

A LITERARY REVIEW ON VISHAGHNA (ANTI-TOXIC) PROPERTY OF GAIRIKA
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ABSTRACT

Gairika also known as Red ocre is one among the *Uparasa*. It is chemically symbolized as Fe_2O_3 and has three types namely *Swarnagairik*, *Pashanagairik*, and *Samanyagairika*.^[1] It is the *Upadhatu* of *loha dhatu* i.e Iron. *Gairika* is a natural hematite mineral that occurs in igneous and metamorphic rocks as an accessory mineral with other iron-titanium oxide minerals. *Gairika* is one of the contents of various *Vishaghna kalpas* (anti-toxic formulations) mentioned in *Vishachikitsa*. It is widely used for *Abyantara* and *Bahya chikitsa* in diseases caused due to *Visha* as a result of contact or ingestion of *Stavara* or *Jangam Visha*. There are various properties of *Gairika* which results in anti-toxic effect such as use of *Gairika* in the second *vishavega* as *Hrudaya Raksha* (protection of Heart). **Objective:** This article attempts to screen *Ayurvedic samhitas* of *Agdatantra*, *Rasashastra* for various references of *Gairika* being *Vishaghna* or Anti-toxic. **Methods:** Such references were collected, evaluated and grouped according to indication from various *samhitas*. **Conclusion:** This article is a simple compilation focusing on the Anti-toxic properties of *Gairika* to promote its application in treatment of *Visha rogas*.

KEYWORDS: *Gairika*, Red ocre, Anti-toxic, *Vishaghna*.

INTRODUCTION

Agadmatra also named as *Vishavairodhik prashamana* is the name of the branch which describes poisonous plants and the symptoms of bite by poisonous animals like snakes, insect, spiders, rat etc. diseases due to different kinds of poison and their treatment. *Agadtantra* is made of two words *Agad* and *Tantra*. The word *Agad* means the one which destroys or conquers poison.

Poison or *Visha* is mainly classified as *Sthavar*, *Jangam* and *Krutrim Visha*. Manifestation of this poisoning is seen on human body in the form of systemic and local signs and symptoms. *Agad* which are Anti-toxic formulations mentioned in *Samhitas* are useful in treating harmful effects of chemicals or toxins and also useful in cases of fatal poisoning. Formulations or drugs which act against the properties of poisons are called as *Vishaghna Yoga* or *Agada*. In *Agadtantra* 24 *Upakramas* are mentioned by Acharya Charak for treatment of *Visha*. *Prativisha* or Antidote is a type of treatment or *Upakrama* which has properties opposite to the *Visha* to destroy the poison in body.

References in books such as *Rasatarngini*, *Rasaratnasamuchaya* etc are available where *Vishaghna* property of *Gairika* is mentioned. In *Ayurved Samhitas* various *Vishaghana* treatments and *Agad* are mentioned which contain *Gairika*. It is found in highly ferruginous

rocks as a result of the alteration of other iron minerals or as weathered residual amounts. *Gairika* is rich in ferrous iron, which is the most absorbable of all iron types. Internal administration of *Gairika*, on the other hand, is still possible using a simple *shodhana* method. *Gairika* is also more commonly available as compared to other *Lauha*-containing minerals, as well as being more cost-effective for the general public.^[2]

MATERIALS AND METHODS

References from *Ayurvedic* texts and modern science were explored, analysed, compared and interpreted. Books of *Rasashastra* and *Agadtantra* were studied. Literature regarding *Gairika* is reviewed from various research articles and websites.

Literature Review

1. Types of *Gairika*^[3]

1. *Swarnagairika* (kidney iron ore)
2. *Samanya Gairika* (Fe_2O_3)
3. *Pashan Gairika* (Fe_2O_3)

2. Synonyms of *Gairika*^[3]

1. *Raktadhatu*
2. *Girija*
3. *Dhatu*
4. *Girimrittika*
5. *Lohadhatu*

3. Names of Gairika in other languages^[4]

- 1.Hindi – Geru
- 2.Bengali – Girimati
- 3.Marathi – Geru, Sonkava
- 4.Gujarati – Geru, Songeru
- 5.Arabic- Magra, Magrata, Tine ahamara
- 6.Parsi – Gile surkha
- 7.English- Ochre

4.Properties of Gairika^[3]

According to *Rasaratnasamuchaya Samnya gairika* is Red in colour and soft, when touched by hands it gives red coloured stains. *Pashan gairika* is hard with copper red colour when touched it does not stain your hands by its colour. *Swarnagairika* is dark red, soft and smooth. It is a compound of iron and oxygen. For therapeutic use *samnya* and *swarnagairika* are used.

Table no 1: 5.Rasapanchak Of Gairika^[5]

Rasa	Madhura, Kashayam
Guna	Snigdha, Vishada
Veerya	Sheeta
Vipaka	Madhura
Doshagnata	Pitta-kapha shamak
Rogagnata	Dahaghnam, Raktastambak, Vishaghnam, Kanduharam, Vranaropakam, Raktapittaharam.

