

ROLE OF JALANDHAR BANDHA IN MANAGEMENT OF HYPOTHYROIDISM

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ABSTRACT

Hypothyroidism is a condition in which thyroid does not create and release enough thyroid hormone into blood Stream. People with thyroid disorder often have emotional or mental health symptoms as well as physical symptom. *Yoga* is a series of physical, mental, and spiritual practices which is originated from ancient India. In *yoga Bandhas* are the most powerful technique as they change internal chemistry of the body in a fundamental way. The aims and objectives of this article is to study the role of *Jalandhar Bandha* in management of Hypothyroidism. Out of 4 types of *Bandhas*, *Jalandhar Bandha* (throat lock) is most important in treating throat disorder. As we

practice Jalandhar bandha with breath retention and due to pressure of *Bandhas* slows down the blood supply to the carotid arteries which send signal to the brain and stimulate parasympathetic nervous system as a result it creates calmness in mind and relieves emotional or mental symptoms associated with thyroid disorder. *Jalandhar Bandha* are applied in various asana practices like, neck flexion asanas -*Sarvangasana* (Shoulder stand pose), *Halasana* (plough pose), *Setu Bandhasana* (bridge pose), *Viparita karani* (Inverted Pose), neck extension asanas like, *Ushtrasana* (Camel pose), *Matsyasana* (Fish pose), *Dhanurasana* (Bow pose), *Bhujangasana* (cobra pose) etc. As this *asanas* presses on the thyroid gland in the throat, thus benefiting the glands by increasing its vascularity and help them to work better for long time. Hence, by practising these *asanas* over months will improve the thyroid gland function and would be beneficial in Hypothyroidism.

KEYWORDS: *Setu Bandhasana, Viparita karani, Ushtrasana, Matsyasana.*

INTRODUCTION

Thyroid disease are common worldwide. In India, there is significant cases of thyroid diseases. As per various studies on thyroid disease, it has seen that 42 million people suffer from thyroid disorder.^[1] Thyroid is an major endocrine gland situated at the root of the neck on either side of the trachea.^[2] It secrete important thyroid hormones having major action on our body. like, action on basal metabolic rate, action on carbohydrates, protein, fat metabolism, action on body temprature, action on sleep, action on sexual function and action on various other endocrine gland.^[3]

When there is imbalance of these thyroid hormones all the system of our body get affected, so to improve the function of these system and to maintain a good health we need to improve the thyroid function.

Yoga is the science which is basically originated from the ancient India. It is a process which makes an Individuals to become free from sorts of physical, mental, and social miseries (*vedana mukta*).^[4] In *yoga Bandhas* are the most powerful technique as they changes the internal chemistry of the body in a fundamental way and perform to increase the endocrine secretion in the body.^[5]

Jalandhar Bandha(throat lock) is most important in treating throat disorder. As we practice Jalandhar bandha with breath retention and due to pressure of *Bandhas* slows down the blood supply to the carotid arteries which send signal to the brain and stimulate parasympathetic nervous system as a result it create calmness in mind and relieve emotional or mental symptoms associated with thyroid disorder.

AIMS AND OBJECTIVES

To study and understand the role of *Jalandhar Bandha* in the management of Hypothyroidism.

Review of Literature

YOGA

Yoga is a series of physical, mental, and spiritual practices which is originated from ancient India.^[6]

The sanscrit noun *yoga* is derived from the sanscrit root *yuj*, which means " to attach, to join."^[7]

As per Yoga Sutras of Patanjali

Yogas Chitta vritti nirodhah.

It means Yoga is responsible to remove fluctuation from mind.

BANDHA

Bandha is a special characteristics of *Hatha Yoga*. The word *Bandha* means to hold, lock tighten. So, it is a posture which gripped, contracted, or controlled certain organ or parts of the body.^[8] *Bandhas* are the types of neuromuscular locks and most powerful technique in yoga and performed to control the function of endocrine gland in the body.^[9]

There are mainly four types of *Bandha* which is,

- 1) *Jalandhar Bandha* (throat lock)
- 2) *Uddiyan Bandha* (abdominal lock)
- 3) *Mul Bandha* (root lock)
- 4) *Maha Bandha* (great lock)

JALANDHAR BANDHA

Jalandhar Bandha is described in the yogic text *Hatha Yoga Pradeepika*, *Gherand Samhita* and *Siva Samhita*. The *Vishuddhi* or *Vishuddha Chakra* is activated by.^[10] The name comes from the Sanscrit, *jal*, meaning "throat". *dharan*, meaning "stream". and *bandha*, meaning "lock". According to *Hath yoga Pradeepika*, extending neck while lifting the heart then dropping the chin to the chest is called *Jalandhar Bandha*. Which destroy old age and death.^[11] *Jalandhar Bandha* stop fall of nectar (*soma or chandra*) from brain into the fire (the *surya* situated in navel) and air is not disturb. when *Jalandhar Bandha* is applied it stop two *Nadi's* called the middle circuit or center (*madhya chakra/ Vishuddha Chakra*) and it stop the 16 *adhara*(i.e. vital parts).^[12]

Gherand Samhita - By practising this *Jalandhar Bandha* for upto 6 months by sadhak no doubt sadhak will achieve *Siddha* status.^[13]

Siva Samhita

Amaratva can be achieve by practising *Jalandhar Bandha*.^[14]

Standard operating procedure^[15]

Sthiti :- Meditative posture like *Sukhasana*, *Padmasana*, and *Siddhasana*.
standing posture – *Tadasana*.

