



REVIEW ARTICLE

ROLE OF *TAKRADHARA* IN *UCHCHARAKTACHAPA* (HTN)

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ABSTRACT

World Health Organization has estimated that High Blood Pressure / Hypertension cause 1 in every 8 deaths, making Hypertension the third leading killer in the world. Globally, there are about one billion hypertensive people and about one million people die as a direct im-pact of Hypertension. Stress and strain of day to day life affects one's bodily organs through several psychophysical mechanisms. Among the several psychosomatic diseases, the cardiovascular disorder like *Uchcha Raktachapa* (HTN) is quite significant. In *Ayurveda*, it is considered as a *vatapradhanatridoshajavyadhi* (*vata* dominant disease) and we can consider Hypertension as an abnormality of *raktadhatu* (blood element), also known as *shonitadushti* (blood- imbalance). Though Hypertension is well known in *Ayurvedic* systems of diagnosis and treatment, effective treatment through *Ayurvedic* medicines and methods have not been fully standardized. Further, it will be useful to explore new methods and procedures for treatment of such a major problem. *Takradhara* (treatment to the head through medicated *takra*) which is a well established course of treatment in *Ayurveda* has not been used extensively for management of Hypertension. Therefore, a review has been undertaken to understand the effect of *Takradhara* of *takra* (butter milk) on Hypertension.

Key words: Hypertension, Blood Pressure, *Uchcharaktachapa*, *Takradhara*.

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INTRODUCTION

Hypertension is a leading public health challenge globally due to its high prevalence and related morbidity and mortality^[1]. An estimated 978 million adults, or 28% of the world's adult population, had uncontrolled hypertension in 2008^[2]. More alarming, conservative estimates indicate that the global burden of hypertension will increase to more than 1.56 billion by 2025. As the most important modifiable risk factor for cardiovascular disease and all-cause mortality, high blood pressure was responsible for approximately 7.6 million deaths globally, or 13.5% of all deaths, in 2001^[3].

Hypertension is classified as either primary or essential hypertension and secondary hypertension, about 90–95% of cases are categorized as "essential/idiopathic/primary hypertension" which means high blood pressure with no obvious underlying medical cause. The remaining 5–10% of cases (secondary hypertension) is caused by other conditions such as coarctation of aorta, renal artery stenosis, vesiculo-ureteral reflux nephropathy, Cushing syndrome and hemorrhage etc. In pathogenesis of hypertension (*Uccharaktachapa*), *Vata* (*Vyana&Prana*), *Pitta* (*Sadhaka*), *Kapha* (*Avalambaka*) (bodily humors) and *Manovaha Srotas* (psyche channels) involving *Hridaya*, *Rasa-Rakta Samvahana* and *Oja* are main

responsible factors. They are vitiated due to disturbed *ManasikaBhavas*(psychological factors) like *Chinta* (Anxiety), *Tanav* (Stress), *Krodha* (Anger) etc. producing hypertensive state.

AcharyaCharaka has advised to control *ManasikaBhavas* (psychological factors)^[4]. The line of treatment in the disease consists of *Nidanaparivarjana*(Avoiding etiological factor), *Shodhana*(Purification) in the form of *Virechana*(Purgation), *Shirovirechana*, *Raktamokshana*(Blood letting), *Shirodhara*, *Shamana*(Pacification) medications and *RasayanaChikitsa* (Rejuvenating)^[5].

BLOOD CIRCULATION AS PER AYURVEDA

Circulation of blood is a very vital process in the human system. It was known in India, much before William Harvey re-reported in 18th century about blood circulation.

The *Atharva Veda* refers to the blood circulation in the human body in the following terms (*AV-Brahma PrakashanaSukta*):^[6].

