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Commentary

HIV-Related Hyperthermia with Tumors on the Papillary Thyroid

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ABOUT THE STUDY

HIV-infected patients' immune systems are highly compromised, which can lead to a variety of autoimmune disorders, including hyperthyroidism. Primary and secondary hyperthyroidism are two types of hyperthyroidism. Graves' disease is the most prevalent kind of primary hyperthyroidism, and it can arise in HIV patients after immune reconstitution following antiretroviral treatment. A 47-year-old lady with a history of HIV arrived with hyperthyroidism symptoms. After antithyroid medication therapy failed, the patient and her family decided to have surgery.

Papillary thyroid cancer was discovered during the postoperative checkup. Hyperthyroidism is a clinical illness caused by an abnormally high level of thyroid hormone production and secretion. There are two types of hyperthyroidism: primary and secondary. Anti-thyroid medications, radioiodine therapy, and surgery can all be used to treat primary hyperthyroidism. HIV-positive people can develop vasculitis, immunological cytopenia, rheumatic illnesses, lupus, sarcoidosis, thyroid disease, liver disease, and antiphospholipid syndrome, according to a research of HIV-infected patients and autoimmune disorders. They can arise concurrently with or after HIV. In the age of HAART (highly active retroviral therapy), autoimmune disorders in HIV-infected individuals develop mostly during the immunological recovery phase. Graves' disease-related inflammatory syndrome develops once HIV-infected individuals begin immunological reestablishment on antiretroviral treatment at an advanced stage of the disease.

The explanation for this might be because the proliferation of naïve T cells and primary transplanted CD4 T cells, as well as the rise in autoantibody titers, contribute to the development of organ-specific autoimmune disorders. The connection between hyperthyroidism and thyroid cancer is still unknown. Previous postoperatively reported thyroid function hyper function sickness inspection results suggest thyroid cancer, and HIV patients with autoimmune thyroid disease, including Graves' disease and hash moto's thyroiditis, but no cases of HIV patients with hyperthyroidism combined with thyroid papillary carcinoma have been reported. Patients and their families provided informed permission for the study. Several pathophysiological hypotheses link HIV infection to autoimmune diseases, including direct viral particle action, immune complex mediations, molecular simulation, dysregulation of B/T lymphocyte interactions, and activation of polyclonal B lymphocytes, which may promote autoantibody synthesis.

Hyperthyroidism is a clinical illness defined by hyperexcitability and hypermetabolism of the neurological, circulatory, and digestive systems induced by the thyroid gland's production and release of an excessive quantity of thyroid hormone. To differentiate between primary and secondary hyperthyroidism, Thyrotrophin Receptor Antibody (TRAb), ultrasonography, iodine absorption rate, and radiological imaging can be employed. Surgery is one of the most effective therapeutic options. Graves' Disease (GD), Toxic Multinodular Goitre (TMNG), Toxic Adenoma (TA), iodine hyperthyroidism, pituitary hyperthyroidism, and hCG-related hyperthyroidism are all common causes of hyperthyroidism. Thyroid Doppler ultrasound revealed no visible nodules in this example, which might be due to the patient's hyperthyroidism having a plentiful blood supply, resulting in indistinguishable thyroid nodules under ultrasound.

This patient had a history of HIV and was on antiviral medication on a daily basis. According to studies, HIV patients on IL 2 and HAART are predisposed to autoimmune thyroid disease (AITD), such as Hashimoto's thyroiditis. Graves' disease is caused by immunological reconstitution in HIV-infected individuals undergoing antiretroviral treatment. A CD4+ absolute count of less than 200 is a risk factor for symptomatic hyperthyroidism. As a result, frequent thyroid monitoring is advised for HIV patients.

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