Practice Method

Inhale deeply and hold the breath.

Place the hand on the knees; lift the shoulders and tilt the body forward slightly (60 degree forward), keeping the upper back straight.

The wind pipe and oesophagus are firmly closed by pressing the chin firmly against the chest or between the collar bones.

Raised the head and with a long exhalation return to the starting position.

Breathing:- Inhale deeply while starting and hold the breath.

Anatomical point :- Focus on neck and shoulder muscle.

Spiritual Point:- Focus on *Vishuddha Chakra*.

Contra-indication:- pressure induce dis-order like Hypertention, Hernia, headache.

Note:- Performed in empty stomach.

The Thyroid Gland

It is an endocrine gland found in front of the neck, and connected by an isthmus containing two lobes, just below the Adam's apple. The thyroid gland secretes three hormones namely thyroxine/T₄, triiodothyronine/T₃, and calcitonin.^[16] The thyroid hormones primarily influence the metabolic rate and protein synthesis. Calcitonin plays an important role in keeping calcium at normal level. thyroid-stimulating hormone regulate the secretion of hormone from thyroid gland, secreted from the anterior pituitary gland, and TSH secretion is regulated by thyrotropin-releasing hormone (TRH) which is secreted by the hypothalamus.^[17]

Blood Supply of Thyroid Gland**Arterial Supply**

The superior thyroid artery supplies arterial blood to thyroid. The superior thyroid artery divides into anterior and posterior branches supplying the thyroid and the inferior thyroid artery divided into superior and inferior branches.^[19] Behind the outer part of the thyroid lobes, the superior and inferior thyroid arteries join together.

Venous Supply

The venous blood is drain into the internal jugular vein.^[20] The inferior thyroid veins drains into the left and right brachiocephalic veins.^[21]

Nerve Supply

The superior, middle and inferior cervical ganglion of the sympathetic trunk supplies sympathetic nerve supply to the gland. Superior laryngeal nerve and the recurrent laryngeal nerve supplies parasympathetic nerve supply to the gland.

Hypothyroidism

Hypothyroidism is defined as a clinical state resulting from insufficient secretion of the thyroid hormone from thyroid gland due to some of the structural or functional impairment of the thyroid hormone production.^[22] The thyroid gland situated just below adam's apple. It produces two thyroid hormones, triiodothyronine (T3) and thyroxine (T4), which regulate the body metabolic rate.^[23]

Primary hypothyroidism - When thyroxin (T4) and triiodothyronine (T3) levels are low and levels of thyroid stimulating hormone (TSH) secreted by anterior pituitary high then it is called as primary hypothyroidism.

Secondary hypothyroidism-when TSH is low and T4 and T3 levels are high then it is called as secondary hypothyroidism.^[24]

SUBCLINICAL HYPOTHYROIDISM - Subclinical hypothyroidism is defined as a thyroid stimulating hormone (TSH) level of 4.6 to 10 mIU/L.

Normal TSH level - 0.4 to 4.0 AND full-blown hypothyroidism - 10 or higher.

DISCUSSION

Jalandhar Bandha exerts pressure on many major nerve fibres pass through the neck and the flow of nervous impulses to the brain is restricted. Due to pressure impulses collect in the cervical plexus and flood into the brain when pressure due to *Jalandhar bandh* released. Higher centres in the brain get activated due to force of these impulses. Pituitary hormonal secretions flow through the blood stream to the endocrine glands.

The throat region is intermediate between the brain, the digestive and assimilative processes. The thyroid gland secretes the hormone thyroxin (T4), which is responsible for the rate of tissue metabolism. The thyroid gland is located in the front of the neck. This fleshy gland is squeezed by applying *Jalandhar bandha*. The secretory responses of the gland are modulated when nerve stimuli and blood flow to and from the gland.

"Vigyana Nadi" is affected by the *bandhas* which passes through the neck. It is passing below the neck divided into two parts, which move towards the brain from both side of neck It is also called as Carotid Artery.

In backword bending of neck, heartbeats can be easily felt. The pulse is felt on the both sides below the jaw. The Carotid Sinus is flat portion where the blood vessel is divided into two parts. Due to inner or outside pressure wall surrounding Carotid Sinus which is thin and can easily get affected. Carotid Nerve passing from here goes high up into the skull and then down into the brain, which has relation with internal carotid, external carotid sinus. The *Jalandhar Bandha* is the process where pressure exerted on this nerve is transmitted to the Brain. The nerves are activated to send a signal to the brain when the pressure is exerted on carotid sinus due to the peculiar position of the neck.

CONCLUSION

As we practice Jalandhar bandha with breath retention and due to pressure of *Bandhas* slows down the blood supply to the carotid arteris for a moment and then released forcefully which send signal to the brain and stimulate parasympathetic nervous system as a result it create calmness in mind and relieve emotional or mental symtoms associated with thyroid disorder, relieving stress, anxiety and anger and thereby increasing the thyroid gland function and metabolism.

By practising this *Jalandhar Bandha* in the form of various asanas in which this *Bandha* is applied like neck flexion asanas- *Sarvangasana* (Shoulder stand pose), *Halasana* (plough pose), *Setu Bandhasana* (bridge pose), *Viparita karani* (Inverted Pose), and neck extension asanas - *Ushtrasana* (Camel pose), *Matsyasana* (Fish pose), *Dhanurasana* (Bow pose), *Bhujangasana* (cobra pose) etc. over a few months may cure thyroid disorder or its progression.

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