ROLE OF MEDHYA RASAYANA (NOOTROPIC HERBS) IN PRESENT SCENARIO: AN AYURVEDIC OVERVIEW

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Keywords: Medhya, Rasayana, memory, stress.

ABSTRACT

Rasayanatantra is a branch of Ayurveda which describes the measures of attaining long life, maintenance of youthfulness, increasing immunity and providing excellent nutrition to all the body tissues. Rasayana on regular practice boosts nourishment, health, memory, immunity and longevity. Rasayana can be classified as Dravyabhuta and Adravyabhuta Rasayana. Adravyabhuta Rasayana includes Aachara Rasayana and Dravyabhuta Rasayana are classified as Kamya Rasayana, Naimittika Rasayana and Ajasrika Rasayana. Medhya Rasayana (nootropic herbs) is a subtype of Kamya Rasayana and they are used with an intention or desire to improve intellect, concentration and memory. Need of attaining mental peace is increasing day by day in view of tremendous increase in the stress and strain. Medhya Rasayana described in the classics can be used as single Dravyas or in combination. Some examples from our classics are Mandukaparni, Gudduchi, Yashtimadhu, Shankhpushpi, Brahmi, Vacha, Jatamansi and Ashwagandha. Aims and Objectives: To highlight the importance of using Rasayana in today's perspective which is bounded by stressed life and immense competition. Materials and Methods: All the relevant Ayurvedic classics with desired content matter was available which was thoroughly searched and the outcome was analyzed. Conclusion: The use of Medhyarasayana in everyday sphere is a boon to the mankind considering the amount of stress, one is surrounded by which is difficult to deal with now a days.

INTRODUCTION

Desire of long and healthy life has been cherished by the man since ages. Ayurveda aims at maintenance of health in healthy individuals and prevention and cure of the diseased one. Ayurveda enfolds knowledge about the beneficial and harmful factors for four types of (ayu) life i.e. Hitayu, Ahitayu, Sukhayu and Dukhayu.[¹] Hitayu and Sukhayu should be encouraged with the beneficial factors and the Ahitayu and Dukhayu should be amended or discouraged. The definition of health given by Acharya Sushruta covers all the perspectives of health viz. physical, mental, social and spiritual.[²] As per WHO “Health is a state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity.”[³]

In today's hastily lifestyle, everyone wants to be at the peak but it is not an easy task. For achieving this aim, one should be unconditionally in a good state of physical health, with calm and peaceful mind, in a virtuous social structure and with a spiritual awareness and cognizance. Though, medical and public health advances have led to better treatment of many existing diseases but the health outcome in terms of quality of life needs to be pondered upon. The people who appear healthy, in fact encounter many customary troubles like anxiety, stress, fatigue etc. They may not appear ill in young age but these factors act as main causative or precipitating
factors for severe diseases in late age. Hence, maintenance of health and health related quality of life is a necessity in present era to run in the race of competition, thus hold a good position, and enjoy being there. To meet this necessity some common, affordable and feasible measures must be adopted in the form of medicine and behavioral regimen.

**Stress- The Most Common Problem of Society**

Stress affects people of all ages and in all walks of life. Children at play, students preparing for examination, workers on the job and elderly at the home all are subjected to stress. Stress is our body's way of responding to any kind of demand. It can be caused by both good and bad experiences. When people feel stressed by something going on around them, their bodies react by releasing chemicals into the blood. These chemicals give people more energy and strength, which can be a good thing if their stress is caused by physical danger. But this can also be a bad thing, if their stress is in response to something emotional and there is no outlet for this extra energy and strength. People experiencing severe stress are often overwhelmed by tension, anger, fear and frustration. Those who have difficulty in dealing with stress over time suffer from a number of stress related disorders.

It is most common among adolescents. Majority of the adolescent undergo stress, whatever the sources may be internal or external, and it hampers the major functioning of the body.

