THYROID LEVEL ASSESSMENT AMONG PATIENTS PRESENTING IN OUTDOOR DEPARTMENT

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ABSTRACT:
The thyroid, or thyroid gland, is an endocrine gland in the neck consisting of two connected lobes. The lower two thirds of the lobes are connected by a thin band of tissue called the thyroid isthmus. This cross-sectional study was conducted among the patients presenting in outdoor department of different hospitals. Name, age, gender, disease of presentation and thyroid function tests were noted on a predefined proforma. All the data was entered and analyzed with SPSS Ver. 23.0. A total of 110 patients were included in this study i.e., 55 males (50%) and 55 females (50%). The mean age of the patients was 31.78±5.45 years. The thyroid function tests of all the patients were taken from the lab. Out of 110 patients, five patients had lower T3 and T4 levels and six patients had higher levels. Rest of the patients had normal levels.

Keyword: Thyroid Levels
INTRODUCTION:
The thyroid, or thyroid gland, is an endocrine gland in the neck consisting of two connected lobes. The lower two thirds of the lobes are connected by a thin band of tissue called the thyroid isthmus. The thyroid is located at the front of the neck, below the Adam’s apple. Microscopically, the functional unit of the thyroid gland is the spherical thyroid follicle, lined with follicular cells (thyrocytes), and occasional parafollicular cells that surround a lumen containing colloid. The thyroid gland secretes three hormones: the two thyroid hormones – triiodothyronine (T3) and thyroxine (T4) – and a peptide hormone, calcitonin. The thyroid hormones influence the metabolic rate and protein synthesis, and in children, growth and development. Calcitonin plays a role in calcium homeostasis. Secretion of the two thyroid hormones is regulated by thyroid-stimulating hormone (TSH), which is secreted from the anterior pituitary gland. TSH is regulated by thyrotropin-releasing hormone (TRH), which is produced by the hypothalamus. The thyroid gland develops in the floor of the pharynx at the base of the tongue at 3–4 weeks gestation; it then descends in front of the pharyngeal gut, and ultimately over the next few weeks, it migrates to the base of the neck. During migration, the thyroid remains connected to the tongue by a narrow canal, the thyroglossal duct. At the end of the fifth week the thyroglossal duct degenerates, and over the following two weeks the detached thyroid migrates to its final position. Euthyroid is the term used to describe a state of normal thyroid function in the body.

Thyroid disorders include hyperthyroidism, hypothyroidism, thyroid inflammation (thyroiditis), thyroid enlargement (goitre), thyroid nodules, and thyroid cancer. Hyperthyroidism is characterized by excessive secretion of thyroid hormones: the most common cause is the autoimmune disorder Graves' disease. Hypothyroidism is characterized by a deficient secretion of thyroid hormones: the most common cause is iodine deficiency. In iodine-deficient regions, hypothyroidism secondary to iodine deficiency is the leading
cause of preventable intellectual disability in children. In iodine-sufficient regions, the most common cause of hypothyroidism is the autoimmune disorder Hashimoto's thyroiditis. The presence of the thyroid and its various diseases have been noted and treated for centuries, although the gland itself has only been described and named since the Renaissance. Knowledge of the thyroid, its biochemistry, and its disorders developed throughout the late nineteenth and twentieth centuries. Many modern treatments and investigative modalities evolved throughout the mid-twentieth century, including refinement of surgical techniques for thyroid removal (thyroidectomy) for the treatment of goitre; the use of radioactive iodine and thiouracil for the treatment of Graves' disease; and fine needle aspiration for diagnosis of thyroid nodules (1-3). The objective of this study was to see the prevalence of thyroid disease among the patients presenting in the outdoor department.

MATERIAL AND METHODS:

This cross-sectional study was conducted among the patients presenting in outdoor department of different hospitals. Name, age, gender, disease of presentation and thyroid function tests were noted on a predefined proforma. All the data was entered and analyzed with SPSS Ver. 23.0. The quantitative variables were presented as mean and standard deviation. The qualitative variables were presented as frequency and percentages.

RESULTS:

A total of 110 patients were included in this study i.e., 55 males (50%) and 55 females (50%). The mean age of the patients was 31.78±5.45 years. The thyroid function tests of all the patients were taken from the lab. Out of 110 patients, five patients had lower T3 and T4 levels and six patients had higher levels. Rest of the patients had normal levels.
DISCUSSION:
Excessive production of the thyroid hormones is called hyperthyroidism. Causes include Graves' disease, toxic multinodular goitre, solitary thyroid adenoma, inflammation, and a pituitary adenoma which secretes excess TSH. Another cause is excess iodine availability, either from excess ingestion, induced by the drug amiodarone, or following iodinated contrast imaging. Hyperthyroidism often causes a variety of non-specific symptoms including weight loss, increased appetite, insomnia, decreased tolerance of heat, tremor, palpitations, anxiety and nervousness. In some cases it can cause chest pain, diarrhoea, hair loss and muscle weakness. Such symptoms may be managed temporarily with drugs such as beta blockers. An underactive thyroid gland results in hypothyroidism. Typical symptoms are abnormal weight gain, tiredness, constipation, heavy menstrual bleeding, hair loss, cold intolerance, and a slow heart rate. Iodine deficiency is the most common cause of hypothyroidism worldwide, and the autoimmune disease Hashimoto's thyroiditis is the most common cause in the developed world. Other causes include congenital abnormalities, diseases causing transient inflammation, surgical removal or radioablation of the thyroid, the drugs amiodarone and lithium, amyloidosis, and sarcoidosis. Some forms of hypothyroidism can result in myxedema and severe cases can result in myxedema coma.

Hypothyroidism is managed with replacement of the hormone thyroxine. This is usually given daily as an oral supplement, and may take a few weeks to become effective. Some causes of hypothyroidism, such as Postpartum thyroiditis and Subacute thyroiditis may be transient and pass over time, and other causes such as iodine deficiency may be able to be rectified with dietary supplementation (4-6).

REFERENCES:


