

A Literary Review on Mrigashringa – Antler or Horn

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Abstract: Ayurveda is a science of life, deals with diseases in a holistic way so that once cured will never re-occur, as root cause is treated. The concept of using Bio-waste products was in practice since time immortal. Animal products are very commonly used in Ayurvedic preparations since vedic period, among them, *Mrigashringa* is one of controversial animal products. In Rasashastra, Iatro-chemistry and Ayurveda Pharmaceutics is a special branch of Ayurveda deals with identification and processing of various Minerals, Metals, Germ stones, Poisons, Silicate, Alkaline materials and Animal products. *Mrigashringa* was mentioned under one in *sudha varga dravya* and bio-waste product of Stag-deer having high medicinal values; *Mrigashringabhasma* is rich in calcium, magnesium, phosphorus etc., carbonates and it is effective in treating heart disorders, respiratory tract infections and acid peptic disorders even in very minimal dose. The antler of stag deer is used to make handles to knives, walking sticks, interior decorations and believed to be *rakshoghanam* or *bhutaghnam* (controls viral infections, relieves of psychiatric disorders) in nature. As the demand for *Mrigashringa* is very high, vendors usually adulterate the sample by horns of other animals. To avoid all such uncertainty, an attempt was planned, compiled and presented lucid way in this literary review on *Mrigashringa*.

Keywords: Acid peptic disorders, Antlers, Bio-waste animal products, Heart disorders, *Mrigashringabhasma*, *Rakshoghanam*, Stag-deer antler.

1. Introduction

Mrigashringa is one among *Sudhavarga dravyas*. Its source is Horn of stag deer hence it is rightly called Deer's horn or Stag deer horn. In specific, scientifically it is Antlers of deer, which means lowest tine.

Antlers are extensions of an animal's skull found in members of the Cervidae family. Antlers are a single structure composed of bone, cartilage, fibrous tissue, skin, nerves and blood vessels. These are found only in male animals [1]. Antlers are shed and re-grown every year and function primarily as objects of sexual attraction and as weapons in fights between males for control of harems. In contrast to antlers, horns found on pronghorns and bovid, such as sheep, goats, bison and cattle are two-part

structures that usually do not shed.

A horn's interior of bone is made-up of keratin sheath [2]. Deer are a group of even-toed ungulate mammals of Cervidae family. A male deer known as stag or buck, a female deer called doe or hind and a young deer called fawn, kid or calf.

There are about 60 species of deer. Their habitat is northern hemisphere and found in Europe, Asia, North America, South America, Australia, New Zealand and South Africa. All adult deer have antlers. The antlers are deciduous and drop off after the mating season. Their main use is for male animals to fight for groups of females during the rutting season.

Antlers are usually large, branching boney appendages on both sides of heads of male deer.

In Ayurveda, *Mrigashringa* explained for the first time in *Astangahridya sutrasthana*, *Anna Swarupa vijyaneyaadhyaya* [3]

2. Need of the Study

For proper preparation and use of medicine, one should have through knowledge about the identification of drug and method of preparation mentioned in classics, there must be no confusion and controversy. To answer all these quires this study focused. Antlers and horns pronounced as synonyms but really, they differ in origin and uses.

3. Materials and Methods

Author wants to remove such misconception in physicians, a humble trail was taken, compiled the literary data from all authentic classical texts for better understanding to the readers.

Ayurveda is a holistic medicine, among the concepts of Ayurvedic medicine for making Ayurvedic preparations in procurement of raw drugs no animals are killed but collected bio waste materials. Examples: Eggshell, Crouch shell, Pearl, Coral, Oyster Shell, Milk and Tortoise shell.

Vernacular names: In Hindi it called as Bara sinhing or Harina shringa, in Telugu it is known as Dupplikommu, in Tamil and Malayalam it is Manukombu.

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Ideal qualities of Mrigashringa: Mrigashringa of both sides looks symmetrical, not contaminated by insects, germs or pest. It must be long, heavy, hard, strong-enough and having many branches etc, considered as ideal Mrigashringa [4].

Purification (Shodhana) or Cleansing: Author of Rasaprakashika, explains purification of Mrigashringa. Mrigashringa was chopped into pieces, processed in swedanayantra with buttermilk or sour gruel (Amlakhanji) for three days, every day the used liquid must be replaced [5].

Incineration or Method of Bhasmikanana: Author of Rasatarangini in two methods, namely Antardhuma and Bahirdhumavidhi, mentioned Bhasmikanana of Mrigashringa. Following Bahirdhumavidhi is considered the best.

In Antardhumavidhi, Shodita Mrigashringa pieces are kept in sharvasamputa (earthen crucibles), give one puta and convert in to powder form.

This powder is pounded with latex of Calotropisgigantia, prepare pellets (Cakrikas), subjected to puta for three times or until bhasmasiddhi lakshanas are found. It looks black in colour.

Shoditamrigashringa pieces are fried and powdered; the powder is soaked in latex of Calotropis gigantia and subjected to puta for three times or till bhasma siddhi lakshanas attained. It looks white in colour. As this process is carried out on open air and open pan (without closing lid), it is called Bahirdhumavidhi [6].

Organoleptic characters of Mrigashringabhasma: It looks black in colour on Antardhumavidhi where as white when followed Bahirdhumavidhi. Its taste is Bitter and pungent, Light in weight, rough in touch and hot in potency.

