



Review of *chittodveg* (psychological distress) w.s.r. to cancer patients and evaluation of *shirodhara* for its management

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ABSTRACT-

Psychological Distress in cancer patients can also precede clinical depression and anxiety, with prevalence rates ranging between 5% and 50% (Artherholt and Fann, 2012). Numerous patients that receive a cancer diagnosis assume that they are close to death and experience anxiety, depression, fear, and anger as the disease progresses. Females have more tender emotions and emotional vulnerability. Cancers which are most common in females specifically are Breast cancer and Cervical Cancer. Out of these, malignancy of breast has physical, psychological, social, cosmetic, marital impact on female. Psychological distress is

comparatively much more related to breast cancer. It is one of the causes of cancer as well as consequences of cancer. Out of all types of breast cancers, TNBC- Triple Negative Breast Cancer is supposed to be most dangerous. It is so; owing to its genetic predisposition, severity, tendency of recurrence, absence of hormone receptors and scarcity of efficient drugs.

So, there is need of therapeutic intervention to deal with psychological distress in patients having TNBC. This is done with help of '*Moordhni Tail*' concept. In this trial, *Shiropichu* was done for 10 minutes for 3 days followed by *Shirodhara* for 10 minutes for 7 days. Both the treatments were carried out with

Jatamansi siddha (*Medhya Rasayan siddha*) Tail. Pilot study was carried out to study and evaluate effect of *shirodhara* on insomnia and symptoms of psychological disturbance with help of Quality of Life Questionnaire.

KEY WORDS - Psychological Distress, Anxiety, Depression, *Shirodhara*.

INTRODUCTION:

Signs of good health are mentioned in *Susruta Samhita* as - *Samdosha*, *Samagni*, *Samdhatumalakriya* , *Prasannatma* *Prasannendriya* and *Prasanna Manas*. Therefore, cheerful state of mind is necessary for the good healthy life.

In today's metaphysical society, human life has become speedy, mechanized, less efficacious and more centered, which contribute to more production of *Chittodvega* (psychological distress) in form of *Kama* (Desire), *Krodha* (anger), *Lobha* (greed), *Bhaya* (fear), *Soka* (Grief), *Cinta* (Worry) and *Irsa* (envy) etc. like *Manasa Vikaras*.

Chittodvega and its association with somatic diseases

The term *Chittodvega* has been considered to represent the psychological distress. This term comprises of two components - *Chitta* and *Udvega*.

Chitta : “*Chityate sanjnayate Anena Iti*

chittam”¹ the one through which perception takes place. “*Chityate Jnayat Anena iti Chittam*”² the one through which understanding takes place.

Udvega: ³ Trembling, waving, shaking, agitation, anxiety, regret, fear, distress

Chittodvega can be defined as disturbed, distressed status of a mind”. *Chittodvega* is a perfect word for highlighting the condition of anxiety &/or depression state. It is evident from the references in *Ayurvedic* literatures that different terminologies were used to represent different forms of mental status e. g. *Chittakshobha*, *Asvasta Chitta*, *Anavasthita Chitta*, *Tapta Chitta*, *Manvikshobha*, *Manovasada*, and *Chittodvega* .

Factors influencing Chittodvega:⁴ *Chittodvega* may result from several causes, most of the times by the combination of more than one factor. These are

- Influencing Factors at the Individual Level

Hereditary Component , Intra Uterine Life, *Prakriti* , *Satva Bala*

- Influencing Factors at the physiological level

Vata Dosha, *Pitta Dosha*, *Kapha Dosha* and *Ojas* play an important role in the manifestations of distinctive facets of *Chittodvega*. Apart from that

Manovaha Srotas being the major one and *Rasavaha*, *Svedavaha* and *Udakavaha Srotas* being the complementary *Srotas* have a major influence on *Chittodvega*.

• Relative Factors :
Chandogyopanishad, states that the subtle part of the food nourishes the mind. A reference from *Susruta Samhita* states that *Ahara* has immediate effects on the *Deha Dharana* and *Utsaha*.

Anxiety and Depression in Breast Cancer patients-⁵

The estimate of the prevalence of major depression among breast cancer patients range from 2 % to 48 %. Breast cancer diagnosis, treatment, and the month following primary therapy are stressful time for most women. While many experience normal distress, there is a subset that experience clinically significant depression that may benefit from specialized psychiatric intervention. Studies that examined both distress and depression have found difference in prevalence. Hegel et al found that while 41 % of newly diagnosed breast cancer patients had high level of distress only 11% had Major Depressive Disorder.