6. Shodhana of Gairika (Purification of Gairika)

- 1.Godugdha bhavana^[6]

According to *Rasa Ratna Samucchaya* Gairika churna is given *bhavana* of *godugdha* (cow's milk) for 3 days and then dried.

2. Goghruta Bharjana^[7]

According to *Rasatarangini* Gairika is made into fine powder then in iron *kadhai goghruta* (ghee made from cow's milk) is added and *gairika* is roasted in this *ghrita* for purification.

7. References of Vishagna Property of Gairika**1. Rasatarangini^[7]**

According to *Rasatarangini Suvarnagairikam* is *snigdha*, *madhura rasa*, *sheeta*, *kashayam* and treats *hiika* and *chardi*. It is very useful in treatment of *ratkapitta* and *raktapradar*. It is also used for treatment of diseases caused due to *bahya* and *abhyantara vishaktata*.

2. Rasaratnasamuchaya^[6]

According to *Rasaratnasamuchaya* Gairika is *madhura*, *snigdha*, *kashyam* and *netryam*. *Suvarnagairikam* is *vishaghnam* (antitoxic) and used in treatment of diseases which are caused due to *rakta dusti*.

3.Yogaratnakar^[8]

According to *Yogaratnakar* Gairika and *Suvarnagairika* are useful in treatment of *Prameha*, *Kushta*, *Pitika*, *Vrana* and is *Visha nashak* (anti-toxic).

8. Dose Of Gairika

250mg to 500 mg.

Table no.2: Vishaghana Yoga which contain Gairika.

Sr. no	Vishaghana Yoga	Reference	Contents	Indication	Route of Administration
1	Lepa for Shatapadi dansha ^[8]	Yogaratnakar (Vishaadhikar)	Haridra, Daruharidra, Gairik, Manashila	Shatapadidansha (centipede bite)	Lepa (local application)
2	Lepa for Makshika dansha janit pitika ^[8]	Yogaratnakar (Vishaadhikar)	Khadir, Rala, Gojivha, Hansapadi, Haridra, Daruharidra, Gairik	Makshika dansha janit pitika	Lepa (local application)
3	2 nd visha vega yoga ^[9]	Charak chikitsa (chapter 23/47)	Honey, Ghee, Majja, Swarnagairika	2 nd Visha vega	Pana (Oral administration)
4	Nakha danta shata chikitsa ^[10]	Charak chikitsa (chapter 23/220)	Khadir, Ashwakarna, Gojivha, Hansapadi, Haridra, Daruharidra, Gairika	Dog or cat bite/nail scratch	Lepa (local application)

Table no.3: Agad kalpas which contain Gairika described in Agadtantra.

Sr.no	Vishaghana Yoga	Reference	Contents	Indication	Route of Administration
1.	Pippalyadi Agad ^[11]	Yogaratanakar (Vishaadhikar)	Pippali, Dhyanaaka, Jatamansi, Lodhra, Ela, Suvarchika, Maricha, Swarnagairika	Dooshivisha	Pana (Oral administration)
2.	Mahagandhahasti Agad ^[12]	Charak chikitsa (chapter 23/79)	Patra, Agar, Must, Ela, Twak, Patra, Agar, Must, Ela, Twak, Priyangu, Haritala, Manahshila, Sunthi, Rajni, Madhuka, Somaraji Vaca, Ruha, Surasa, Marich, Ajaji, Aparjita, Dhyamaka, Nimba, Gairika Anjan, Harenuka, Vanyanakha	Rat poisoning, spiders poisoning, all types of snake bite, poisons from roots and rhizomes, Fever, Indigestion, Pruritus, Scabies, Eczema,	Pana, anjana, lepa (Oral administration, local application, collyrium)
3.	Ksharagada ^[13]	Charak chikitsastana (chapter 23/103)	Ash of Palasha, Gairika , Haridra, Daruharidra, Surasamanjiri, Jatamansi, Hingu, Sariva, Madhuka, Shunthi, Maricha, Pippali, Kushta, Balhika, Laksha.	All types of poisons, inflammation due to toxins, tumor skin diseases, piles, fistula, spleen diseases worms,	Pana (Oral administration)
4.	Drakshyadi agad ^[14]	Sushruta kalpastana (chapter 5/76)	Draksha, Sugandha, Nagavruttika, Shweta, Samanga, Suraa, Kapittha, Bilva, Dadima, Sita Sindhuvara, Ankotha, Gairika , Honey	Mandali visha	Pana (Oral administration)
5.	Mahasugandhi Agad ^[15]	Sushruta kalpastana (chapter 5/15)	Chandana, Agru, Kushtha, Yavaphala, Bharangi, Jata, Nagara, Priyangu, Bala, Toya, Sarjrasa, Punnaga, Satpushpa, Elavaluka, Gairika , Dhyamaka, Katunnata, Silapushpa, Saileyapatra, Kalanusariva, Usira, Guggulu, Kumkuma, Bimbi, Sarpakshi, Must, Haridra, etc. bile of cow, ghee	Snake bite (Vasuki snake bite), cures fracture caused due to visha	Pana, lepa (Oral administration, local application)
6.	Tarkshya Agad ^[16]	Sushruta kalpastana (chapter 5)	Prapoundarika, Suradaru, Must, Dhymaka, Guggulu, Punnaga, Talisa, Suvarchika Shyonaka, Ela, Sita, Sindhuvara, Tagara, Priyangu, Rodhra, Jala (Bulaka) Kañchana, Gairika , Magadha, Chandana And Saindhava salt taken in equal parts and powdered finely should be kept with honey inside a horn.	Tarkshya snake bite	Pana, nasya, anjana (Oral administration, local application, collyrium)
7.	Dushivishari Agad ^[17]	Astanga hridayam uttarstana (chapter 35/39)	Pippali, Pippalimoola, Dhyamaka, Jatamansi, Lodhra, Ela, Suvarchika, Kutannatam, Natam, Kushta, Yashtimadhu, Raktachandana, Gairika	Dushivisha (chronic/latent poison)	Pana (Oral administration)
8.	Mandara Agad ^[18]	Astanga hridayam uttarstana (chapter 37/73)	Apamarga, Manovaha, Darvi, Dhyamaka, Gairika , Nata, Ela, Kustha, Maricha, Yashtimadhu, ghee and honey	Spider poison, Insect bite	Pana (Oral administration)