"Koasminnapovyadhadadvishuvrata: puruvrata:

Sindhusrityayajataa: "Tivraarunaalohi-

nistamradhumraaUrdhvaavachi:

purushetirashri"

[Who does form in men the blood turning in all directions (i.e., having circulation throughout body and limbs) to flow in the blood vessels which are red, hasty, copper-

hued and purple, running all the ways up-ward and downward in men's body?]

Rakta (blood) is *adravadhatu*(liquid element). Therefore, it has natural property of flowing. To maintain the circulation up to the end tissue, additional force is required which is provided by the contraction and relaxation of the heart. In Ayurveda, *thridosha-vata(gati/* principle of movement/nervous system), *pitta* (principle of secretions/metabolism) and *kapha* (carrier of nutrients), seven *dhatu (rasa* (lymph), *rakta* (blood), *mamsa* (flesh), *meda* (fat), *asthi* (bones), *majja* (bone marrow) and *shukra* (semen) and three *mala* (excretions-sweat, urine and stools) are considered as fundamental for the functioning of the body.

According to *Acharyasushruta* formation of *Hridaya*(heart) of a foetus occurs by the essence of *Kapha* and *Asruk*(blood)^[7]. Therefore both *kapha* and *asruk* should be in its normal ratio and status to maintain the normal functioning of the heart.

AcharyaCharaka has mentioned *hridaya* as the root of *dhamani*. *Dhamani* circulates *rasa rakta* propelled out by *hrudaya* and nourishes all the body tissues(*dhatu*s). Therefore *dhamani* is called as 'OJOVAHA'(channel of vitality). *Bala*(strong) of the body depends on it. Through *dhamanis* a pressure is exerted by the *rakta* at the walls of *dhamanis*, which depends on the elasticity of *dhamani*.

If any pathology occurs in *dhamani*, adverse effect is seen on the blood pressure. The vessels in which *sravana*(Movements) takes place known as *sirah*(vein) like *dhamani*, *sira* is also mentioned as *pitrajabhava*. These are the pulsation less vessels. They are formed by the *mridupaka*(fatty material). They also forms as an *updhatu*(sub-element) of *Rakta*. They carries blood from the body to the heart.

Ayurvedic texts refer to conditions like *Raktagata vata*(*Vata* in blood), *Raktavegavridhi*(increase in blood speed), *Raktachapaadhikya*(increase movements of blood), *Dhamanipraparana*(arterid pulsation) and *Rudhiramada*(efflux of blood) but Essential hypertention has not explained specifically as such as in Ayurvedic texts. The following factors have been found associated with Essential hypertension- 1) *Kulaja*(inheriyance/genetic influence), 2) *Vaya*(age), 3) *Linga*(sex), 4) *Samhana na*(constitution), 5) *Manodosha*(temperament and stress), 6) *Jatiprasakta* and *Prakruti*(Races and envirement), 7) Physical activity, 8) Smoking

Takradhara relieves insomnia and provides mental calm, in addition to provide cure of hypertention. In addition, it also provided significant relief in their symptoms like *Shiroruka*(headache), *Bhrama*(vertigo), *Klama*(Mental fatigue) and Breathlessness^[8].

CLASSIFICATION OF BLOOD PRESSURE

Oxygen (bound to haemoglobin in red blood cells) is the most critical nutrient carried by the blood. In all arteries a part from the pulmonary artery, haemoglobin is desaturated at about 75%. The Blood pressure in blood vessels is traditionally expressed in millimetres of mercury (mmhg). In the arterial system this is usually around 120mmhg systolic and 80mmhg diastolic. In contrast, pressures in the venous system are constant and rarely exceed 10mmhg. Based on the 7th report of the Joint National Committee on detection, evaluation and the treatment of high blood pressure (JNC-7), the following classification has been adopted^[9].

AIMS & OBJECTS :

- 1) To review about *Uchcharaktachap* (Hypertension)
- 2) To review in detail about *Takradhara*.
- 3) To review the effect of *takradhara* in *uchcharaktachapa* (Hypertension)

METHODS AND MATERIAL:

MATERIAL: *Takra*-38 tola, *Amalaki*churna-1 ½ *prasruta*, *Jalam*-18 *kudav*.

