

Hyperthyroidism as late adverse effect of treatment for Hodgkin lymphoma

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Introduction

Recently, survival rate of Hodgkin lymphoma in childhood and adolescence is over 90%. However, late effects are important problem in this disease. Hyperthyroidism is reported as late effect in long surviving patients with Hodgkin lymphoma, especially in irradiated patients. As Hodgkin lymphoma is relatively rare disease in Asia compared with US and Europe, the report about this complication from Asia is rare.

Methods

Herein, we report 2 cases of hyperthyroidism as late adverse effect of treatment for Hodgkin lymphoma.

Results

Case 1 is 12-year-old boy. He complained left cervical swelling, fever and body weight loss. Biopsy of cervical lymph node revealed classical Hodgkin lymphoma, nodular sclerosis. His clinical stage was IIB. He was treated with 4 courses of ABVD regimen. However, additional 2 courses of BEACOPP regimen and irradiation therapy (cervical and mediastinal lesion: 21Gy, additional tumor bed: 12Gy) were performed because of positive image of PET. After 2 years and 8 months from the end of treatment, he was diagnosed as hyperthyroidism by blood examination (fT3 8.4pg/ml, fT4 2.2ng/dl, TSH <0.1mIU/ml). In addition, his family (mother, grandfather and aunt) had a past medical history of hyperthyroidism. He was treated with thiamazole.

Case 2 is 12-year-old girl. She complained cough and dyspnea. The chest X-ray revealed giant mass of thymus. She was diagnosed as classical Hodgkin lymphoma, nodular sclerosis by biopsy of thymic mass. Her clinical stage was IIBX. She received 2 courses of OPPA regimen and achieved complete remission. Moreover, she received additional 2 courses of COPP regimen and did not receive irradiation therapy. After 2 years and 6 months from the end of treatment, she complained palpitation, excessive sweating and body weight loss. Blood examination revealed hyperthyroidism (fT3 10.79pg/ml, fT4 2.78ng/dl, TSH <0.1mIU/ml). She was treated with thiamazole.

Hyperthyroidism as late effect of treatment for Hodgkin lymphoma is well known. Many manuscripts showed that irradiation therapy was the risk factor for hyperthyroidism as late effect. In case 1, he received irradiation therapy and had family history. In case 2, however, she never received irradiation therapy and never have family history of hyperthyroidism.

Conclusion

Hyperthyroidism is notable late adverse effect in all treated patients with Hodgkin lymphoma.