Stress is categorized by feelings of tension, frustration, worry, sadness and withdrawal, which commonly last for few days. Depression is both severe and longer lasting. Depression is characterized by more extreme feelings of hopelessness, sadness, isolation, worry, withdrawal and worthlessness that last two weeks or more. Improved methods of assessment and research design have established a robust and causal association between stressful life events and major depressive episodes.[4] Stress levels if not controlled can lead to lifestyle disorders like diabetes, high cholesterol and cardiac arrest. Irregular working hours often lead to dietary disturbances.[5] Ayurvedic classics also mention stress and anxiety as a precursor of many diseases like Jvara, Prameha, Pandu and Rajyaksha.[6] etc.

**The Concept of Rasayana Therapy**

Rasayana Tantra which has been mentioned among eight branches of Ayurveda describes the measures which enhances longevity and memory, alleviates disease and slows the ageing process resulting in total gain of physical and mental health. It is the measure of providing excellent nutrition to all the body tissues.[7] In nutshell, it aims to produce a state of Dhatusamya through different modes of action. It has been placed under Swasthsyaaurjaskara[8] type of class of medicines which means that is strengthens and promotes the Swasthhava or the Dhatursamy.

**Classification of Rasayana**

Rasayana can be classified as Dravyabhuta and Adravyabhuta Rasayana. Adravyabhuta Rasayana includes Aachara Rasayana and Dravyabhuta Rasayana can be classified as Kamya Rasayana, Naimittika Rasayana and Ajasrika Rasayana. The different types of classification of Rasayana can be understood as follows.

**Dravyabhuta Rasayana**

(A) As per method of use [9]
- Kuti Praveshika (indoors use)
- Vatatapika (outdoor use)

(B) As per Scope of use
- Kamya Rasayana- (Promoter of normal health) – These are used with an intention or desire to gain or promote longevity, memory or physical beauty.
  1. Prana Kamya (Promotes longevity- e.g. Amalaka, Brahmrasayana, Chyavanprash etc).
  2. Medha Kamya (Improves mental faculties – e.g. Mandukparni, Guduchi, Shankhapushpi, Brahmi etc.)
  3. Shri Kamya (Improves lusture or physical beauty of body- e.g. Bringraja, Aswagandha etc.)

(C) According to Prabhava (Effect)
- Samshodhana Rasayana e.g Haritaki and Amalaki
- Samshamana Rasayana e.g. Guduchi and Madhuyashthi

**Adravyabhuta Rasayana**

Achara Rasayana-Conduct of Rasayana

Achararasyana includes worship of god, respecting elders, holding on truth, avoiding anger, avoiding indulgence in alcohol and sex, keeping peaceful, being kind to living beings, balanced sleep, regular use of nourishing diet and studying religious literature.

Budhimedhakargana includes Satatadhyayana (the habit of reading or gaining knowledge), vada (discussion with others), Partantraavaloikan (reading other texts), Acharyaseva (paying regards to mentors), Ayushyabhojan (nutritious diet), etc. for severe diseases in late age. Hence, maintenance of health and health related quality of life is a necessity in present era to run in the race of competition, thus hold a good position, and enjoy being there. To meet this necessity some common, affordable and feasible measures must be adopted in the form of medicine and behavioral regimen.

Stress- The Most Common Problem of Society

Stress affects people of all ages and in all walks of life. Children at play, students preparing for examination, workers on the job and elderly at the home all are subjected to stress. Stress is our body's way of responding to any kind of demand. It can be caused by both good and bad experiences. When people feel stressed by something going on around them, their bodies react by releasing chemicals into the blood. These chemicals give people more energy and strength, which can be a good thing if their stress is caused by physical danger. But this can also be a bad thing, if their stress is in response to something emotional and there is no outlet for this extra energy and strength. People experiencing severe stress are often overwhelmed by tension, anger, fear and frustration. Those who have difficulty in dealing with stress over time suffer from a number of stress related disorders.

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Veganamavidhahan (not holding urges), Brahmhcharya (controlling desires) and Ahinsa (non-violation).

