A Case of Severe and Recurrent Painless Thyroiditis Requiring Thyroidectomy

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Key Words
Thyroid disease • Thyroid function • Thyroid surgery • Thyrotoxicosis

Abstract
Objective: To report a case of severe and recurrent painless thyroiditis requiring thyroidectomy. Clinical Presentation and Intervention: A 47-year-old man who presented with severe thyrotoxicosis was found to have extremely low radioactive iodine uptake, negative TSH receptor antibodies, and normal C-reactive protein; these findings suggested a diagnosis of painless thyroiditis. Due to the severity and recurrence of thyrotoxicosis, surgical resection of the thyroid gland was performed to prevent a thyrotoxic storm. Histological examination revealed typical lymphoid infiltration of the thyroid gland. Conclusion: This case illustrates that a patient with painless thyroiditis was successfully treated with surgery.

Case Report

A 47-year-old man visited the outpatient clinic of Shinshu University Hospital because of recurrent thyrotoxicosis. Two weeks before the first admission, he consulted his physician because of palpitation and diarrhea. His clinical manifestations and thyroid function indicated profound thyrotoxicosis. Although TSH receptor antibody (TRAb) was negative, thiamazole was initiated because of severe thyrotoxicosis and related manifestations, including atrial fibrillation. The patient’s thyroid function...
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Discussion

The distinctive features of this case of painless thyroiditis were the recurrence of the thyrotoxicosis (7 times in 1 year) and its severity, which approached that of a thyrotoxic storm given the severe tachycardia and diarrhea. However, Hiraiwa et al. [2] reported a case of adrenal crisis with transient thyroiditis, in which another hormonal deficiency was not apparent. The diagnosis of painless thyroiditis was based on the presence of thyrotoxicosis with low radioactive iodine uptake and negative TSH receptor antibodies. Thyrotoxicosis factitia was included in the differential diagnosis but considered unlikely because the patient asserted that he never took thyroxine, thyroid gland extracts, or foods containing thyroid hormones. Even if the measurement of serum thyroglobulin was low, the histological appearance of the thyroid confirmed the autoimmune pathogenesis of thyrotoxicosis. The treatment of painless thyroiditis is typically limited to observation, given the transient and mild nature of the thyroid dysfunction. β-Adrenergic blockade is effective for the treatment of symptoms related to thyrotoxicosis. Antithyroid medication and iodide intake are not effective in preventing hormone release from the affected gland. At the beginning of management of this case, we treated with anti-thyroid drugs for a few weeks due to an initial diagnosis of Graves’ disease, although TRAb was negative. Prednisolone is an alternative choice to treat painless thyroiditis, although steroid therapy was not initiated because of manic excitement and depressive states in this case. Drastic ablative therapy, such as surgery or radioac-

Fig. 1. Pathology of the resected thyroid gland. HE staining showing lymphoid follicular formation with germinal center in the interstitium and lymphocyte infiltration in the follicular epithelium (a). Surrounding lymphoid follicular formation; lymphocyte infiltration was evident in the follicular epithelium (b).
tive iodine, is rarely indicated. Although a sufficient absorbed radiation dose is required, radioactive iodide therapy was reported to be effective in some cases of recurrent painless thyroiditis [3, 4]. There have been three reports of painless thyroiditis treated by thyroidectomy [5, 6]. Although thyroidectomy is a unique therapy to achieve complete cure, physicians generally hesitate to recommend surgical resection for several reasons. First, this is a rare clinical course among common cases of painless thyroiditis. The second reason is that because thyrotoxicosis due to painless thyroiditis is a process of hypothyroidism, we predicted that thyrotoxic severity would subside. Third, exclusion of exogenous thyroid hormone intake is difficult. However, as shown in this case, surgical resection is the most effective form of treatment in cases of severe thyrotoxicosis.

**Conclusion**

This was a rare case of severe recurrent painless thyroiditis effectively managed by proactive surgical resection to avoid thyrotoxic crisis.

**References**