The powder of *Amalaki* and water should be taken in the mentioned proportions. They should be heated on moderate fire on the stove until 1/6th of water remains (i.e. until 38 tola – 456 grams). The contents should be filtered to this equal quantity of *takra* – 38 tola (456 grams), is

added the medicine for *Takra Dhara* is ready for use^[10].

METHOD:

PRE-OPERATIVE MEASURES: Since it is done as a *shamana* therapy no *poorvakarma* is needed. The application of oil on head. Suitable oils according to *roga* are selected by the physician for this purpose. The eyes should be covered with eye pads and gauze should be tied around the head above the eyebrows. The ear should be plugged with two cotton pieces.

PROCEDURE: The patient should lie in supine position on the *droni*. A small pillow should be placed under the neck. The *dhara* pot should be kept in such a way as to allow steady flowing of the liquid, poured into it, over the forehead of the patient. The tip of *dhara* should be 4-5 cm above the forehead of the patient and total wick length should be 8-10cm. The *takra* falling should be poured again into the vessel after collecting it from the *droni*. The vessel should always be kept oscillating so that the *takra* will fall into the patient's entire forehead without interruption. All the procedures are same as *shirodhara*, but *takra* should not be heated or reused.

TIME TO PERFORM THE PROCEDURE:

Generally the treatment is done in the morning hours, between 7-10 am. If necessary, it can be done between 4-6 pm.

DURATION: The process should be done daily for a period of 7 to 14 days. The duration of

treatment as well as the time period is according to the nature of the disease and the physical condition of the patient. It is done usually for a fixed time (45minutes to 1 hour).

POST-OPERATIVE PROCEDURE: After the *dhara*, the head is washed with *Amalakiwatha*. Then head should be wiped with towel and *Rasnadichoorna* is applied. Patient is advised to take rest for a period same as the period of the procedure, then to take bath.

DISCUSSION AND CONCLUSION:

Description of *Hridaya* and processes of *Rasa Vikshepana*(circulation) by *VyanaVayu* is helpful to understand the disease. Though the exact nomenclature of the disease to some extent is controversial, the signs and symptoms of the disease can be understood in terms of *Dosha*, *Dushya*, *Strotasa*, etc. Looking at hypertension from this perspective, we can assume that vitiated *VataDosha* is the main cause of the disease, as the *Dhatu Gati (Rasa Gati)* or *Vikshepa* is achieved by *Vayu* itself^[11]. *Pitta* and *Kapha* complement the effect of vitiated *Vata* and support the progress of the disease with *Rasa, Rakta* (whole blood) being the main mediator of vitiation. This suggests the involvement of *Tridosha* in hypertension. Inference of previous research work done is that hypertension is nothing but a '*Vata PradhanTridoshaja Vyadhi*', be greatly influenced by *Mana*. Therefore it may be

considered as *Sharirand Manas Roga (UbhayashritaVyadhi)*. *Sharirand Satva (Mana)* have been designated as the habitats of *Vyadhi* by *AcharyaCharaka*^[12]. Academicians of *Ayurveda* suggested different names to demonstrate the phenomenon - like *RaktaGata Vata (Y.N.Upadhyaya - 1950)*, *Shiragata Vata(AcharyaG.N. Chaturvedi - 1962)*, *AvrittaVata (AcharyaR.K. Sharma - 1966)*, *Dhamani Prapurnata (Acharya A.D.Athavale - 1977)*, *Rakta Vriddhi (AcharyaG.N. Chaturvedi - 1981)*, *Rakta Vikshepa (Shukla J.P.- 1954)*, *Rakta Chapa (Ravani.&MahaishkarU.B. 1967)*, *Rakta Sampida(PandeyS.B. 1972)*, *Vyana Bala (TrigunaB. 1974)*, *Dhamanipratichaya (AthawaleA.D.)*, *Rasa Bhara (AthawaleT.S. 1979)*, *RudhiraMada (DwivediV.N. 1991)*, *RaktaVata (Sharma P.V. 1993)*^[13]. This list goes on with different concept by different *Vaidyas* and it creates confusion for upcoming *Ayurvedic* generation regarding causative factors, pathophysiology, complications and exact treatment modalities of hypertension.