**DISCUSSION**

Medhya Rasayana is a subtype of Kamya Rasayana and they are used with an intention or desire to improve intellect, concentration and memory. Medhya Rasayana described in the classics can be used as single Dravyas or in combination. Some examples from our classics are Mandukaparni, Guduchi, Yashtimadhu, Shankhpushpi, Brahmi, Vacha, Jatamansi and Ashwagandha.

Medha is to have proper correlation and understanding about the knowledge of the existing objects. Due to Medha a person will be able to obtain the knowledge of existing object and hence person becomes learned. Majority of Medhya Rasayana drugs possess varied properties. They can be useful in the stress and anxiety state or simply to improve intellect and memory.

Rasayana drugs are used for preservation of positive health. Rasayana stands as an answer to solve the problem of healthful longevity including mental development and resistance against disease. Rasayana is a specialized type of treatment influencing the fundamental aspect of body i.e. Dhatu, Agni and Srotasa. It is possible that different Rasayana drugs may act with predominance effect at different levels. These comprehensive effects are brought about with the help of the varied pharmacodynamics properties of these drugs. Rasayana effect is not a specific pharmacological action but is a complex phenomenon operating through a comprehensive mechanism involving the fundamental factors like Rasa-samvahan, Dhatus, Agni and Srotas. It may ultimately be leading to the achievement of the total health.

Acharya Nagarjuna has mentioned that Medhya drugs mainly act by their Achintya Veerya i.e. Prabhava. The effect of Medhya Rasayana is also at different levels such as at level of Rasa, Agni, and Srotasa. At the level of Agni these drug act by stimulating and improving the function of Agni. At level of Srotasa, these drugs improve the circulation of Rasa by opening and cleaning the micro channel and then ultimately improve the function of Medha. These drugs have beneficial effect on body as well as on mind. Various Medhya Rasayana drugs used are Mandukparni Svarasa, Shankhpushpi Kalka, Guduchi Svarasa and Mulethi Churna. These Medhya Rasayana are described in Charaka Samhita. Some of the Rasayana drugs act by Panchbhautika composition, some by rasa, Gunaveerya, and Vipaka. The probable mode of action of these herbs can be defined as the Pharmacological properties of drugs are the resultant of different combination of Mahabhoota. Medha is attributed to predominance of Satva Guna, Hence Akashiya, Tajus, Aapya drugs having Satvaguna predominance improve Medha. On the basis of Rasa tikta rasa has direct action on the promotion of Medha. It performs this function by its Laghu property and Deepana-Paachana and Srotoshodhaka action. Madhura rasa also by promoting the formation of Ojus nourishes five sense, mind and Medha. Hence Medhya Rasayana drugs appear to be predominantly Tikta-madhura rasa. Amla, Lavana and Katu rasa are having least importance in Medhya action. Similarly Ushana veerya drugs stimulate Saadhak pitta which promotes Medha.[10] Ushanaveerya drugs improve Grahanashakti (power of reception) and Smriti (power of recalling). Majority of drugs are having Madhuravipaka which nourishes Medha by formation of Ojus. So all the Medhyarasayana drugs improve mental faculties, improve mental function and intellect.

Some Medhyarasayana mentioned in Charaka Samhita:

- **Mandukparni** (Centella asiatica Linn.) is a prostrate, stoloniferous perennial herb rooting at node Major constituents are saponin (medacoside, asiaticoside, medacassoside, asiatic acid, a new triterpenic acid.[11] They act on behavior besides being neuroprotectives and brain growth promoter.[12] *Centella asiatica* inhibits the memory impairment induced by scopolamine through the inhibition of AChE.[13] BR-16A (Mentat), a formulation containing *Centella asiatica* proved for its antistress effects.[14] Study on Menotab an effective herbomineral preparation containing *Centella asiatica* with other drugs from the Himalaya drug company, Bangalore is an ideal medication for relief of postmenopausal symptoms as a short-term therapy. [15]