Anxiety is a normal response to threat, uncertainty and loss of control. The diagnosis and treatment of cancer is stressful. After the initial shock of diagnosis, patient typically feels anxious and irritation. They may experience

anorexia, insomnia and difficulty in concentration because they are distracted by intrusive thoughts about their prognosis. After that, acute anxiety dissipates as a treatment plan is established and prognosis is classified. A recent cross sectional study on 178 patients with cancer showed that almost half of them had significant anxiety, but anxiety disorder and its subtype was present in 18 % of patients. Breast specific post traumatic stress symptoms were noted in 24 % but only 9 % reported post traumatic stress disorder and majority had co- morbid major depressive disorder.

So, there is need of therapeutic intervention to deal with psychological distress in patients having cancer especially female patients. There is more need of it in females as they are more vulnerable to stress. Further, dealing with psychological distress is most important in patients of breast cancer and especially TNBC. It is so because TNBC is most dangerous cancer in female patients. This can be done with help of *Shirodhara* (well known procedure in *Panchkarma* useful for mental relaxation) with oil processed with *Medhya Rasayan* like *Jatamansi*.

Shirodhara

Pouring of a liquid on the forehead or scalp is known as the *Shirodhara*, it can be done by different medicaments like *Taila*,

Takra, *Kshira*, *Kwatha*, etc. When it is done with medicated Ghee or *Taila*, it is called *Taila Dhara*. *Dhara* is used in psychic disease as well as in psychosomatic diseases like Insomnia, IBS (Irritable Bowel Syndrome), psoriasis etc. Like the roots of tree nurture and control all the activities and well being of the tree, the head is the operational center of the entire body. It controls the function of the brain and spinal cord. It has many *Marmas* or vital points and is the house of the master endocrine gland, the Pituitary. It is one of the seats of *Vata Dosha* (*Prana Vayu* in particular) and also houses subtypes of *Kapha Dosha* (*Tarpak Kapha*) and *Pitta Dosha* (*Sadhak Pitta*)⁶.

So as the three *Doshas* are represented in the head region, any vitiation in the *Dosha* can cause respective disorders with widespread response in the whole body. Here *shirodhara*, through use of various mediums like oils, ghee and buttermilk, pacifies these *dosha* and works on the entire body indirectly.

- **Indications:**

Nowadays, it is indicated in almost all stress and psychosomatic disorders such as IBS, Asthma, Neurological disorders viz. Headache, epilepsy, *Ardhavabhedaka*, *Suryavarta*, *Ardita*, *Pakshaghata*, *Hanugraha*, *Akshishula*, *Nidranasha*, *Shirogata Vata*, *Shirahkampa* and psychiatric disorders like psychosis,

neurosis, insomnia and also in psoriasis, eczema, HT etc.

***Taila Dhara* and its benefits:⁷**

When medicated Ghee or *Taila* is poured on the forehead, it is called *Taila Dhara*. It improves speech, stabilizes mind, increases the physical strength, remove anorexia, increases sweetness of voice, softness of skin. It is helpful in *Timira* and *Netra Roga* etc. *Dhatus* are nourished, increases virility, reduces excessive body temperature and patient can get good sleep.

According to *Acharya Charaka*, one who has his head well oleated daily does not get headache, baldness and grey hair. The strength of his cranial bones is markedly increased and his hair becomes firmly rooted and very black. The sense organs are toned up and the skin of the face becomes beautiful and the person gets good sleep and feels happy (Ch. Su. 5/82-84).

- ***Aushadha* (Drug):-**The drug should be selected according to the disease. The quantity required is about 0.5 to 1 Litre. *Sneha* mentioned according to the condition of *Doshas*.

- ***Vata Dosha* :** *Tila Taila*, *Vataghna* liquid & it should be lukewarm
- ***Pitta Dosha* :** *Ghrita*, cold water
- ***Kapha Dosha* :** *Tila Taila*,

not very hot, not very cold water

- *Rakta Dosha* : *Ghrita* with cold water
- *Vata + Pitta + Rakta* : *Ghrita + Taila* in equal proportion
- *Vata + Kapha + Rakta* : ½ part *Ghrita* + 1 part *Tila Taila*
- *Dharakala*: 20-25 Minutes, 7-14 Days, between 7-10 am.
- Period for changing the liquid: Milk or *takra*-every day. *Dhanyamla*-up to 3 days. Oil-3 days.
- Temperature of the *Sneha*: It should be *Sukhoshna* near about to body temperature. In case of *takra* it should be at room temperature.
- *Pariharyani*: Patient should abstain from any thought or deed of physical exertions, mental excitement and exposure to cold, sun, dew, wind, smoke or dust should also be avoided.
- *Pariharakala*: Patient should take *Pathya* and remain as *Jitendriya* up to the period which is taken for the completion of *Dharakarma*.

