

Simultaneous Discovery of Thyroid Disease and Lymphoma: Is it Simply Coincidence?

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Learning Objectives

1. Identify etiologies of splenomegaly.
2. Recognize association between autoimmune disease and lymphoma.
3. Identify hepatotoxicity as a side effect of methimazole.

Introduction

The relationship between autoimmune disease and development of non-Hodgkin's lymphoma is well known. The autoimmune diseases typically involved range from rheumatologic processes such as rheumatoid arthritis, lupus and Sjogren's syndrome, to gastrointestinal disorders like Celiac disease.

Case Description

History of Present Illness:

35 yo F with PMHx of untreated hyperthyroidism secondary to Grave's disease who presented with new onset jaundice and one month of malaise. She was recently diagnosed with hyperthyroidism at an outside. She was started on methimazole 30 mg daily and propranolol 20 mg twice daily. Approximately one week after starting the medication, she developed a diffuse body rash. The rash was treated with topical hydrocortisone and chamomile lotion. She then developed jaundice and that prompted her to visit the ED.

Exam:

Vitals were unremarkable other than mild tachycardia. Pertinent exam findings included dry mucus membranes, scleral icterus, abdominal tenderness in LUQ as well as diffuse jaundice.

Initial Labs/Imaging:

- Liver function studies revealed bilirubin 10.1, ALP 386, AST 506 and ALT 198. Creatinine was normal
- CBC normal w/ exception of platelet count of 90
- Coagulation factors abnormal: INR 1.6, haptoglobin 18, D dimer 18, ferritin 19K, and fibrinogen 93
- Thyroid function studies normalized w/ treatment

With the above work-up complete, she was admitted for acute hepatitis and possible DIC. She had blood cultures and viral titers drawn, urinalysis to rule out infection and imaging to work up possible malignancy.

Hospital Course and Further Work-Up

- Based on her laboratory findings, we were very concerned for DIC.
- A broad work up was undertaken to rule out infection and malignancy.
- Blood cultures came back negative and titers for viral hepatitis were also negative.
- RUQ US revealed hepatic steatosis and splenomegaly to 20cm.
- CT chest/neck/abd/pelvis revealed cervical, supraclavicular, and retroperitoneal adenopathy with an enlarged spleen.
- PET scan showed increased up take in spleen, cervical and supraclavicular lymph nodes.
- Hematology consulted for concern of HLH, Did not meet diagnostic criteria but very suspicious for malignancy.
- ENT consulted for lymph node biopsy, which eventually revealed classical Hodgkin's Lymphoma.



Figure 1. PET scan showing splenomegaly with increased uptake. Additionally, there was increased uptake in the cervical and supraclavicular lymph nodes (not shown).

