

## ANTI-AGEING ACTIVITY OF MAKARADWAJA RASA – A REVIEW

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### ABSTRACT

Rasashastra is the main branch of Ayurveda. In that Kupipakva Rasayana is a popular and commonly used formulation. It has its own significance because of specific pharmaceutical process and quick action at minimum therapeutic dosage. Makaradwaja rasa is one such Kupipakva rasayana. In Rasagranthas it is mentioned that it increases the longevity and contest ageing process. It is renowned rejuvenating, immunomodulator and aphrodisiac formation being used in many disorders. That is why it is considered as Rasayana drug.

In the present era of modernization even because of faulty food habits and modified life style ageing symptoms like greying of hair, loss of memory, low immunity etc are observed in the early stage of life only. So it is necessary to take anti-ageing drugs in order to delay the early ageing. In the present paper specific mode of action of makaradwaja rasa as an anti-ageing has been discussed.

**KEYWORDS:** kupipakvarasayana, makaradvajarasa, antiageing, geriatric.

### INTRODUCTION

Ageing is both a complex and challenging scientific problem and a fact of universal concern. Ageing is a process that accumulates changes in organisms or objects over time. Human aging process involves multidimensional changes on physical, psychological, cultural and social levels. These changes doesn't depend only on the age even in the early stage of life also the symptoms of ageing can be seen in the present era. These type of early changes are called as premature ageing.

Ayurveda is basically the science of life and longevity. It presents a good concept of ageing, process of delaying the ageing and its management. In Ayurveda ageing is described by the word Jara. Jara is an inescapable part of life. Ayurveda has a lot

to contribute towards jarachikitsa. Jarachikitsa of Ayurveda is a method to slow down or delay the process of ageing in human beings during the later stage of life when degeneration of body tissues and senses occurs at an enhanced rate. For a better understanding of jarachikitsa, the concept of ageing should be first acknowledged. Ayurveda advocates healthy ageing through rasayana chikitsa.

Makaradwaja is one of the most popular Rasaushadi (herbo-metallo-mineral compound formulations) prepared with Shodita Swarna (gold), Parada (mercury) and Gandhaka (sulphur) by Kupipakva method of preparation using Valukyantra in the ratio of 1:8:16, 1:8:24 or 1:8:48. It is a popular medicine of Ayurveda used for

vigor and vitality. It is mentioned in classical texts of Rasashastra that Makaradwaja increases longevity of life and contest ageing process. It is a well-known aphrodisiac, immune – modulator, rejuvenator drug being used in many ailments.

### ETYMOLOGY OF JARA<sup>1</sup>

The term JARA has been derived from the Sanskrit root, JRISH VAYOHANOW which can be explained as the muscles and other tissues are loosened under the influence of ageing. Totally this term indicates of the “loss” in the period of lifespan. Synonym of the word JARA – VISRASA derived from the root SRAMSU ADAHPATANE which means a degradation or retardation in the physical, psychological and physiological well-being.

### AGEING IN AYURVEDA

According to ayurveda, ageing is outcome of kala or parinama and described under svabhavabalapravrittavyadi<sup>2</sup> those diseases which produced by the strength of nature.

Acharyas classified this age into 3 ie- balyavasta, madyamavsta and jeernavasta. There is difference of opinion about this. Charaka<sup>3</sup> says after 60yrs is considered as jeernavasta but acaryasusruta says after 70 years is considered as jeernavasta<sup>4</sup>.

Acarya susruta has explained for the first time about the types of jaraie 1)kalajajara and 2) akalaja jara<sup>5</sup>. Kalajajara is the one which occurs at the proper time even after proper protection or care. Akalajajara is the one appearing before proper time due to improper care and prevention.

