TRADITIONAL USED PLANTS AGAINST COGNITIVE DECLINE

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ABSTRACT
The medicinal plants in classical literature of Ayurved and traditional folk care health practices provide clues to new area of pharmaceutical research. The numbers of plants had been mentioned in Ayurveda for curing various pathophysiological stages of ailment and these are being practiced in various traditional streams in different parts of India. The present study aims to focus selected herbs that can be beneficial over psychological factors like cognition. Cognitive behavioral performance can be commonly noticed with gradually increasing forgetfulness generally due to old age or some neuropathological factors. It may troublesome or embarrassing to observe such suffering individual with mild behavior problems. But consistent or increasing concern about your mental performance may suggest Cognitive Decline. Ayurveda consider three Gunas i.e., Satva, Raja and Tama along with Tridoshas and their disequilibrium leads to abnormal functioning and behavior pattern of mental health. The significance of mental health is equally empathized under the definition of health by WHO along with physical health. Today’s upcoming lifestyle in term of diet and regimen leads to number of Psychological factors. Cognitive Decline is one of them. The selected herbal drugs possess Sadnyastapan property and helpful in cognitive enhancement. Ayurveda mentioned list of plants that are used and practiced for the treatment neurological disorders in traditional indigenous medicine. The medicinal plants possess positive effects on various cognitive functions by means of its multifold action. The selected mentioned drugs in the study can be useful for treatment of neuropsychiatric disorders and capable of enhancing cognitive performance. These herbs can prove better medicaments in case of Cognitive Decline.

KEYWORDS: Ayurveda, Cognition, Pradnyaparadha, Sadnyasthapan, Medhya.

INTRODUCTION
Medicinal herbs are a potential source of therapeutic aids and have gained significant importance in the healthcare system all over the world for both humans and animals in diseased conditions and to maintain proper health. The medicinal plants have been used for the prevention as well as curing of various ailments in the ancient indigenous science of Ayurveda. More than 2000 herbal plants are being used in the treatment of number of diseases all over India. Out of which many plants found to be useful in the treatment for the management of symptoms associated with brain functioning and neurological disorders. These drugs are grouped under “Medhya drugs” supposed to act on mind and the nervous system1.

In Ayurvedic literature, Acharya Charaka had mentioned that the improper usage of Kala (time), Buddha (intellect) and Indriya (Senses) leads to prognosis of ill health of body and mind2. WHO define health as "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Both physical and mental health contributes to maintain good health of a person. Central nervous system co-ordinates all body functions in an organism through its complex integrated circuits. Body and mind is the place where various factors lead to genesis of diseases. And at the same place happiness is experienced.

According to Ayurvedic literature, mind has three folds-Satva, Raja and Tam. The equilibrium among them is necessary to maintain healthy condition of mind3. While Vata, Pitta, Kapha are the three Doshas responsible for maintaining physical health. Their unequilibrium among themselves results in ill health and leads to prognosis of various mental diseases associated with behavioral and physiological symptoms.

Modern Review
The word cognition comes from the Latin verb cognosc. (con = with & gnus = to know).

Cognitive Decline (CD) is a cognitive deficit that present with many of neuropsychiatric conditions and/or alone as developmental deficit. CD is a brain function syndrome involving the onset and evolution of cognitive impairments beyond those expected based on the age and education of the individual without significant interference of daily activity4.

It is a transitional stage between normal aging and Dementia. CD can present with variety of symptoms. Individual with MCI (Memory Cognitive Impairment) does not meet diagnostic guidelines for dementia.
In CD, memory loss is the predominant symptom. Memory is a relatively permanent storage form of the learned information\(^8\), e.g. trouble in recalling one's name. It is known as 'amnestic MCI'. This symptom is mostly seen at earlier stage of Alzheimer disease, while individuals may not meet neuropathological criteria for the disease\(^9\).

A person with MCI is at an increased risk of developing Alzheimer's or another dementia.

**Discussion**

There are also list of drugs like Dnyan (intellect), Dhruvi (Cogniance) and Smruti (Memory)\(^10\). These all together or alone becomes individual incapable of working in day to day life. Above mentioned three folds of Pradnyaaparadha split ends in unbefallening happenings for health by individual\(^11\). This group of related responsible factors is the Pradnyaaparadha. It is the root cause for starting prognosis by means of vitiation of bodily Tridosha and neurological Doshas. Ultimately it result in deteriorate condition of the body.