- **Yashtimaduchurna:** Fine powder of dried root is used internally with milk for therapeutic purpose as Medhya. [16] The roots and rhizomes of *G. glabra* has been studied with respect to spatial learning and passive avoidance[17] preliminary free radical scavenging cerebral ischemia and antioxidant capacity towards LDL oxidation. The roots and rhizomes of *Glycyrrhiza glabra* is an efficient brain tonic; it increases the circulation into the CNS system and balance the sugar levels in the blood.[18] Liquorice has significant action on memory enhancing activity in demential it significantly improved learning and memory on scopolamine induced dementia.
Gudduchi swarasa (Tinospora cordifolia (Wild) Miers) is a large glabrous, deciduous, climbing shrub of Menispermaceae family found throughout tropical India. Juice of whole plant is used therapeutically as Medhya.[20] It is also used in the form of decoction, powder and Satwa (starch extract of stem). Its root is known for its anti stress, anti-leprotic and anti-malarial activities.[21,22] Neuroprotective and ameliorative properties are due to their antioxidant and trace element contents.[23] It increases the blood profile and has lead scavenging activity. Tinospora cordifolia has been claimed to possess learning and memory enhancing, antioxidant, and anti-stress activity, [24]

Shankhpushpikalka (Convolvulus pleuricaulis Choisy) is a perennial, prostate or sub erect spreading hairy herb, found throughout India. Recommended therapeutic form is fine paste of whole plant. Highly regarded as Medhya (intellect promoter). Important chemical principles are microphylic acid, Shankhpushpin, kaempferol-kaempferol-3-glucoside, 3, 4 dihydroxycinnamic acid, sitosterols. Neuroprotective and intellect promoting activity implicated to free radical scavenging and antioxidant property.[25] BR-16A (Mentat), a poly herbal combination containing Shankhpushpi significantly reversed the social isolation stress-induced prolongation of onset and decrease in pentobarbitone-induced sleep, increased total motor activity and stress-induced antinociception in experimental model. Ayushman-8 (containing Shankhpushpi, Brahmi and Vacha) reported to be effective on Manasa-mandata (mental retardation).[26] Shankhpushpi compound containing Shankhpushpi, Sarpagandha, and Gokshura in equal quantities studied to be effective in Chittodvega (anxiety disorders). Sanjay Parsania reported Shankhpushpi to be effective in relieving signs and symptoms of Chittodvega (anxiety disorders).[27] Herbalists believe that Shankhpushpi calms the nerves by regulating the body’s production of the stress hormones, adrenaline and cortisol. Few investigations reports that Shankhpushpi has potent depressive action in mice.[28] Convolvulus pleuricaulis whole plant extract, shows the highest inhibitory activity against Helicobacter muridarum.[29]

Some Medhyarasayana mentioned in Sushruta Samhita

- Vaccha
- Ghee

Swarna Bhasm
- Bilva Churna

CONCLUSION

Rasayanatantra is a branch of Ayurveda which describes the measures of attaining long life, maintenance of youthfulness, increasing immunity and providing excellent nutrition to all the body tissues. Rasayana on regular practice boosts nourishment, health, memory, immunity and longevity. To fulfill our materialistic needs and desires we are encountering stress because of excessive hurry and worry. Need of attaining mental peace is increasing day by day in view of tremendous increase in the stress and strain. Ayurveda, the science of life is a treasure of various means and methods which are helpful in combating stress and provide mental strength. The practice of Rasayanas is useful in present situation in which every second person is bounded by stressed life and immense competition. The perspective of Rasayana is very wide. Speaking the truth, following the preaching of elders and mentors, not getting too much involved in worldly pleasures and practicing Rasayana therapy in the form of drugs is very much profitable to encounter stress and strain and prevent major physical and psychological disorders. The vast data of the above researches regarding drugs or herbs in Ayurveda is vibrant example how it can become an indistinct part of so many people who are suffering from anxiety, depression and stress.

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