### ETIOLOGY OF KALAJA JARA

1. Svabhavoparamavada (theory of natural destruction)

2. Kala (time)
3. Shariravridhdhikara bhava – abhava
4. Role of tridosha
5. Role of agni
6. Role of dhatus
7. Role of srotas

### ETIOLOGY OF AKALAJA JARA

1. Aharatmakahetu
2. Viharatmakahetu
3. Manasikahetu

### SYMPTOMS OF AGEING<sup>6</sup>

Physical symptoms –

- a. Vali (wrinkles)
- b. Palitya (premature graying of hair)
- c. Khalitya (hair loss)
- d. Sukraapravartanam
- e. Ojaksaya (weakness)
- f. Mamsasaitilya (muscle weakness)
- g. Asamartacesta (inability to work)
- h. Analpameda (debilitated)

2. Psychological symptoms –

- a. Medhahani (decreased functioning of intellect)
- b. Avasannata and nairasya (depression)
- c. Smritihani (loss of memory)
- d. Utsahahani (decreased enthusiasm)
- e. Buddhihani (deterioration in wisdom)

### MANAGEMENT OF JARA

1. Rasayana therapy
2. Swastavritta
3. Sadvritta

### RASAYANA THERAPY

Rasayana word is made up of two words Rasa means ‘nutrition’ and Ayana means circulation or promotion throughout the body for its efficient assimilation into the body. Ayurvedic system of medicine specially incorporates Rasayana Tantra as one of the eight disciplines of Astanga

Ayurveda, which is exclusively devoted to geriatric health care.

Acharya susruta defines Rasayana as a branch of Astang Ayurveda where all measures which help for attaining longevity, enhance intelligence and mental strength and increase immunity against various disorders are elucidated.

Essentially Rasayana therapy has a very broad scope and it does not mean only rejuvenation or method for delayed ageing. Rasayana is specialized procedure practiced in the form of rejuvenative measures, dietary regimen and health promoting methods. Rasayana drugs act primarily at the level of Rasa dhatu, Agni (improved digestion and metabolism) and Srotas( cleaning up the micro channels leading to better perfusion of tissue ).

### **MAKARADWAJA RASA<sup>7</sup>**

Long years ago in search of emancipation (Moksha);Indian Sages were practicing alchemical procedures to achieve it. For the immortality, thousands of medicines were prepared and used. Alchemical science was one of the branches, which were advocated for this purpose too. The Indian Alchemy was monitored for two purposes Dehavada and Dhatuvada. Dehavad mainly practiced for immortality to achieve Moksha. But later on, it has given birth to Medicinal Alchemy. A number of Alchemical medicinal preparations were prepared to increase longevity of life and rejuvenation. Makaradwaja was one of them. It is the perfect blend of herbo-mineral drugs.

It is very much popular drug in the Indian system of medicine. Physicians use it as a main aphrodisiac agent and rejuvenator and treating a number of disorders. From

centuries, it is a drug of choice for many diseases.

The word Makaradwaja is composed of two words ie , Makara and Dhawaja that is also a synonym of Kamadeva ,the God of beauty. When used internally for therapeutic purposes, the Makara stands for the drug having aphrodisiac property and Dhawaja stands for the resultant as a straight rod or flagpole. Chandrodaya<sup>8</sup> is also known as Makaradwaja in later rasa classics. It is constituted of two words ie Chandra (Moon) and Udaya (Glow of rising moon).

### **METHOD OF PREPARATION<sup>7</sup>**

#### **Ingredients**

- 1) Shuddha swarnapatra – 1 part
- 2) Shuddhaparada – 8 parts
- 3) Shuddhagandhaka – 16 parts

#### **Method of preparation<sup>7</sup>**

First shuddhaswarna and equal quantity of parada should be taken in khalvayantra and triturated well till it becomes uniform butter like amalgam with no shiny particles of gold left. Later remaining parad and mentioned quantity of gandhaka should be added to same khalva. It is triturated continuously for 2-3 days until appropriate kajjali is formed. The prepared kajjali is again subjected for one day bhavana with ghrtakumariswarasa. The product obtained is carefully collected and filled into metvastralepitakacakupi, the mouth of the bottle is closed with cork, placed firmly in valukayantra to subject it for mrudu, madyama and tiksnaagni respectively for a day each.