Chemical composition: Mrigashringa is composed of Iron in Fe_3O_4 in 0.32%, Calcium 25%, Potassium 43%, Magnesium 4% and Calcium carbonate 3 to 31% [7].

Popular formulations with Mrigashringa: Trinetraras, Trigunakhyaras, Jwarankusaras, Jaharamoharavati and Balarkaras.

Dose of Mrigashringa: 2 to 6 Ratti or Gunja, which may vary between 250 to 750 mg.

Vehicle (Anupana): Milk, Butter and Ghee etc are given as vehicle for Mrigashringa.

Therapeutic utility of Mrigashringa:

1. **Sinusitis:** For draining out the accumulated fluid from sinuses, Mrigashringabhasma is given internally with honey.
2. **Hridashula:** Mrigashringabhasma is given internally

with cow's milk or honey.

3. **Pain in flanks (Parswashula):** Mrigashringabhasma is given internally with honey.
4. **Upper Respiratory Tract infections and Hiccups (Kasa, Shwasa and Hikka):** Mrigashringabhasma, Fruit pulp of Bhadra (Zyzyposujuba), Seed powder of Apamarga and Pippali (Piper longum) all are taken in equal quantity and given internally with honey.

A. Difference between Antler and Horns



Fig. 1. Differences between Antler and Horn

Antler: Male animals of Cervidae family grow Antlers, Includes species of deer, moose and elk. They appear to compete with co-male animals for mating rights with mates.

Antlers are grown every spring, shed off every winter, growth of antler needs healthy, rich nutritious diet. It is a known fact that, an animal with a complete horn with lots of stout branches with sub-branches helps to attract its mate.

Cervids have pedicels, bony structures that support the antlers as they grow

In the spring, testicular and pituitary hormones get the growing process started. Antlers are covered with velvet such as in the antlers of deer carries blood and nutrients to antlers during development.

Horn: Bovidae family animal usually have Horns, which includes species of cows, sheep, goats, water buffalo, antelopes and gazelles.

Unlike antlers, horns are never branched, are never shed (with one notable exception) and in many species horns never stop growing throughout an animal's life.

Horns have a bony hallow, covered with a sheath of keratin.

The bony core of a horn is not part of skull but fused to skull with connective tissue.

Horns are for social dominance, grown territoriality and anti-predator interactions.

Table 1
Difference between the Antler and Horn

Specifications	Antler	Horns
Family of animals	Cervidae	Bovidae
Examples	Stag deer, white-tailed deer, mule deer etc.	Cow, sheep, goat etc.
Exceptions	Reindeer (female) in North America	No exceptional
Gender	Male animals only possess antlers	Both (male and female) animals have horns
Purpose	To attract its mate and for self defense	Self defense
Multiple branches	Present	Absent
Shed-off nature	Present (Sub-branches will shed-off seasonally and while defense)	Never shed-off
Chemical nature	Rich in calcium, magnesium, keratin, and trace mineral compounds	It is composition of calcium.
Made out of	made out of bone and velvet like coating	made out of bone and keratin
Arises from	Pedicles on both sides of Head.	Skull
Medicinal uses	Cardio- respiratory disorders, Acid peptic disease, Calcium supplement	Calcium supplement

Bovine male animals also use horns in fights and displays of strength during breeding season.

4. Discussion

Acharya Sushruta and *AstangaHridaya – Vagbhata* are mentioned the animal Stag deer by name *KaralaMrigam* under *mamsavargam* but not explained about the horn of animal. It is presumed that use of *Mrigashringa* is noticed from *Rasatarangin* onwards, preparation and use of *Mrigashringa* in *bhasmam* form was delineated lucidly. The author intended to explore the method and uses of *Mrigashringabhasma* through this article and to help Ayurvedic practitioners.

Without harming the animals, *mrigashringa* as are procured and prepared *bhasma* of it. Use of animal bio-waste products is not new for Ayurveda, the concept inbuilt, observed in usage of *Kukkutandatwak*, *Kurmaasthi*, *Ajasthi*, *Madhu*, *Ksheera* and *Shanka* etc.

According to pharmacology, the calcium preparations are used for bone fractures, acid peptic disorders and to promote callus bone formation. *Mrigashringabhasmam* is chemically calcium and other compounds, so it is also benefit in Cardio-respiratory disorders as mentioned in Ayurveda. Hence, this cannot be concluded as merely calcium compounds and it is observed that, it is beyond the expectations based on chemical composition.

5. Conclusion and Summary

To differentiate Horn and Antlers, with short and accurate, if collecting raw drugs is not clear then everything may go wrong. To differentiate them, Antlers are found on cervide, are made of bone, are typically branched, and are shed every year. Antlers are good source of phosphorous and calcium with Iron and

Magnesium, which is beneficial in the treatment of Bone disorders like osteoporosis. Horns are not branched and are a permanent part of animal.

According to classical texts, *Mrigashringabhasama* and its preparations exhibits expectorant and Broncho-dilator activity hence it is the drug of choice for Bronchitis, asthma and all Upper Respiratory Tract disorders.

6. Perspectives and Propositions

Clinical or experimental trials on *Mrigashringabhasama* in cardiac, respiratory tract and acid peptic disorders can be planned after taking ethical consent will be helpful for public health.

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