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Patty Anderson

Otterbein University, patty.anderson@otterbein.edu

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Hashimoto’s Disease: The Underactive Thyroid Disease
Patty Anderson, RN, BSN
Otterbein University, Westerville, Ohio

Introduction
The thyroid gland is part of the endocrine system and has a widespread function that controls metabolism and growth of three major organ systems and processes. The main function of the thyroid gland is to produce thyroid hormones (TRH and T4), but how this gland helps to metabolize proteins and carbohydrates.

Pathophysiological Process and Significance
HT is caused by an overt autoimmune response causing thyroid gland destruction. Loss of immune tolerance to normal thyroid antigens triggers the release of antibodies directed against thyroid tissue, which causes destruction of the thyroid gland. This destruction inhibits the release of TRH and T4, but not the other thyroid hormone, T3.

The destroyed thyroid gland continues to produce antibodies (anti-TSH), which causes the thyroid gland to continue producing thyroid hormone. The thyroid gland becomes less effective in producing the hormones it produces, which leads to a decrease in the body’s ability to produce thyroid hormone.

Signs and Symptoms
Since the thyroid gland regulates the entire metabolism, the thyroid gland indirectly affects every cell, tissue, and organ in the body—from muscles, bones, skin, and the digestive tract, heart, and brain. Since the thyroid gland is a hormone-secreting gland, it can present itself in many different ways. As the gland continues to release thyroid hormone, the following symptoms may be seen:

1. Thyroid gland enlargement: The thyroid gland may be enlarged due to the destruction of the thyroid gland.
2. Hypothyroidism: The thyroid gland may be enlarged due to the destruction of the thyroid gland.
3. Goiter: The thyroid gland may be enlarged due to the destruction of the thyroid gland.
4. Hypothyroidism: The thyroid gland may be enlarged due to the destruction of the thyroid gland.

Nursing Implications
Since HT and hypothyroidism can present in a variety of ways and levels of severity, the most important factor is an accurate assessment. Both diseases begin with a thorough physical exam and obtaining a complete medical history. Taking time to interview the patient and truly hear what is being said is crucial. In addition, focusing on one symptom will provide necessary information that can lead to diagnosis. Before meeting with the patient, the healthcare provider needs to be aware of certain symptoms or signs that are more common in hypothyroidism. Other important signs to be aware of are:

1. Cold diaphoresis, cold intolerance, and heavy and excessive exhalation
2. Irregularities of voice
3. Altered reflexes
4. Edema
5. Altered mood

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