



BENEFIT OF UJJAYI PRANAYAMA IN ALLEVIATING HYPOTHYROIDISM – A CASE REPORT

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Abstract : Hypothyroidism is the most common functional disorder of thyroid gland. The prevalence of hypothyroidism in the world is about 4- 5 %. Thyroid produces two related hormones T4 and T3 which play a critical role in cell differentiation during development and help to maintain thermogenic & metabolic haemostasis in the body.¹ Deficiency of these hormones is known as hypothyroidism caused due to stressful life style, autoimmune, iodine deficiency etc. A female patient age 40 years c/o of tiredness even after doing minimal household works ,laziness ,weight gain, under the medication OF Thyronorm 37.5mcg was subjected to ujjayi pranayama for 15 min morning and evening for 6 months . This patient having subclinical hypothyroidism showed marked result in reducing the TSH levels and maintaining its value after the regular practice of ujjayi pranayama

IndexTerms - Ujjayi pranayama, subclinical hypothyroidism ,yoga

INTRODUCTION

Among all clinical disorders of thyroid gland hypothyroidism is most commonly encountered. It can be largely defined as a, deficient in production and secretion of thyroid hormones T4 [Thyroxine], tri-iodothyroxine [T3].T4 and T3. Two lobed Thyroid gland is situated at the roof of the neck either side of trachea, bellow the larynx. It is composed of follicular cells containing protein name thyroglobulin[Tg] in its cavity which binds with iodine to synthesise T4 and T3.This whole mechanism is supervised by the Thyroid stimulating hormone[TSH] secreted by the anterior cells of pituitary glands ,further TSH secretion is controlled by the secretion of thyroid releasing hormone from hypothalamus .So, causes of hypothyroidism are congenital, defects of hormone synthesis ,autoimmune, infective, post surgery, secondary [to hypothalamic –pituitary disease]. Common cause of defects of hormone T4 &T3 synthesis include iodine deficiency, Others are dysmorphogenesis ,antithyroid drugs, other drugs lithium, amiodarone, interferon. Autoimmune causes are atrophic thyroiditis, hashimoto's thyroiditis, postpartum thyroiditis .Post surgery causes include [iatrogenic causes] radioactive iodine therapy, external neck radiation. Factors decreasing the secretion of thyroid hormones are excess iodide intake, stress. Clinical symptoms include tiredness, weight gain, depression, cold intolerance. Prolonged hypothyroidism includes low pitched voice, carpal tunnel syndrome, non -pitting oedema, puffy eyes and periorbital region. Low or normal level of T3 &T4 and elevated levels of TSH in investigation confirms hypothyroidism. Types of hypothyroidism whether primary, secondary are assessed on the basis of levels of hormones.

Though there is no direct reference with respect to hypothyroidism in Ayurvedic literature but the presenting signs and symptoms can be assessed based on the involved dosha, dushya, sthana and srotas. The sign and symptoms match with the descriptions of number of conditions like kaphaja shotha, rasa prodoshaja vikara and atisthoola purusha. Further analysis indicates the predominance of vitiated kapha and vata along with Rasa dhatu.

Though Among all clinical disorders of thyroid gland hypothyroidism is most commonly seen but improvement in the thyroid profile and discontinuation of standard drug merely by continuous practice of ujjayi pranayama for 6 months is remarkable.

CASE HISTORY**Patient Information**

A female patient aged about 40 years, housewife by occupation came with the presenting complaint of tiredness even after doing minimal household works, laziness and weight gain.

Ethical considerations

No ethical considerations were there in this case.

Medical, family, and psychosocial history including lifestyle and genetic information.

No significant family history supporting the diagnosis. There is no similar complaint in the paternal or maternal side.

Other pertinent co-morbidities, interventions, therapies including self-care.

Patient is a known case of Hypothyroidism and was on Tablet Thyronorm 37.5mcg once a day since four years with mild alternating dozes.

HISTORY OF PAST ILLNESS

No history of previous surgeries and any other major illnesses. History of following allopathic medications since 4 years.

PHYSICAL EXAMINATION**CLINICAL FINDING**

General examination of the patient was fair and vitals were stable. Appetite was increased, Patient had history of cold intolerance since three to four years, weight gain over three years and experienced weakness and laziness with mild day to day activities as well. Sleeping habits were good. Patient is of vata pitta prakruti and psychologically patient was fit.

Information about substance abuse (Tobacco smoking, alcohol, any other)

The patient is free from addictions and does not involve in regular alcohol consumption as a practice or tobacco chewing and smoking.

Objectives for reporting the case

To evaluate the efficacy of Ujjayi Pranayama as a add on therapy in the management of hypothyroidism.

