

COVID-19 Masking an Atypical presentation of Hairy Cell Leukemia

Kahmalia-Kalee Sada, MD PGYII

Introduction

- Hairy cell leukemia is an uncommon, chronic B cell leukemia
- The typical presentation of Hairy Cell leukemia is the classic triad of splenomegaly, pancytopenia, and “hairy” appearing leukemic b cells in the bone marrow
- There are variants of Hairy Cell Leukemia, which may have different presentations clinically, and genetically which change how we approach treatment
- Early Diagnosis results in a increase in survival rate and a good prognosis.

Case Presentation

- A 51-year-old male with a past medical history of COPD presents to the Hospital ED for shortness of breath, fever, chills, and generalized weakness
- Prior infection with COVID 19, with frequent Emergency room visits for COPD exacerbations, sent home despite abnormal CBC.
- February Hospitalization, shed light on repeated abnormal CBC with pancytopenia, despite respiratory infection seen on CTA of the chest and chest x-ray.
- Physical examination unremarkable, patient remained asymptomatic aside from respiratory failure. No splenomegaly or palpable organomegaly found.

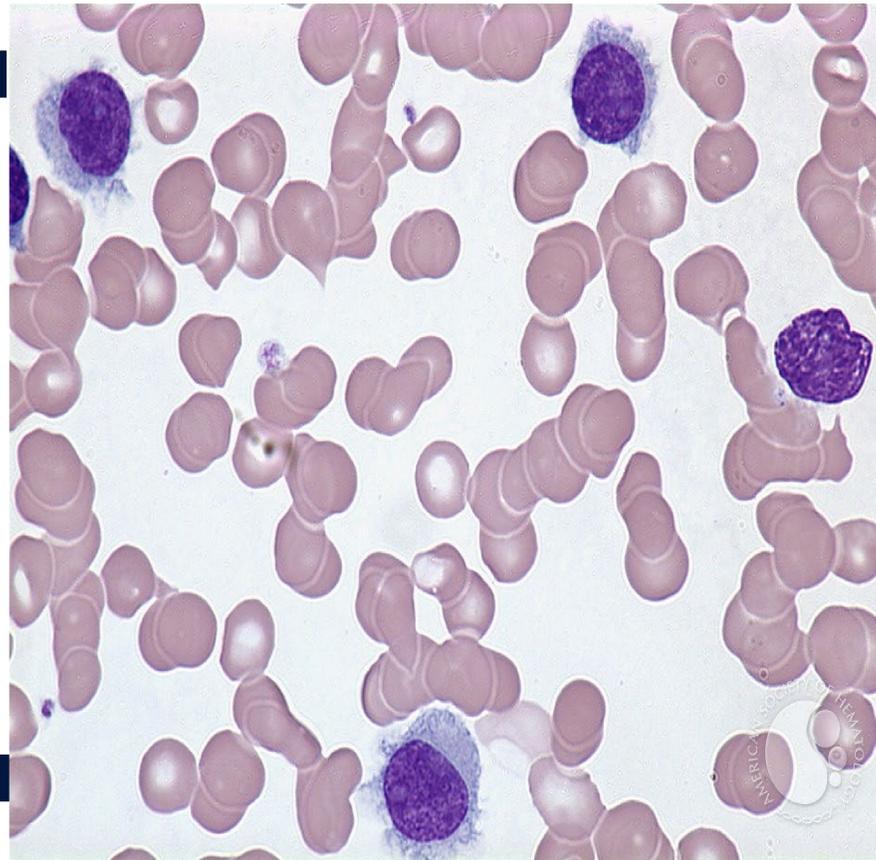


Figure 1 :“Hairy” appearing leukemic b cells found in the bone marrow

•Hairy cell leukemia. (n.d.). Imagebank.hematology.org. Retrieved October 18, 2022, from <http://imagebank.hematology.org/imageset/715/hairy-cell-leukemia>

Diagnosis and Management

- Bone marrow biopsy and aspirate confirmed B cell lymphoma highly suggestive of Hairy Cell Leukemia
- BRAF mutation testing confirmed positive
- This aligned with Classic Hairy Cell Leukemia, not a variant of the B-cell Lymphoma
- Patient received first 5 rounds of Cladribine

Discussion

- Hairy cell leukemia is an uncommon, chronic B cell leukemia, first reported as a distinct entity in the 1950s
- Bone marrow biopsy is definitive diagnosis
- BRAF mutation testing is essential prior to treatment.
- Cladribine is used for Classic Hairy Cell Leukemia
- Palpable organomegaly accounts for ~70% of patients.
- Variants of HCL may need additional therapy with Rituximab

Conclusion

- Hairy Cell Leukemia is an extremely uncommon diagnosis of chronic b cell leukemia, and accounts for only 2% of lymphoid leukemias with a male predominance and average age of 58.
- Bone marrow biopsy and immunohistochemistry plays an important role in correct diagnosis, receiving this information quickly can ensure prompt treatment with specific chemotherapy agents based on the presence or absence of mutations.
- Early diagnosis is proven to decrease complications from this malignancy as well as increase chance of survival
- Rare hematologic malignancies can exist and be hidden beneath various medical diagnoses during a hospitalization, while addressing acuity of other major issues

References

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