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A CRITICAL REVIEW ON THE EFFECT OF MURDHNI TAILA IN MANASAROGA

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ABSTRACT

Health is defined as the well-being of the body and mind. The equilibrium of the body's *dosha*, *Agni* and *dhatu*, *Malakriya* (physiological functions of the body) and *prassannata* of *atma*, *indriya* and *manas* is said to be *svasta*¹. In these developing times where the only *dinacharya* people follow is work and the stress of meeting deadlines have put people more prone to *asta vibramas* is the *vibrama* of *manas*(mind), *buddhi*(intellect), *samjna*(consciousness), *Gnana*(knowledge), *smriti*(memory), *bhakti*(desire), *Sheela*(attitude), *chesta*(activities) *and achara*(behaviour) leading to *Manasaroga*. In this aspect, Ayurveda offers *Murdhni taila chikitsa*. It is a procedure of conducting treatment on the head using medicated oil such that the oil remains in contact with the scalp for a fixed duration of time. This contact period of oil on the scalp is necessary for profiting from its benefits. The oil is said to cross the blood-brain barrier. The blood-brain barrier is a selective semi-permeable membrane made up of closely spaced endothelial cells which selectively permits only certain ions, solutes, glucose, amino acids which are essential for brain function. *Murdhni taila* is one such procedure that helps in the direct transfer of medications along with other benefits directly into the brain across the blood-brain barrier.

Keywords: Murdhni Taila, Manasaroga, Blood-brain barrier, Astavibhrama.

INTRODUCTION

Mind is the set of faculties responsible for mental phenomena. It is that which controls all the aspects of one's life. It is the intellectual and psychological phenomena of an organism. According to Ayurveda manas is that entity that does contemplation and understanding. Manas is that which controls the sense organs, self-control, perception. Any hindrance to its normal functioning may result in Manasaroga i.e., the disorders of the mind. Moordha or Murdhni means head and taila means oil. The brain and all the sense organs are situated in the head. Moordha is the Uttamanga of the body. The brain is that which controls them all, the seat of intelligence. Millions of years of evolution of the brain have given the Homo-sapiens to stay on top of the food chain. Hence any slight alteration in its functioning could be fatal to lead a normal life. Thus, there requires a way to prevent any untoward alteration in the physical and mental state. And if at all there is any alteration in their normalcy, there needs to be a highly effective way to fix it. Out of all ways humans have thought of securing the brain and the mind, Murdhni taila is one such method that the ancient Acharyas have thought of using to effectively deliver medicines through the most complex customs system with a free pass across the barrier called the Blood-Brain Barrier. The neuron, the basic functional unit of the brain which facilitates memory, intelligence etc, requires a constant supply of food and oxygen which helps in their effective functioning. Thus, it must be protected from all sorts of harmful unnecessary solutes, ions, bacteria and viruses. Hence there exists a barrier called the blood-brain barrier. The blood-brain barrier is a highly selective membrane. It regulates the inflow of solutes residing in the blood and prevents the non-selected solutes from entering the extracellular region of the brain. It is achieved by the semipermeable layer of the endothelial cells, astrocyte pericytes of the capillary walls. This membrane allows select nutrients, foods and macromolecules like water, amino acids and glucose to enter the extracellular region [1]. Hence it is very difficult to fix them using normal methods in case it malfunctions. Thereby one good therapy for delivering therapeutic such

medicines to the brain that could easily cross the blood-brain barrier is by *Murdhni Taila*. *Murdhni taila* is a procedure of application of medicated oil on the head such that the oil stays in contact with the scalp for a stipulated period ^[2]. *Murdhni taila* controls the vitiation of *Vata* and does not increase *kapha* in the *Moordha* ^[3]. Thus, it plays a vital role in the treatment of psychological disorders. For example, one such disorder is *unmada*, which means the *vibrama* of mind, intellect, consciousness, knowledge, memory, desire, manners, behaviours and conduct ^[4]. Where *Acharya charaka* has mentioned *Shirovirechana* as an indication for *unmada chikitsa* ^[5].

Murdhni Taila can be divided into 4 major types:

- 1. Shiro abhyanga
- 2. Shiroseka
- 3. Shiropichu
- 4. Shiro Basti

Murdhni taila chikitsa procedures are enumerated as effective in their successive order ^[6].

1. Shiroabhyanga

Application of oil on the head followed by massage is known as *Shiroabhyanga*.

MODE OF ACTION

The action of the application of *taila* over the *shiras* is well explained in modern science in physiology and biochemistry. The percutaneous absorption of medicaments gets enhanced after *Sneha paka* when it is the fatty vehicles that carry the Medicines. By performing *abhyanga* i.e., massage, the heat produced also helps to increases the blood supply to the scalp and it relaxes the brain and relieves it from stress. The application of pressure upon massage also helps to drain the lymphatic system. Lymph consists of amino acids called tryptophan, upon massage it releases tryptophan which further facilitates the production of serotonin which is an essential neurotransmitter that elevates mood and also melatonin which regulates the sleep-wake cycle

2. Shiro Seka

It is the continuous pouring of medicated oil in a particular manner on the forehead or scalp from a height of 4 angulas using a *Dhara yantra* ^[8].