Probable Mode of Action of *Shirodhara*:

It is difficult to prove that how *shirodhara* works in a scientific measures but we cannot ignore the magnificent results of the treatment, we can explain it hypothetically as-

According to *Ayurveda*:-

Vata is a chief controller of the body,

Acharyas explained *Anidra* as *Vata Nanatmaja Vikara* which is caused due to *vata dosha* as aggravated *Vata* disturbs the sleep and *shirodhara* works as *Samvahana* (gentle massage) on the head which re-establishes the function of *Vata & Mana*.

Stress, according to *Ayurveda* is a state of imbalance of *Prana vayu*, *Sadaka pitta*, and *Tarpaka kapha*. *Shirodhara* through its mechanical effect reestablishes the functional integrity between these 3 doshic subtypes -

1. These will have relaxing effect over the *Vyana vayu*, *Ranjaka Pitta*, *Avalambaka Kapha & Udana Vayu* controlling the heart functions & circulation.
2. By controlling the *Kledaka Kapha*, *Bodhaka Kapha*, *Samana Vayu*, *Ranjaka Pitta & Pachaka Pitta* will keep the core metabolism under control.
3. By controlling the *Apana Vayu*, it will keep excretory function under control & help in regular detoxification of the body.
4. By controlling the *Bhrajaka Pitta & Vyana Vayu* it will improve the color & complexion.
5. By controlling the *Shleshaka Kapha* function it will maintain the musculoskeletal integrity.

Continuous flow of *Shirodhara* on *Shira* improves the *Dhi* (intellect), *Dhiriti* (restraint) and *Dhyana* (concentration) i.e. there is balance of *Raja* and *Tama Dosha* and improvement of

Satva Guna. When an individual lies down in a relaxed state for longer time, *Tamasika Guna* overcomes the *Rajasika Guna*. The procedure of *Shirodhara* brings the *Sanjnavaha Srotas* in peaceful state of rest which helps in inducing sleep.

Dharakalpa explains the time required for the drug potency to cross through the body elements. The unctuous substances transfers through these hair follicles by a time period of three hundred *matra kala*. These substances cross over through the seven layers of skin by seven days; by six days it reaches upto *Raktadi* six *dhatu*s.

स्नेहोऽत्र त्रिभिरेति रोमविवरं
मात्राशतैश्च क्रमात्।

सप्तपि त्वच एति सप्तभिरथो
षड्भिस्तथाम्रादिकन्धधातू

निषुसिन्धुदिग्रहमिता
मात्रामूहूर्तोभवेत्॥ - धाराकल्प

The process of suffusion explain in detail: The unctuous substances after laying over hair follicles for a period of three hundred *Matra Kalas*, enter skin by four hundred *matra kala*; similarly, the unctuousness reaches *Rakta*, *Mansa*, *Meda*, *Asthi* & *Majja* in each successive hundred *Matra Kalas* i.e. it reaches *majja* by 900 *matra Kalas*. *Bhoja*, in addition, mentioned that unctuousness reaches upto *Shukra* by sixteen hundred *Matra Kalas*.

The medicinal potency during

course of successive transference pacifies diseases of *Vata*, *Pitta* & *Kapha* located in the respective body elements.

The forehead and head are areas of many vital spots (*Marma*) as mentioned in *Ayurvedic* classics. *Shirodhara* acts on 7 out of 10 *Marmas* present in *Shiro Pradesh*, mainly *Sringataka*, *Sthapani*, *Utkshepa* and *Avarta Marmas* (the vital points in the head) are situated in this region. According to *Acharya Bhela*, the site of *Chitta* (mind) is *Bhrumadhya* (region between two eyebrows) i.e. *Sthapani Marma* and *Buddhi-Vaisheshika Alochaka Pitta* also situated on this region. The *Shirodhara* helps the patient to concentrate on this essential area, which eventually leads to stability in the functions of mind.