The cork has to be removed soon after beginning the heating process. Once madyamagni of a day is applied, fumes start rising from mouth of the bottle. In case the neck of the bottle gets blocked, it has to be

cleared with hot iron rod so that the ganshaka burns and moves out.

Flames and fumes gradually subsides indicating the completion of the medicine formation inside the bottle. After getting suryodayalakshana corking should be done. Valuka around neck should be removed and allowed to cool on its own.

Next day the bottle is broken tractfully and the makaradwaja gathered at the neck of bottle is collected.

**Dose** – ½ - 1 ratti

**Rasa** – Apyakta (shadrasatmaka )

**Virya** – Ushna

**Doshagnata** – Tridoshashamaka

**Varna** – Rakta

**Anupana**–Madhu and Tambulapatraswarasa

Therapeutic efficacy of SwarnaBhasma as described in Ayurvedic classics

References	Qualities
Rasa Ratna Samucchaya <sup>9</sup>	Kshayahara, Agnimandiyahara, Ojo-dhatuvivardhana, Balakara
Rasa Prakasha Sudhakar <sup>10</sup>	Saundaryakantivardhana, Tridoshajarogahara
Ayurveda Prakasha <sup>11</sup>	Vrishya, Balya, Rasayana, Brumhana, Ayushya
Rasa Tarangini <sup>12</sup>	Vrishya, Punsanopyogi
Rasamruta <sup>13</sup>	Rasayana, Vishagna, Medhya

It is also having following properties<sup>14</sup>

- 1) Free radical scavenging activity
- 2) Anti – anxiety and anti – depressant activity
- 3) Effect on modulation of the immune responses

#### **SHUDDHA PARADA<sup>15</sup>:**

Parada has yogavahi property which incorporates and enhances the properties of the drugs with which it is used. Parada is best Rasayana for Dehavada ( rejuvenation) as well as Dhatuvada (converting lower metals to noble metals) Mruta Parada (calcined form of mercury) is kshaya-shoshahara (relieves debility), balya (strengthens body), veerya-anand

**Action** – delays old age and death, aggravatesagni and bala, alleviates valipalita, improvisesmedha, ayu, kanti and kamasakti.

#### **MODE OF ACTION:**

##### **SHUDDHA SWARNA:**

Swarna is considered superior among all metals and is kept under saarlauha group ( essence or noble metal). It has been used in calcined form (SwarnaBhasma). It is considered as best rejuvenator which promotes longevity and prevents ageing. The SwarnaBhasma is sweet in taste and vipaka. It is aphrodisiac, cardiac tonic, promoter of eye sight as well as intellect and rejuvenating. It counteracts the toxins.

vridhikara (increases sexual desires), kantivardhana (increases luster), increases striramanashakti and viharashakti (sexual vigour ).

##### **SHUDDHA GANDHAKA<sup>16</sup>:**

Gandhaka is pungent in taste, hot in potency and sweet in vipaka. It is rejuvenating agent, yogavahi, “sutendraveeryaprada” (when added with Parada, it enhances its therapeuticpower) aphrodisiac, alleviates kapha and vata. Here, excess Gandhaka is assimilated / digested in Parada to form a therapeutically extremely effective compound; a polysulphide form probably is termed as ganadhaka jarana which plays an important role in detoxification of mercury.

It has been claimed that Parada without the process of GandhakaJarana cannot be able to cure the diseases, so it must be digested with Gandhaka to make it highly effective ie to acquire many pharmacological and therapeutic properties.

**Bhavanadravya:**

**Kumari swarasa**<sup>17</sup>- Kumari literally means “like a young girl or virgin” as it imparts the energy of young. Kumari increases the blood circulation.

