THYROID DISEASE AND PSYCHIATRIC SYMPTOMS

Psychiatric Symptoms and Conditions in Thyroid Disease

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Studies show an increased prevalence of psychiatric disorders and symptoms in patients with autoimmune thyroid disease and euthyroid goiter.

Incidence

Several large studies have shown a higher prevalence of psychiatric symptoms and psychiatric disorders in patients with autoimmune thyroid diseases and euthyroid (normal thyroid function) goiter than that observed in the normal population.

Overall, higher rates of panic disorder, simple phobia, obsessive-compulsive disorder, major depressive disorder, bipolar disorder, depression and cyclothymia (condition of alternating periods of depression and expansiveness/irritability/hallucinations) are seen in patients with thyroid dysfunction even when they are receiving appropriate treatment for their condition. Psychiatric diagnoses in these studies were based on standard DS IV criteria using the International Composite Diagnostic Interview, Simplified.

Effects of Thyroid Hormone

Thyroid hormone has a potent affect on disposition, mood, and cognition, and even slight changes in thyroid hormone levels can affect one's psyche. Abrupt changes in thyroid hormone levels, such as those resulting from ablative treatments for hyperthyroidism are known to cause symptoms that progress to psychosis.

Depression and Obsession

Depression is seen in both hyperthyroidism and hypothyroidism, but it is much more common in patients with Hashimoto's thyroiditis, a disorder of autoimmune hypothyroidism. Patients with Hashimoto's disease were more likely to have high frequencies of lifetime Depressive Episodes, Generalized Anxiety Disorders, Social Phobia, and Primary Sleep Disorders and they were shown to have a tendency towards an increased frequency of Panic Disorders.

In addition, hypothyroidism has long been associated with obsessive disorders (Psychiatric Diagnosis, 4th Edition, DSM-IIIR). And although anxiety and mood disorders more often associated with hyperthyroidism, they're common features of hypothyroidism and may be evident before thyroid dysfunction becomes obvious.

Symptoms
Patients with Graves' disease often have symptoms of anxiety, nervousness, fluctuating moods and irritability that resolve when thyroid hormone levels return to the normal range. Patients who are overmedicated on anti-thyroid drugs or who become permanently hypothyroid as a result of treatment often complain of the same conditions seen in patients with Hashimoto's thyroiditis.

Even when patients in either of these groups have thyroid hormone levels that fall within the normal range, if the levels are too low for their body's needs these symptoms frequently emerge. Similar to other symptoms seen in thyroid disorders, most patients will have one or more predominant psychiatric symptoms rather than all associated symptoms.

**Thyroid Antibodies**

The majority of patients with thyroid dysfunction found to have depressive disorders also had high levels of thyroid peroxidase (TPO) antibodies. Patients with symptomless (asymptomatic) autoimmune thyroiditis and postpartum depression have also been found to frequently have high levels of TPO antibodies.

**TSH Response**

Studies show that a sub-clinical disorder characterized by a poor response to thyrotropin releasing hormone (TRH) can alter the normal circadian rhythm of TSH secretion. TRH is a hormone produced and released by the pituitary gland in response to low thyroid hormone levels.

TRH normally stimulates the pituitary gland to produce more TRH. Researchers speculate that the slight reduction in thyroid hormone production seen in subclinical hypothyroidism related to poor TRH response may affect cognition and mood. In addition, the brain may be the first organ to be affected by deficiencies of thyroid hormone.

**Autoimmunity**

Alternatively, the researchers speculate, autoimmunity may play a role in the development of depressive symptoms and may be related to levels of inflammatory cytokines released during the immune response. In addition, because vasculitis often occurs in patients with Hashimoto's disease, central nervous system vasculitis may be responsible for the depressive symptoms. Learn more about central nervous system vasculitis at yesterday's blog.

M Carta, M Hardoy, B Carpiniello, A Case Control Study on Psychiatric Disorders in Hashimoto Disease and Euthyroid Goitre: Not only depressive but also anxiety disorders are associated with thyroid autoimmunity, Clinical Practice and Epidemiology in Mental Health, article link

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