According to Yogic Science:-

- *Shirodhara* is believed to act at the level of *Yogic Chakras*. It stimulates the supreme *Chakras* i.e. *Aagya Chakra* and *Sahasrara Chakra* which are situated in the head region. These *Chakras* govern all the vital energies in the body. Due to the stimulation of these *Chakras*, the individual achieves a good mental condition. Hence, conditions like *Anidra* are really benefitted by the *Shirodhara*.

- The method of *Shirodhara* may even produce effects similar to that of “*Yoga nidra*” technique in yogic science. Most of the benefits of meditation and

relaxation are seen to be achieved by the procedure of *Shirodhara*.

- In *Shirodhara*, the patient is asked to lie down in supine position as in *Shavasana*. This position in itself is used for relaxation in Yogic science.

According to Modern Science:-

Modern explanation for the therapeutic effect of *Shirodhara* can be done on the background of following important anatomical and physiological considerations regarding sleep:

The thalamus, basal forebrain and medullary reticular formation are held responsible for sleep. While the brainstem reticular formation, the midbrain, the sub thalamus, the thalamus and the basal forebrain have all been suggested to play a role in the generation of wakefulness.

In the procedure of *Shirodhara*, when oil is poured upon forehead from a certain height, it generates momentum due to change in the form of energy. This momentum may cause change in voltage and stimulate nerve impulse generation or accentuate its conduction. The magnitude of momentum decides the voltage difference for nerve impulse generation and conduction. If its magnitude is small the energy is absorbed by the skull only. This may be the probable reason why drug should be given for 45 min- 1 hour in *Shirodhara*.

In *Shirodhara* particular

pressure and vibration is created over the forehead. The vibration is amplified by the hollow sinus present in the frontal bone. The vibration is then transmitted inwards through the fluid medium of cerebrospinal fluid (CSF). This vibration along with little temperature may activate the functions of thalamus and the basal fore brain which then brings the amount of serotonin and catecholamine to the normal stage inducing the sleep.

Again, it is explained in modern text books of physiology that pressure has an effect on impulse conduction through tactile and thermo receptors. Receptors involved being root hair plexuses, free nerve endings, etc. Warm liquids used in *Shirodhara* procedure causes increased infiltration of blood in scalp region thus relaxing muscle and nerve endings. If prolonged pressure is applied to a nerve, impulse conduction is interrupted and part of the body may go to rest. In *Dhara* therapy, prolonged and continuous pressure due to pouring of the medicated liquid may cause tranquility of mind and induce natural sleep.

Continuous flow of lukewarm liquid may dilate the blood vessels and thus increase the blood flow through the brain. It thereafter circulates and warms rest of the body too. It has been proved that higher the body temperature, longer will be the sleep.

According to the modern science, forebrain is the site of behaviour, concentration and intelligence. *Shirodhara* may stimulate the forebrain and produce improvement in these qualities.

The space between the two eyebrows is the seat of Pituitary and Pineal gland. As we know, pituitary gland is one of the main glands of the endocrine system. *Shirodhara* may stimulate it by its penetrating effect, which decreases the brain Cortisone and Adrenaline level, synchronizes the brain wave (alpha waves), strengthens the mind and spirit and this continues even after the relaxation.

The concept of percutaneous absorption in the modern physiology is as follows: There are three possible routes of absorption. a) The pilo sebaceous follicles play some part in absorption of many compounds. b) The trans-follicular absorption, the route of penetration is through the follicular pores to the follicles and then to c) The dermis via the sebaceous gland. The permeability of the cells of the sebaceous gland is greater than that of granular layer of the epidermis. In this way the substances which are used in *Shirodhara* are absorbed and enter in the blood through and remove the pathology.

Shirodhara induces bradycardia

& the expired gas analysis showed a decreased tidal volume & CO₂ excretion. During the process subject's sympathetic nervous tone was suppressed. EEG results monitored during the process of *shirodhara* indicated restful alertness in which the frontal lobe, limbic system & medulla oblongata were activated.

These metabolic, ECG & EEG findings support the reported experience of relaxed & low metabolic states during *Shirodhara*. Differences in heart rate, CO₂ excretion, sympathetic tone & EEG were indicates a change in function of the frontal lobe, limbic system, brain stem & Autonomic Nervous System. In view of above, Pilot study was carried out to study and evaluate effects of *shirodhara* on insomnia and symptoms of psychological disturbance with help of Quality of Life Questionnaire.