Taste: bitter, astringent, pungent

Attribute: slimy

Potency: cooling

General action: tonic, aphrodisiac, rejuvenating

**Anupana:**

**1) Nagavalli swarasa**<sup>18</sup>

Action: Deepana, Pacana, Sugandi, Vrushya

**2) Madhu**<sup>19</sup>

Action: vrushya, yogavahi

**DISCUSSION**

In Ayurveda, the phenomenon of ageing is also related to principle of Tridosha. The tridosha (vata, pitta and kapha) is the most important factor in maintenance of good health and production of disease. These doshas exist in the body all the time but it varies as per age, day, night, etc. During childhood kapha dosha predominates, in the middle age pitta dosha predominates and in the older age vata dosha is said to be dominant. The properties of vata dosha are described as ruksha, laghu, sheeta, vishada. So vata dosha by nature decreases lustre of skin, lessens body strength, dries and decays the body and hastens ageing process.

Apart from doshas, agni also plays an important role in ageing process. Body tissues are regularly nourished by dietary

substances and agni is said to be responsible for the conversion of dietary substances into tissue element. As vata gets vitiated it results in vishamagni and affects the digestion. This will lead to under nourishment to tissue.

Oja, the essence of all the dhatus is also termed as bala. It is responsible for resistance against diseases or vyadhikshamatva. So the dhatukshaya and ojakshaya are also responsible for process of ageing and diseases in old age.

Srotas are having the function to transfer the body fluids. The vitiated vata and mandagni leads to srotodushti. This srotodushti in turn leads to early ageing process.

As per classics Rasayana therapy works on Agni which in turn leads to proper formation of rasadidhatus. Hence it is necessary to nourish the ojas which is considered as prime essence of these rasadidhatus. Which in turn is responsible for proper working of immune system of body in terms of vyadhikshamatva. Hence Rasayana plays a critical role in prevention of ageing and old age related disorders. It also enhances the bodily strength and mental faculties.

Rasayana agents act by various modes such as 1) Direct enrichment of the nutritional quality of rasa, 2) Improving the competence of Ayanas or Srotas in the body leading to improved DhatuPoshana or tissue perfusion and optimum bioavailability of nutrients to the tissue.

Here, mineral and herbal drugs act on synergism which makes the formulation potent enough to treat. Bhavana samskara with dravyas like kumari leads to possible formation of organo metallic compound and converts heterogeneous form into

homogenous form, macro to micro form, rough to smooth form of drugs. This process of impregnation helps in reducing the particle size of the drugs thus increasing their capacity for absorption into the system. Nagavalli swarasa and Madhu as Anupana play a major role in potentiating drug action through their Rasa, Guna, Virya, Vipaka and Prabhava as well as improvement of rogabala and rogebala. Other than this, these also help in palatability, easy administration and prevent irritation and can also control adverse drug effect.

Makaradwaja delays old age. It also aggravates agni and bala, alleviates valipalita, improvises medha, ayu, kanti and kamasakti. Because of all these properties it prevents early ageing and makes person disease free<sup>20</sup>.

Simile: As the light reflected from niladiratna becomes brighter, in the similar way this formulation is therapeutically more efficacious with different adjuvants.

## CONCLUSION

Ayurveda mainly concentrates on swasthasya swastya rakshanam ie prevention of the disease. Akalajajara is considered as major burning issue in the present era because of many causes. For that Acharyas had given Rasayana therapy as a best remedy. Among those Rasayana therapy rasa preparations plays a major role. It is found that the Makaradwaja rasa when administered along with nagavallipatra (Betel leaf) and madhu exhibit santi ageing effect, tridoshagna and immunomodulator. Thus it can be considered as an excellent recipe for positive health, longevity and anti-ageing.

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Source of support: Nil,

Conflict of interest: None Declared

### **Cite this article as**

Anitha T M: Anti-Ageing Activity of Makaradwaja Rasa – A Review; ayurpub; IV(1): 1162-1168