FACTORS INVOLVED IN HYPERTENSION:

Dosha:

In modern science, the functions of nervous system have been described similar to description of the *PrakritaPranaVayu*. '*Hridaya Dhruka*; (i.e. *Dharana* of Heart) the function of *PranaVayu* can be correlated with the vagal inhibition of nervous system^[14]. In addition to

this, vasomotor center controls the blood pressure by autonomic nervous system; similarly *PranaVayu* also controls the regulation of blood pressure by controlling *VyanaVayu*. So pathology of *PranaVayu* can cause abnormality of heart as well as vessels. *VyanVayuis* said to be responsible for various kinds of movements in the body^[15].

Probable Mode of action of *Takradhara*

Takrais having tremendous cooling properties and induces the same to the brain with the intent of relaxing the mind and reducing mental stress. *Ayurveda* suggests this treatment especially for *Vata* predominant disorders like Hypertension. It is also a preferable therapy for people who complain of migraines and other specific *Pitta* disorders, where cooling and refreshing therapies are recommended.

Takradhara have a balancing effect on the deepest recesses of our brains, stimulating the endocrine system, the pituitary and pineal glands (for hormonal imbalances) and pleasure neurotransmitters (for depression or emotional insecurity). It is also said to enhance blood circulation to the brain, improving clarity and releasing deeply trapped *Aama*, or toxins.

If the *Dhara* is dropped on the forehead nearer to the eyebrows, it provide more relief to the patients. *Sushruta* has mentioned *Sthapani Marma* between the two eyebrows.

It is *Vishalyaghana* type of the *Sira Marma*. The hypotensive effect of *Takradhara* proved by this study seems to be mediated through this *Sthapani* or *Kurcha Marma*. Being a *Sira Marma* it might have some reflex action on the baroreceptors which are disturbed in hypertension and may be held responsible for constriction of the arterioles leading to rise in blood pressure. *Takradhara* reduced both systolic and diastolic pressure in a more pronounced way.

Takradhara has been mentioned as an effective treatment for *kaphapittajshirorogah*(headache), *shirodaha*(burning sensation in head), *atiswedapravruti*(excessive sweating), *nidranash*(disturb sleep), *unamad*(Mental disease), *apasmar*(memory loss), *moha*(hallucination)^[16]. In *uchcharaktachapa* this symptoms like *shirahshool*, *nidranash* are found. So *takradhara* can be give relief in *uchcharaktachapa* by relieving this above said symptoms. *Takradhara* has been mentioned as a treatment for all *urdhavajatrugatavikara*^[17].

The mode of action of *takradhara* is attributed to the therapeutic effects of the medicine, *takra* procedural effect of the process like pressure, rhythmic streaming. local application of heat, treatment timing, the rhythmic streaming, pressure of the medicine and temperature causes vasodilatation and

helps the medicine to penetrate through the follicular pores to the follicles and then to the dermis via the sebaceous glands. The permeability of the cell of the sebaceous glands is greater than that of granular layer of epidermis. The procedure helps in oxygen consumption, normalizing blood pressure, brain cortisones and adrenalin levels, muscle tension and probably an increase in alpha brain waves. The space between the two eye brows is the seat of pituitary and pineal gland Pitutary gland is one of the main glands of the endocrine system and exhibits its action on other organs.

Considering all these factor *Takradhara* is said to be affected treatment for Hypertenstion.

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