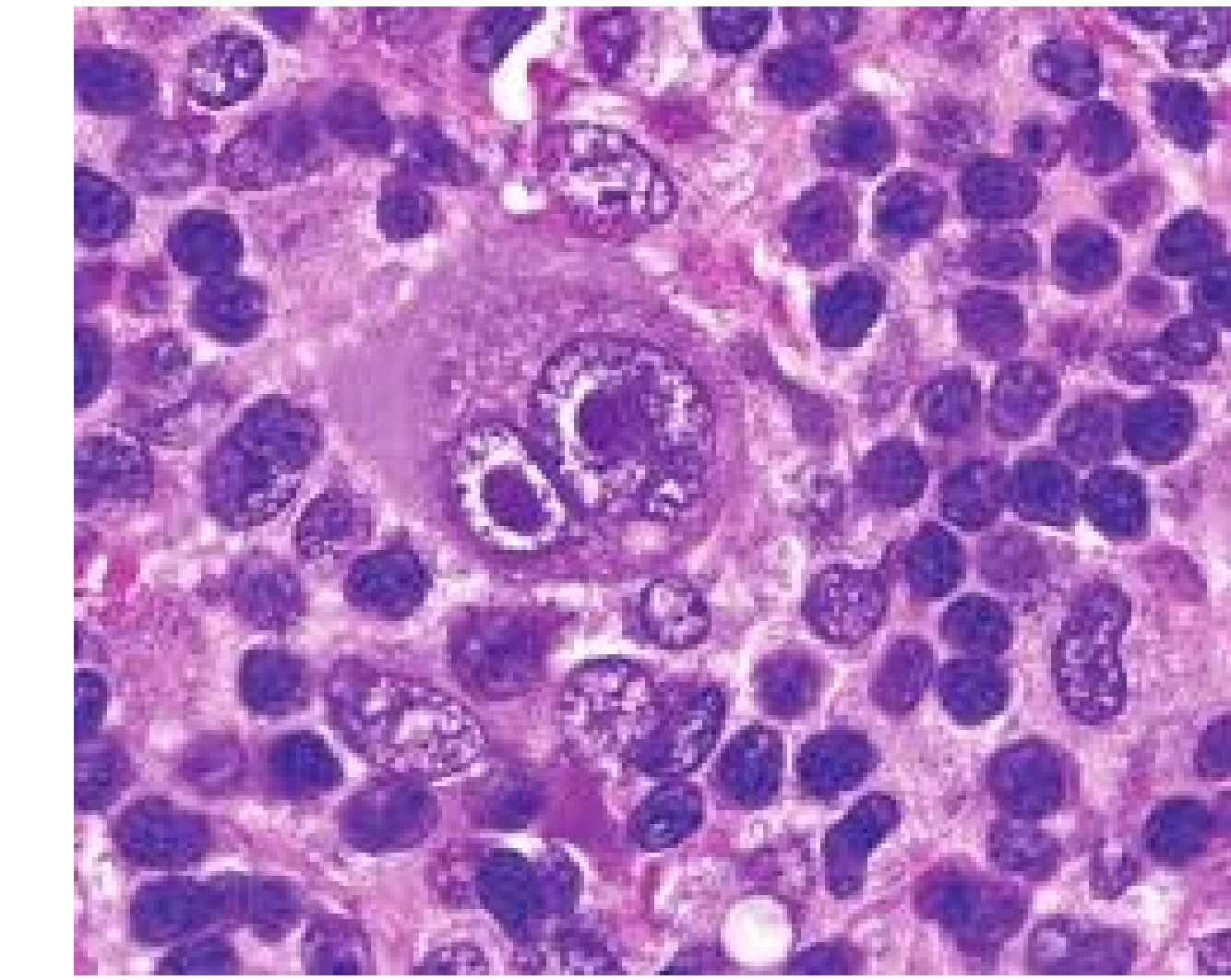


Figure 2. Pathology appearance of a lymph node in Hodgkin's Lymphoma. Depicted in the image is the classic Reed Steinberg cell.

Discussion

- Work up for splenomegaly should include infection (EBV, CMV, AIDS), malignancy (specifically hematologic disorders), granulomatous diseases, secondary causes such as portal hypertension and cirrhosis, myeloproliferative disorders, and in the most rarest of cases, hemophagocytic lymphohistiocytosis (HLH).
- It is not unusual for autoimmune disease to predispose patients to lymphoma development. This is thought to relate to chronic inflammation which drives antigenic stimulation and thus, lymphomagenesis
- Hepatotoxicity due to methimazole is a well-known side effect. However, the degree of hepatotoxicity did seem out of proportion to the expected effect of the medication, specifically, that it involved the synthetic function of the liver. Ultimately, we diagnosed her with Hodgkin's lymphoma, which may have predisposed her to develop hepatotoxicity from methimazole.

Conclusion

- Despite historical association between autoimmunity and NHL, there is a growing literature suggesting there is a small increase in developing HL.
- To our knowledge, this is the first case report identifying the presence of both uncontrolled Grave's disease and Hodgkin's lymphoma suggesting that perhaps Grave's disease should be considered a predisposing autoimmune condition

References

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