**Ayurved Therapy**

Prashatmutyasoshaghei ........

…………………….Smrutee Samadhibhi [Charak Samhita/ Sutrasthana 1/58].

The treatment of neurological condition include Dnyan (Spiritual knowledge), Vignyan (Medical knowledge), Dhaivya (Patience), Smruti (Memory) and Samadhi (Concentration)\(^12\). Acharya Charaka also mentioned specific group of drugs that are beneficial in maintaining healthy neurological condition. It includes ten different herbs that posses supporting resuscitative multi-dimensional action for proper working in such impairments. Satvajaya (psychotherapy) and Rasayan (adaptogens- including immunomodulators, anti-stress and rejuvenation drugs) therapy also found to be useful in treating physiocycological condition.

Hingukaitaryamedavacha...........

………………Etetasemanisadnyasthapan bhawanti. [Charak Samhita/ Sutrasthana 4/48].

It is the group of ten herbs including Hingu, Kaitarya, Arimedha, Vacha, Charor, Vyayastha, Golomi, Jatila, Palankasha, Katak\(^13\). These herbs shows therapeutic action in neurological disorders by possible mechanism of action by means of attributes possessed by each individual as summarized in the chart. There are also list of drugs like Shankhpushpi, Iyotismati, Nagadamani, Vedamusk practiced for in different parts of India\(^14\).

The herbal drugs useful in neuropsychiatric disorders and capable of enhancing cognitive performance are summarized in the following table.

**Table showing useful herb in CD**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Latin Name of herb</th>
<th>Common Indian Name</th>
<th>Part Used</th>
<th>Active Chemical Constituents</th>
<th>Recent Studies Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ferula narthex (Boiss)</td>
<td>Hinga</td>
<td>Exudates</td>
<td>Asaresinotannol, Disulphide</td>
<td>Act on CNS(^13) as radical</td>
</tr>
<tr>
<td>2.</td>
<td>Melia azedarach (Linn)</td>
<td>Mahanimba</td>
<td>Flower, Leaves</td>
<td>Azadiridin, Margocin</td>
<td>Scavenging activity.(^14)</td>
</tr>
<tr>
<td>3.</td>
<td>Acorus caramus (Linn)</td>
<td>Vacha</td>
<td>Root</td>
<td>Asarones, Acorones, B-fanrese, Octaioic acid</td>
<td>Act as immunostimulants(^15) and enhance humoral immune responses.(^16)</td>
</tr>
<tr>
<td>4.</td>
<td>Acacia farisiana (Willd)</td>
<td>Irimeda</td>
<td>Heart –</td>
<td>Catachin, Catechutaic</td>
<td>Acts on CNS.(^17)</td>
</tr>
</tbody>
</table>

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### REFERENCES

10. Kashinath Pandey, Ghorakhnath, Charak Samhita, Part-1, Varanasi, Chaukhamba Bharati Academy, Varanasi, p.34.

<table>
<thead>
<tr>
<th>No.</th>
<th>Plant Name</th>
<th>Part Used</th>
<th>Activity</th>
<th>Comments</th>
</tr>
</thead>
</table>

**CONCLUSION**

1. CD remains leading cause of mental and physical disability and its conventional therapy provide moderate relief.
2. The symptoms in CD resembles with the symptoms mentioned by Charak as in 'Pradnyaparadha.'
3. Selected plants are found to be promising for cognitive enhancing property, leading to the development of valuable medicine for CD in terms of safety.

**SCOPE OF STUDY**

Though modern existing parameters come from in-vivo studies, assessment of possible effect by using these herbal drugs can be studied to better determine the efficacy.

Though the selected drugs showed differences in term of Rasa, Veerya, Vipak, Guna, Karma, they have multi-fold actions which in turn alter the neuropsychiatric activity during development and ageing in CD in terms of pathogenesis. The scientific studies conducted in recent years with these drugs have proven targeted approach such as anti-convulsion properties, anti-inflammatory activity, neuro-protective effect, increased blood flow at neuropathy, which is responsible for the improvement of overall brain function.