METHODOLOGY-

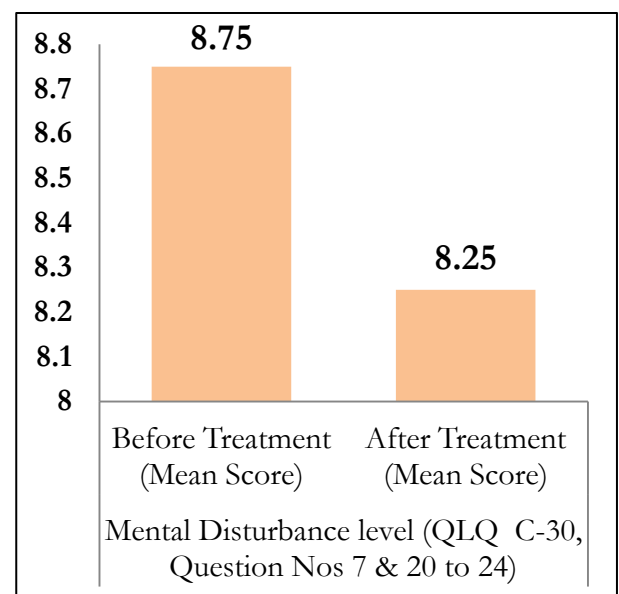
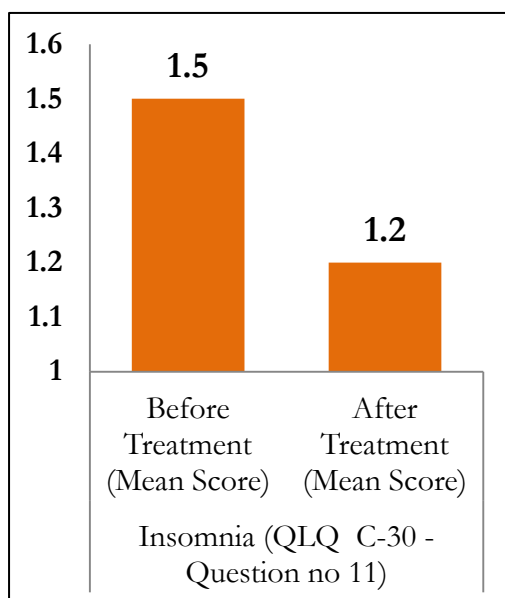
20 patients of Triple Negative Breast Cancer (TNBC) were selected randomly from OPD. These patients had Insomnia- sleep disturbance, in common. Along with that, these patients had symptoms of psychological distress. Psychological evaluation was done with help of Quality of Life Questionnaire QLQ C30 – Question No. 7, 20,21,22,23,24.

Q.NO.	QUESTIONS
7	Were you limited in pursuing your hobbies or other leisure time activities?
11	Have you had trouble sleeping?
20	Have you had difficulty in concentrating on things, like reading a newspaper or watching television?
21	Did you feel tense?
22	Did you worry?
23	Did you feel irritable?
24	Did you feel depressed?

These patients were clinically examined to find out fitness to carry out Shirodhara and Shiropichu. Then, Shiropichu with Jatamansi siddha oil was given for 10 minutes for 3 days followed by Shirodhara with Jatamansi siddha oil for 10 minutes for 7 days.

Clinical Observation and Assessment-

Patients were assessed on day of enrollment and on 10th day i.e. completion of shirodhara with help of QLQ C30 Questionnaire and general clinical examination as Pulse, BP, Heart Rate, Respiratory rate, Sleep, Appetite etc.



Graph1-The Mean Score values recorded Before and After the treatment. (sleep disturbance)

Graph2-The Mean Score values recorded Before and After the treatment. (psychological distress)

CONCLUSION-

1. Insomnia- Sleep Quality and Duration in patients was significantly improved.

2. Psychological Disturbances- Distress at psychological level was significantly improved and patients realized that stability of mind is better than earlier.

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Conflict of Interest: Non

Source of funding: Nil

Cite this article:

*"Review of chittodveg (psychological distress) w.s.r. to cancer patients and
evaluation of shirodhara for its management."*

Pathrikar Anaya Ashish, Abhijit H. Joshi, Sadanand P. Sardeshmukh

Ayurlog: National Journal of Research in Ayurved Science- 2020; (8) (1): 1 - 10