DISCUSSION

Vishaghna yogas are indicated in *stavara*, *jangam vishaktata* and *dushivisha* as well as to reduce the *upadrava* caused by *visha*. The poison acts on the body according to the properties present in it. As the properties of *Gairika* are opposite to the properties of *visha* various formulation contain *gairika* to reduce the effect of *visha* on body. Various *Agadas* mentioned in *samhitas* like *Dushivishari agad* and *Pippalyadi agad* are used in treatment of *Dushivisha* contains *Gairika*. *Kshara agad* used in all types of poison also contains *Gairika*. *Lepa* used for external application in poisoning due to centipede bite and dog bite has main content *Gairika* which has *Dahaghna* and *Raktastambak karma*. In such cases the *sheeta guna* and *madhura rasa* of *Gairika* reduces the inflammation and burning sensation of the site.

Shodhana (purification) is the process which removes unwanted material from the drug and controls toxic effect then enhance the properties of drug. When *Gairika* is roasted in ghee ferrous iron is converted to ferric form which is easily absorbed in the plasma. This also highlights the need of fatty acids for improve iron absorption and drug delivery to body. When ghee is given as *anupana* with *Gairika* it acts as a vehicle as it is laxative, increases appetite and improves digestion thus will not aggravate the spread of *visha* in body.

Visha has *ruksha* and *ushana guna* whereas *Gairika* is *snigdha* and is *sheeta* in nature which helps to counteract the toxicity of *Visha*. *Ghrita* used in various formulations plays important role in *Visha Chikitsa* due to its *Vishaghna* (antitoxic) property. Purification of *Gairika* in *Ghrita* makes it more potent for use as an anti-toxic drug. *Ghrita* is *rasayan*, *yogavahi* and *gairika* has *madhura rasa*, *sheeta veerya* which pacifies *pitta dosha* and increases entry into *sukshma strotasa* as *visha* is *vyavayi* and *viskasi* this *guna* of *gairika* reduces the toxic effect of *Visha*. An animal study was carried out which proved the cardioprotective activity of *swarnagairika* in Indian Cobra Envenomation in albino rats.

CONCLUSION

In *Ayurveda Agad* is referred to as an antidote for poisoning. A combination of anti-toxic drugs, antioxidant, hepatoprotective substances form a herbomineral or polyherbal formulation known as *Agad*. We find the references of *Gairika* as *Vishaghna dravya* in *Rasatrangini*, *Rasaratnasamuchhya* and *Yogaratanakara* which defines that it can be used as a single drug or in formulation with other drugs as an anti-toxic medicine. In *samhitas* utilization of *Gairika* for various therapeutic purposes in the form of nasal snuffing, collyrium, external medicaments are mentioned. Thus *Gairika* can be used to for the treatment of diseases caused due to *Visha*.

The present review highlights the use of *Gairika* in general practice and making it globally accepted for treatment in poisoning cases.

Further Scope Of Study

This Article gives us idea about the Anti-toxic properties of *Gairika*, also to make this study more precise, animal study regarding use of *Gairika* to treat toxicity can be carried out. Clinical study can also be done to treat various diseases caused due to *Visha*.

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