According to *sahasrayoga*, it helps to increase stability in speech and mind, increases desire, and promotes sleep.

MODE OF ACTION

The dripping of medicated oil over the forehead in an oscillatory movement produces vibrations developing a relaxing effect on the brain.

3. Shiro pichu

It is a procedure where a pad is folded and dipped in medicated oil and is kept on the anterior fontanelle. The *pichu* which is kept on the anterior Fontanilla can help in enhancing the power of the *ajanam Chakra* thereby helping to treat psychiatric illnesses.

MODE OF ACTION

The placing of *pichu* over the scalp facilitates immediate absorption. The increased time duration facilitates increased transdermal absorption. It functions by exploiting the *Tarpak Kapha*, *Sadhak Pitta* and *Praan Vayu*. Due to *Tikshana*, *Vyavayi & Sukshma* property of Taila ^[9], it moves into the *Manovaha Srotas* bringing the vitiated rajas and tamas. At a similar time, the *Brimhana*, *Balya*, *Vaat shamana*, *Medhya* properties of *Taila* amends all *Manasavikara* ^[10]. *Shiro Pichu* may strengthen neurons and synapses in the cerebral cortex via diffusion into the superficial venous drainage, i.e., Dural venous sinuses. The absorption and diffusion mechanism of medicated oil of *pichu* corrects cognitive impairment ^[11].

4. Shiro basti

The retention of medicated oil on the head for a prescribed period. In texts, the acharyas have said that the height of the cap that should be worn is 12 angulas and the medicated oil level has to be just above the scalp. As there is increased hydrostatic pressure on the scalp due to the excess oil can result in increased absorption of medicated oil. Thereby Multiloading the effects and benefits. It is difficult to prove the mode of action scientifically, but the results attained cannot be ignored. For example, in unmada vayu is the pradhana dosha. Murdhni taila has a tremendous effect on controlling vayu. Murdhni taila has a relaxing effect on the brain and releases the stress and anxiety stagnant in the chief controlling station of the body and a psychosomatic balance is established.

DISCUSSION

MODE OF ACTION of MURDHNI TAILA

When Murdhni taila comes in contact with the scalp where the superficial fascia of the scalp provides a proper medium for the passage of vessels and nerves to the skin. The medicated oil gets absorbed through the skin and into the bloodstream. The superficial veins of the neck and head commence in a diffuse network in the scalp. These drain into the collecting trunks and then into the main bloodstream. Thereby providing a proper and efficient route for the absorption and passage of the medicated oil. The heat of the oil also helps in vasodilation of the periphery thereby nourishing the tissues. This also helps to bring the Shareerika and manasika doshas to normalcy [12]. According to modern science, A nanoparticle is capable of crossing the blood-brain barrier. Here, by dissolving or encapsulating the desired medicines inside a nanoparticle such as a liposome can cross the blood-brain barrier without any hinderance [13]. After Snehapaka, the taila used attains lipoidal structure and may act similarly to liposomes. A substance with high lipid solubility may move across the blood-brain barrier by simple diffusion. The rate of entry of compounds that diffuse into the brain depends on their lipid solubility, as estimated by oil/water coefficients. After sneha paka the components of the drugs which are lipid-soluble remains in the outer bilayer and the water-soluble components remains in the aqueous space [14]. The permeability of very lipid-soluble compounds at the blood-brain barrier is so high that they are extracted completely from the blood during a simple passage through the brain. Thereby we can use Murdhni taila to effectively transfer drugs across the Blood-brain barrier which are otherwise rejected thus helping us treat the area of malfunction effectively. Thus, the taila which has attained Sneha paka acts as a transporter for the medicinal constituents that we want to administer for psychiatric disorders. Thus, Murdhni taila effectively shows its therapeutic effects due to its lipoidal structure. Hence, their uptake by the brain is only limited by blood flow. Once it crosses the bloodbrain barrier it effectively strengthens the neurons and the synapses and the *vibrama* of all the 9 factors responsible for *unmada* is treated.

CONCLUSION

By this, it proves that through *Murdhni taila* it is possible to enter the brain effectively through the bloodbrain barrier using *Taila* as a vector and for the medicinal constituents that we want to prescribe for the respective psychiatric illnesses. And once inside the drugs smuggled inside can exhibit their *Karma* on the neurons and facilitate its proper functioning by bringing the *manasika* and *Shareerika doshas* to normalcy. Thus, it is very clear that *Murdhni taila* effectively plays an important role in the management of Psychiatric Illnesses.

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