UNDERSTANDING THE PREVENTIVE AND THERAPEUTIC ROLE OF MURDHNITAILA IN JARA JANYA VYADHI W.S.R. TO CEREBRAL ATROPHY- A CONCEPTUAL STUDY

Shruti .B.Joshi¹, Santosh.L.Yadahalli², Ananta Desai³

PG Scholar; Associate Professor; HOD; Department OF Panchakarma, GAMC, Bengaluru, Karnataka, India

Email: shatabhishakpriya13@gmail.com

ABSTRACT
Aging and increasing number of elders in population is a matter of great significance because of its likely impact on public health and socio economic growth of nation.” Mati poorvam deha naashaat paapam mahad avapmuyat’’, Tatparyanirnaya teek on Bhagavat quotes that not taking care of one’s own body, is nothing but knowingly destroying own body, which is a great sin. Ayurveda being science of life and longevity offers a treasure of geriatric care with goal of healthy aging and long life to achieve purushartha chatusthaya. Cerebral atrophy is one such age related degenerative condition where there is wasting and shrinkage of brain occurs. Loss of memory, seizures, difficulty in speaking words, improper gait is some of its symptoms. This particular disease is not described in Ayurveda under any vyadhi but Acharya Charaka explains visheeryamaana dhatu guna in vruddhavastha, lakshanas which are similar to the symptoms of cerebral atrophy. Because old age is the period for vata aggravation thus atrophy is common in old age. According to Ayurveda cerebral atrophy is caused due to disruption in vata dosha which controls motor and sensory activities. ‘Vayustantra yantra dharah’, shiras is uttamanga it controls the entire body, it regulates all sense organs and prana. Murdhni is the place where all indriyas are located and regulated. ‘Sneho anilam hanti’- taila is best vathahara. Sushruta mentioned mastishka’ – mastishko hitam, main line of treatment in shirogata vata under vatavyadhi chikitsa . With this complete reversal cannot be achieved but beneficial to prevent further degeneration or slows down the progressive degenerative changes. With this intention taken a step to understand the role murdhni taila - preventive as dinacharya and therapeutic role in jara janya vyadhi w.s.r to cerebral atrophy.

Keywords: jara janya vyadhi, Cerebral atrophy, Murdhni taila

INTRODUCTION
Ayurveda considers aging as swabhava of life and describes in detail the pattern of sequential losses of biological strength with advancing age in relation to doctrine of tridosha. Advocates the management of age related diseases and prevention of same on the principle of samanya and vishesha siddhanta.[1] "MATIPURVAM DEHANAAISHAAT PAPAM MAHADAVAPNUYAAT"[2]
Not taking proper care of one's own, when healthy living principles are available is nothing but knowingly destroying own body which is a great sin. Ayurveda being science of life and longevity offers a treasure of geriatric care with goal of healthy aging and long life to achieve purusharth chatustaya. Nowadays Aging associated diseases are common. These diseases includes Osteo-arthritis, Alzheimer'sdisease, Cerebral atrophy, Diabetes, Cardiovascular diseases.

Cerebral atrophy is common age related neuro degenerative condition where there is wasting and shrinkage of brain occurs. The weight of entire brain reduces due to loss of neurons and connection between them, which can be due to progressive loss of cytoplasmic proteins.

**PATHOPHYSIOLOGY**
The aging brain gradually loses neurons and supporting neurological cells. Between the age 20-60 years brain loses around 0.1% neurons per year, after which the process speeds up. Individuals in their 50s,which equates to a loss of about 150gm of neural tissue.

Hippocampus - has key role in memory and the acquisition of new skills. With age it loses significant amount of neural tissue.

During normal aging, Blood brain barrier first weakens in the hippocampus, thereby allowing harmful substances and pro-inflammatory mediators to cross in to vital region of learning and memory. This breaching of Blood brain barrier may contribute to hippocampal shrinkage and therefore to cognitive decline.

Neurotransmitters - Aging is associated with declining production of nor-adrenaline, glutamate, dopamine, serotonin. The most common symptoms are confusion, difficulty in concentration, Behavioural- Aggression, Irritability, Restlessness, Psychological-depression, anger, Moodswings.

Although Ayurveda has no equivalent term for cerebral atrophy, Acharya Charaka explains “Heyamana dhatwindriya bala veerya pourusha parakrama grahana dharana smarana vachana vignanaam bhrashyamana dhatugunama vayu dhatu prrayam kramena jeernamuchyate aavarsha shatam..... lakshana which are similar to age related cerebral atrophy.\(^3\)

According to Ayurveda it can be inferred that it may be because of disruption of *prana vata* which is key factor in controlling motor and sensory activities. *JARA AVASTHA-* is represented by predominance of *vata dosha* thus atrophy is common in old age. *Shiras* is *uttamanga*, one among *trimarma* and *dashapranayatana*.\(^4\) This being chief site of *pranavata*, *Prana vayu* commands *Buddhi, hridaya, indriya, and chitta*.\(^5\)

This shows that the higher functions including perception of sense objects, the motor signals in response to the sensory signals, the thought processes, the intelligence and application of intelligence so as to lead the day to day activities, integration of mind and sense organs and all mental functions are manipulated, controlled and governed by *PRANA VATA*. Disruption in the *prana vata* leads to impairment in its function and exhibits symptoms.

There is no effective treatment of cerebral atrophy. *Sneha* is best *vatahara dravya* thus *murdhni taila* can help a lot firstly as preventive through *shiro abhyanga* it does *tarpana* and then by delaying the process of neuron degeneration when advised as therapy.\(^6\)

**MURDHNI TAILA**

*Murdha* or *Murdhni* – Head, *Taila* - oil

Thus *murdhni taila* is a procedure of conducting treatments on the head using medicated oil such that the oil remains in contact with scalp for a fixed duration of time.

