above it was found out that superficially, two main methods of *Vishesh Shodhana* were administered for *Mandoor*. The two methods are- *Nirvaapa* and *Abhisheka & Pachana* namely. The liquid medias preferred for different *Shodhana* processes were- *Gomutra*, *Triphala Kwath* and *Triphala Kwath* prepared using *Gomutra*. Quenching repetitions mentioned were a total of seven times, eight times and twenty-one times according to various traditional texts. Making it to the conclusion, it can be said that *Nirvaapa* was found to be the most endorsed method for *Mandoor Shodhana* with repetition of seven times of quenching into *Gomutra* as most preferred quenching media.

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