Main Medical Problem

A female patient age 40 years c/o of tiredness even after doing minimal household works, laziness, weight gain, under the medication of Thyronorm 37.5mcg was subjected to ujjayi pranayama for 15 min morning and evening for 6 months. Patient TSH level was reduced to 2.85ul/ml after one month of ujjayi pranayama along with the standard drug. Till 6 months she continued the same thing, due to lockdown conditions she was not able to repeat thyroid profile and she stopped standard drug as she was feeling uneasy with the medicine intake as she observed that thyronorm intake was causing c/o headache She continued ujjayi pranayama without the drug for 4 months and when the thyroid profile was done it was in the normal limit of 3.54 ul/ml and patient was not having the complaint of tiredness, laziness, patient was feeling more active and weight reduction also happened.

CLINICAL EXAMINATION**Wayne's Index- Showing the scoring of signs and symptoms for the diagnosis of hypothyroidism**

SYMPTOMS OF RECENT ONSET AND/ OR INCREASED SEVERITY	BEFORE	AFTER

Dyspnoea on effect	-	-
Palpitations	+2	-
Tiredness	+2	-
Preference for Heat	-5	-
Preference for Cold	-	-
Excessive sweating	-	-
Nervousness	+2	-
Appetite – increased /decreased	+3	-2
Weight increased / decreased	+3	-2

INVESTIGATIONS

Reports

<u>TFT</u>	<u>Before</u>	<u>After</u>
<u>TSH</u>	<u>28/03/2016 - 6.3</u> <u>15/10/2016 – 5.5</u> <u>07/09/2020 – 3.54</u>	<u>29/12/2020 – 2.85</u>
<u>T3</u>	<u>119mg/dl</u>	<u>92mg/dl</u>
<u>T4</u>	<u>8mg/dl</u>	<u>5/73mg/dl</u>

TREATMENT AND MANAGEMENT – CLINICAL SOLUTION FOR THE MEDICAL PROBLEM

Ujjayi pranayama for 15 min morning and evening for 6 months along with on going medication.
Ujjayi pranayama for 15 min morning and evening for 4 months without any other medications.

TREATMENT COMPLICATIONS – NIL

DISCUSSION

Prana and Ayama, together is known as Pranayam. Prana has many levels of meaning from breath to the energy of consciousness itself, it is not only the basic basic life force, it is the master form of all energy working on the levels of mind, life and body. Ayama means not only simply means breath control but the controlled expansion of the life force. It is not the suppression of breath which is harmful, but contacting higher sources of prana both within and around us. Pranyama consists of deepening and extending the prana until it leads to a condition of peace. When the prana is at peace, the life force and through it the senses, emotions and mind are put to the rest. Breath – control, done in the proper manner, eradicates all diseases it is mentioned by hathayoga pradeepika. There is no direct reference for hypothyroidism in the ayurvedic texts its symptoms match with the lakshnas of different srto gata dushtis.. Manovaha srto gata dushti causes chita dushti, rasa dushti causes kaphja shotha, klama, rasa prodoshaja vikara. rakta dushti in severe cases causes dhaminiupalepa, dushti in twaka causes kharatwak, medo dushti cuses sthoulyata, gurugatrata² So according

to Ayurveda it is caused due to vitiated kapha and vata , may be considered as kaphaavrita vata .It is mentioned as Ujjayi pranayama according to hathayoga pradeepika as mentioned श्लेष्मदोषहरं कण्ठे it cause shaman of kapha dosha in the kantha region .Thyroid gland is situated in the neck region so ujjayi breath helps in the shamana of vitiated kahpha dosha which is the root cause of the hypothyroidism in Ayurveda .Chitta dushti is as per discussed before ujjai pranayama helps in calming the mind state , there are many references related to this. As the pranayama helps in boosting the body metabolism so it helps in relieving sthoolta [obesity].pranayam kumbhaka also balances Vata dosha so it helps in the balncing the vitiated vata dosha in hypothyroidism .Throat is considered to be the seat of the purifying wheel [visuddhi chakra] according to the yoga shatras which purifies the body by practicing pranayama so it purifies body and by calming the body and releasing the tension in the body parts it helps in relieving the diseases . Modern science is ding researches in hypoxia therapy. In ujjayi pranayama. Intermittent hypoxia is achieved . So far the researches has been done so revealed that this intermittent hypoxia in pranayama causes increase in haemoglobin , erythropoietin activity ,increase in vascular endothelial growth factor[VFGF] ,formation of new blood vessels in the ischemic areas eg. Coronary collateral. It maintains balance in blood pressure ,pulmonary artery diseases, coronary flow, erectile function, balances cerebellar function.it increase preservation, proliferation and migration of stem cells .It cause induction of p53 .the guardian of the genome DNA repair decreases cancer.

WHO health definition states that health is a complete state of physical, mental and social well being and not merely the absence of disease Or infirmity .Ayurveda also states that the diseases has sharirika and mansika karana for the diseases . Sharirika vyadhis may lead to mansika vyadis and vice versa. So increasing are satva by the pranayama and other yogic techniques mentioned in our yoga darshanas are powerful in relieving and protection of disease.

CONCLUSION

Ujjayi pranayama is effective in subclinical hypothyroidism. It should be included in our clinical practices for hypothyroidism patient along with the ayurveda preparation including herbal, rasa aushadhi and other formulations given to treat the hypothyroid patients for the better results.

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