Treating Refractory Immune Thrombocytopenia (ITP) in the Context of Concomitant Papillary Thyroid Carcinoma (PTC) and Hodgkin Lymphoma: A Rare Case Report

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INTRODUCTION

Hodgkin lymphoma (HL) is a heterogeneous group of neoplasms that makes up 10% of lymphomas. HL cases treated with radiotherapy have an increased risk of developing papillary thyroid carcinoma (PTC)(1). However, the concomitant *de novo* PTC and HL are quite rare (2). Moreover, immune cytopenia is reported with lymphoproliferative diseases. Yet they are rarely described in HL patients (3,4).

AIM

This case report highlights two rare concomitant associations (PTC and ITP) in an HL case and the case management.

PATIENT

Male patient was referred from the surgical department due to progressive severe thrombocytopenia after total thyroidectomy. The pathology revealed PTC (follicular variant) with no nodal involvement, which was confirmed by pathology *(figure 1 a,b)* and thyroid scan. Several months later, he was diagnosed with HL.

METHODS

The patient underwent all testing, including immune work-up, and viral markers were negative. His coagulation profile and BM examination were normal *(figure 3)* except for an increase in mature and immature megakaryocytes). He was diagnosed with idiopathic thrombocytopenia, and steroid therapy was commenced. However, there was no improvement. Two months later, several cervical LNs were noted. Lymph node biopsy revealed Hodgkin lymphoma mixed cellularity *(figure 2*). BM trephine biopsy showed that all hematopoietic series were normal with no infiltration of abnormal cells. Meanwhile, his platelet count was less than 10,000/mcl and not responding to other conventional treatment over these 2 months.

RESULTS

The patient started eltrombopag 50 mg for 2 weeks and then was treated with ABVD protocol. Eltrombopag helped to raise and maintain a safe platelet count, and he was able to receive his chemotherapy cycles.

After 2 cycles of ABVD, his platelet count was normalized and eltrombopag was decreased gradually then stopped gradually. PET CT after he finished chemotherapy courses revealed a complete remission response. He is now finishing his consolidative cycles of AVD.

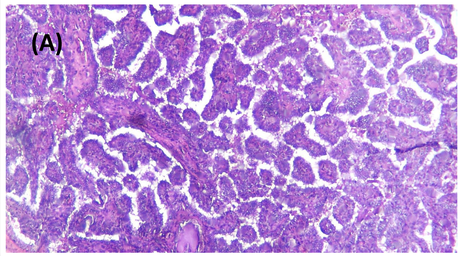


Figure 1 (a): Papillary thyroid carcinoma (H &E X 200)

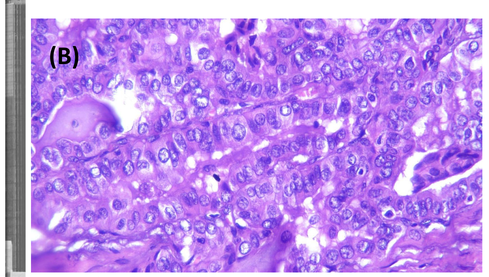


Figure 1 (B): Papillary thyroid carcinoma (H &E X 400)

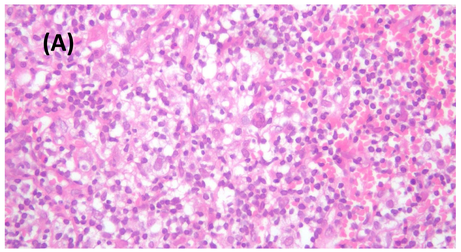


Figure 2 (a): Classic Hodgkin Lymphoma mixed cellularity (H&E x400)

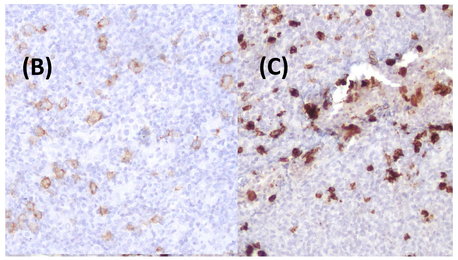


Figure 2 (b): Immunohistochemical study's results: (B) Reed Sternberg cells showing strong CD 30 positivity (x400); (C) Reed Sternberg cells showing strong CD 15 positivity (x400)

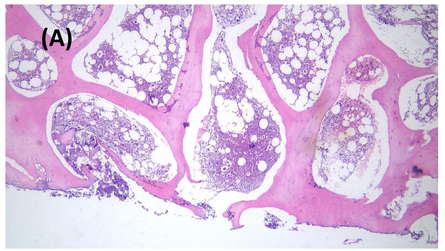


Figure 3 (a): Normocellular BMB negative for deposits(H &Ex100)

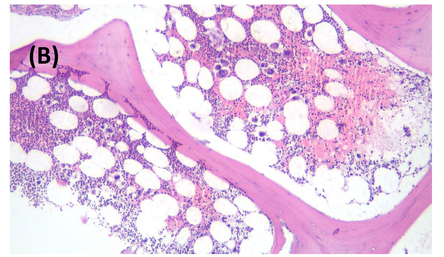


Figure 3 (b): BMB showed increased megakaryocytes (H&Ex200)

CONCLUSIONS

The synchronous occurrence of PTC, ITP, and HL is an extremely rare condition that posed a significant treatment dilemma. Using thrombopoietin receptor agonists may help in this setting.

CONTACT INFORMATION

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REFERENCES

1- Ben Thayer M, Khanchel F, Helal I, Chiboub D, Ben Lazreg K, Hedhli R, Ben Brahim E, Jouini R, Cheddli-Debbich A. Incidental discovery of a Hodgkin lymphoma synchronous to a papillary thyroid carcinoma. Clinical Case Reports. 2022 Aug;10(8):e6246.

2-Al Saidan L, Al S, Al Abdulrahim B, Alajmi KS, Almusallam AS, Justin M, Ashkanani F. Synchronous papillary thyroid cancer and Hodgkin's lymphoma: a rare case report. Glob J Otolaryngol. 2021;24:556143.

3-Marino S, Di Cataldo A, Magro G, D'Amico S, La Spina M, Di Benedetto V, Meli M, Moscheo C, Russo G. A difficult diagnosis of Hodgkin lymphoma due to immune thrombocytopenia. Clinical Case Reports. 2015 Mar;3(3):179.

4-Tanous O, Dujovny T, Hertzel G, Koren A, Levin C. Immune thrombocytopenia secondary to Hodgkin's lymphoma in children. The Israel Medical Association Journal: IMAJ. 2020 Apr 1;22(4):224-6.