



Relationship Of Hypothyroidism, Obesity And Its Homoeopathic Management

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Abstract: Important interaction exists between thyroid function, weight control and obesity. Obese people with a normal thyroid gland tend to have activation of hypothalamic-pituitary-thyroid axis with higher serumTSH and thyroid hormones in serum. On the other hand, small differences in thyroid function are associated with upto 5kg difference in body weight. The weight loss after therapy of overt hypothyroidism is caused by excretion of water bound in tissues.

Index Terms - Hypothyroidism, leptin, obesity, thyroid autoimmunity, homoeopathy.

I. INTRODUCTION

Obesity and hypothyroidism are two common clinical condition that have been linked together closely. Obesity is generally regarded by patient as being secondary to thyroid dysfunction. Recent data have also disclosed a relation between obesity and thyroid autoimmunity with the adipocyte hormone leptin appearing to be the key factor linking these two conditions.

Thyroid dysfunction and body weight

Body composition and thyroid hormones appear to be closely related. Thyroid hormones regulates basal metabolism, thermogenesis and play an important role in lipid and glucose metabolism, food intake and fat oxidation. Thyroid dysfunction is associated with changes in body weight and composition, body temperature and total resting energy expenditure independent of physical activity. Hypothyroidism is associated with decreased thermogenesis, decreased metabolic rate and also has been shown to correlate with a higher body mass index and a higher prevalence of obesity. There is clinical evidence suggesting that even mild dysfunction in the form of sub clinical hypothyroidism is linked to significant change in body weight and represents a risk factor for overweight and obesity.

Thyroid stimulating hormones and body weight among euthyroid individuals

Altered thyroid function with normal feedback regulation may be the primary event that induces alterations in energy expenditure with subsequent increase in BMI and weight.

Thyroid function in obese individual

Thyroid stimulating hormone levels are at the upper limit of the normal range or slightly increased in obese children, adolescents, adults and are positively correlated with BMI. Low free T4 with a moderate increase in free T3 level has been reported in obese subjects. Progressive fat accumulation was associated with a parallel increase in TSH and free T3 levels irrespective of insulin sensitivity and metabolic parameters and a positive association has been reported between the free T3 to free T4 ratio and both waist circumference and BMI in obese patient. Although the typical picture of high TSH, low free T4 and high free T3 is the common, various studies on adult obese individual report thyroid hormone and TSH concentrations as normal, elevated or reduced.

In obese children the most common abnormality is the hyperthyroidism. High level of leptin found in obese subjects is another potential cause. The main action of leptin is to report centrally the amount of fat, leading to decrease in appetite and food intake. Leptin has also been shown to stimulate centrally the transcription of pro-thyrotropin-releasing hormone and consequently also that of TRH and TSH. Leptin also enhances the activity of deiodinases. Further explanation is that inflammatory cytokines secreted from adipose tissue such as tumour necrosis factor alpha, interleukin, inhibit sodium and iodide symporter in RNA expression and iodide uptake activity.

Role of autoimmunity

The link between obesity and the risk of autoimmune thyroid dysfunction which is the main cause of hypothyroidism in adults is a gray area. The prevalence of autoimmune thyroid dysfunction in adults in obesity has been reported to be 12.4% in children and between 10% to 60% in adults.

Obesity and pituitary –thyroid activation

Thyroid function tests in people who are morbidly obese may differ from those in a comparable group of lean people with a serum TSH that is higher in the obese but with no tendency of thyroid hormones in serum to be low in the obese. On the contrary free T3 and also in some studies free T4 in serum tends to be higher in obese people. The pattern has been most clearly observed in over weight children and adolescent where the frequency of underlying thyroid disease in the population is much lower than in adults.

Characteristically weight reduction by change in life style and diet or following gastric banding or gastric bypass surgery tends to ameliorate the small aberration in thyroid function tests in the majority of obese patients.

Thyroid hormones are important regulators of metabolism and conversely metabolism modifies the system of hypothalamus-pituitary-thyroid-peripheral activation or inactivation effect of thyroid hormones. It is well known that such interaction may have effects on the thyroid function test used to evaluate patients for the presence of thyroid diseases.

The exact mechanisms involved in the energy intake dependent variations in the thyroid system are only partly known that probably quiet complex. Signs of low activity of the thyroid system are not only found during short term fasting, but characteristically also in chronic calorie deprivation such as anorexia nervosa.

On the other hand morbid obesity leads to signs of an elevated TSH and free thyroid hormones in serum. In the complex system of hypothalamic regulation, the factor favoured by most authors when discussing the cause for activation of the thyroid in overt is activation of hypothalamic centres by leptin released from adipocytes in fat tissue. There is a complex interaction between the thyroid hormones and adipose tissue where TSH and thyroid hormones may participate in adipocyte differentiation and lipolysis regulation wheras various adipocyte cytokines may interact with the hypothalamic-pituitary-thyroid axis.

Homoeopathic management

Homoeopathy acts from centre to periphery and from inner core of the individual. In homoeopathy we select medicine for the individual and not for the disease. There are many homoeopathy drugs which activates the thyroid gland and brings back the obese individual to normal weight. Here are some important homoeopathy drugs which are useful in cases hypothyroidism and obesity.

- Natrum muriaticum
- Kali carb
- Thyroidinum
- Carcinosin
- Calcarea carb
- Iodum
- Calcrea .iod
- Thuja
- Sepia
- Silicea

General management of hypothyroidism and obesity

- Essential oils, natural oils, fatty acids are important in keeping the thyroid gland healthy.
- Fish oils are good sources of mega 3 fatty acids which helps to promote thyroid hormone production.
- Natural fats in avocado, nuts, flax seeds, fish, walnuts and animal products helps to maintain a hormone balance in body.
- Eat a balanced natural diet.
- Avoid processed, canned and preserved foods or ingredients, hydrogenated oil, white flour and artificial colors and flavors.
- Organic food consumption is most advisable.
- A natural diet with whole grain, vegetables and fruits help to boost the immune system and reduces the effect of hypothyroidism.
- Avoid soy products and soy beans as they contain goitrogenic compounds that interfere with thyroid hormone levels in the body and make it worse for a person with hypothyroidism. Soy reduces thyroid production and causes hormone imbalance in the body promoting the formation of goiters. This may aggravate the symptoms of hypothyroidism and cause a higher deficiency in levels of thyroid hormones.
- Natural iodine like sea food and sea weeds are advisable.
- Include probiotic in diet.
- Apple cider vinegar improves fat metabolism, control high cholesterol, blood pressure and diabetes.
- Regular exercise uplifts mood, improves metabolism, flushes body toxins and maintains a healthy weight.

- Avoid dairy products, higher meat intake and birth control pills which may imbalance hormone level in body and deplete the production of thyroid hormones.

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