This contact period of oil on the scalp is necessary for begetting its benefits. *Murdha taila* is also practiced as a part of *Dinacharya*. *Abhyanga, seka, pichu* and *shirobasti* are the four types, they are superior in their successive order.\(^7\)

**PREVENTIVE MURDHNI TAILA-**
Shiro abhyanga and pichu are the simple procedures which can be practiced every day as told by acharyas in dinacharya. It enhances well being, clarity, calmness and immunity. It promotes deep relaxation, relieves fatigue and renews and reinvigorates the body and mind. It also balances one's energy level, if any are in need of rest and relaxation, the process will provide that. If you are well rested the process will enhance your clarity and perception. It is difficult to prove with scientific measure how exactly murdhni taila works, but we cannot ignore the magnificent results provided by these treatments.

**SHIRO ABHYANGA**

*INDRIYANAAM PRASEEDANTI SUTWAK BHAVATI CHAANANAM NIDRA LABHAM SUKHAM CH ..........* [8]

The concept of percutaneous absorption is explained in modern physiology and biochemistry, says that it is possible to produce certain amount of absorption by the application of the substances conveyed in fatty vehicles, which is absorbed in to the hair roots which in turn are connected with nerve fibers leading directly to the brain.

It increases supply of fresh oxygen and glucose to the brain. [9] Improves arterial, venous, lymphatic flow and nourishes the local tissue. *Shiro abhyanga* is both prophylactic and acts as curative, since brain and nervous system controls the entire body functions, soothing them with murdhni taila procedure will keep body, mind fit and healthy.

**SHIRO PICHU**

In *shiro pichu* oil - is used, which has dense concentration with longer duration of contact. Also skin over the scalp is thin as compared to other part of the body and absorption is faster and more from the scalp. *Shiro pichu may strengthen* neurons and synapses in cerebral cortex via diffusion into the superficial venous drainage, i.e. Dural venous sinuses. By the absorption and diffusion mechanism of medicated oil of *pichu* corrects cognitive impairment, atrophy and degeneration in the temporal lobe, parietal lobe and parts of frontal cortex and cingulated gyrus during venous drainage. [10]

**SHIRO DHARA**

Psychoneuroimmunology - PNI

It says that the states of anything which influence any one system among nervous system, immune system, endocrine system the effect would seen on all the system since they are mutually inter-related between them. [11]

This relation exists by connection between mind-body by the interactions of the endocrine, nervous, and immune system.

The core dictum of this course of action is to encourage relaxation mentally followed by physically. Hence this information helps us to hypothesize that stimulation of *sthapani marma*, motivation of *AJNA CHAKRA*, added benefits of Shavaasana would help to counter balance manasika and shaareerika doshas. This acts on the pituitary gland, pineal gland, nerve ending of the skin which in turn acts on CNS and increase blood circulation resulting in to improvement of the higher intellectual functions.

**SHIRO BASTI**

Retention of medicated *taila* on the head or skull may act on the underlying cortex of brain. In cerebral atrophy it may act on neurons and reduce the mechanism of degeneration and further preventing the neuron degeneration. *Mano avasada* and *bhaya* - injury of seemanta marma is said to cause mano avasada- depression and bhaya - fear complex which is because of cerebral atrophy. Thus the same marma is healed through basti, it may reverse mano avasada and bhaya. i.e. it might relieve stress, anxiety, irritability and depression. [12]

Time for *shirobasti* is till water oozes from nose and watering of eyes which could be the exudate from the mucous membrane due to the constant weight of the oil over the head; a similar process may also take place at the level of tissue in the brain. Toxins and exudate from the cell may ooze into the circulation there by stimulate the nerve cell and remove the toxins.
DISCUSSION

JARA-
“KALASYA PARINAMENA JARA MRUTYU NIMITTAJA ROGA SWABHAVIKA DRUSHTA SWABHAVA NISHPRATIKRIYA”
Ayurveda has recognized kala or parinama as potential causative factor of degenerative disease entities. In this context parinama being the sequential events of balya, taarunya, yavvana, proudha, vardhakya i.e. aging process. Jara being swabhava bala pravrutta roga occur due to the kala parinama which itself is considered as vyadhi hetu and is nishpratikriya.[13] Some of the symptoms of Cerebral atrophy are irritability, anger, depression, mood swings which affect the quality of life.
In jara avastha- deterioration of purushartha, parakrama, dharana, smarana, vachana, vijnana occurs which is similar to the age related cerebral atrophy. Because, it is said that "SHAREERAMAADHYAM KHALU DHARMA SAADHANAM ". Acharya Sushruta advised MASTHISHKYA- MASTIKO HITAM, main line of treatment in shirogata vata under vatavyadhi chikitsa.[14] Which does tarpana of brain cells by increasing brain blood oxygen supply, micro circulation, thus improve the function of brain.

CONCLUSION
To care for someone, who once cared for us is the highest honour. Elderly people are goldmine storehouse of knowledge.
Central focus of strength of Ayurveda in Geriatric care swings around the concept of dhatuposhana in the form of Murdhni taila, which compensates the age related biological losses in the mind -Body system and affords Dhatuposhana to a notable extent.
Preventive - “A stitch in a time saves ten” Shiro abhyanga and pichu as dinacharya prevents age related cerebral atrophy by maintaining restoration of necessary oxygen, blood supply and glucose to the brain cells.
Murdhni taila does tarpana of MURDHNI and it compensates the dhatu kshaya-advocated as therapy. Structurally- beneficial to prevent further degeneration or slows down the progressive degenerative changes.

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