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Chronic Lymphocytic Leukemia of the Liver: A Rare Cause of Elevated Liver Function Tests

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INTRODUCTION

Chronic lymphocytic leukemia (CLL) is a proliferative malignancy that can infiltrate multiple different organs throughout the human body. Even though CLL is one of the most common forms of leukemia in the adult population, it has been previously reported to rarely affect the liver. Since the development of more advanced biologic and chemotherapy medications, patients are presenting with more rare presentations of common disease processes.^{1,2} Now that metastatic CLL is becoming more prevalent, we need to consider previously documented rare sites of metastasis as potential sites of disease.^{2,3}

CASE PRESENTATION

A 76 year-old male with a past medical history of CLL (+13q14 mutation) and CKD was evaluated for elevated liver enzymes. He was found to have an AST of 112, ALT of 348, ferritin of 953 along with a transferrin saturation of 27%. During his extensive evaluation, a CT of his abdomen and pelvis revealed worsening intraabdominal lymphadenopathy. Additional imaging with an abdominal ultrasound revealed worsening hepatomegaly and

splenomegaly. Additional causes of his findings were evaluated, however blood work showed a negative ANA/SMA/AMA, a negative HAV/HBV/HCV. Percutaneous liver biopsy was performed for further evaluation, which showed involvement of his liver with dense lymphoid infiltrate of the portal tracts, consistent with chronic lymphocytic leukemia (CLL). This liver biopsy was similar in nature to his previous bone marrow biopsy. The patient was initiated on Imbruvica and soon thereafter, his liver function tests improved. He continues to follow with Oncology for his CLL.

DISCUSSION

Though there are many different reasons why the liver is becoming more commonly affected, this rise in incidence shines a new light on chronic liver disease management. Even though liver infiltration with CLL has not been studied as much as other organ systems, this spike in disease incidence should make us all aware of these complications. Properly diagnosing this rare complication of CLL in a timely manner would allow our patients to have better outcomes as well as provide physicians a better clinical understanding of this disease process.^{2,3}

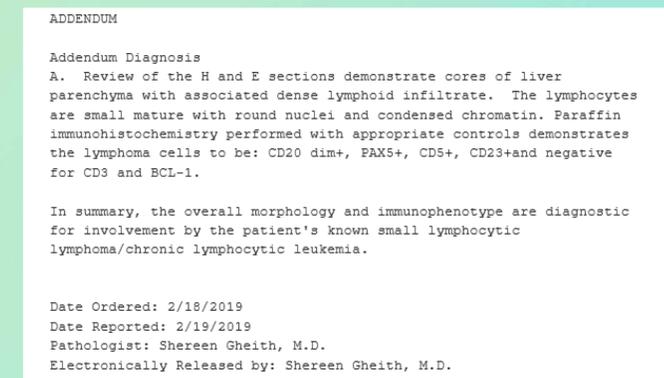


Figure 1: The official pathology report showing CLL infiltrating the liver parenchyma.

	5/14/2018 0606
Carbon Dioxide	29 *
Anion Gap	8 *
GFR, Calculated	52 * ▾
Uric Acid	
Phosphorus	3.5 *
Albumin	3.9 *
Calcium	8.9 *
Protein, Total	6.7 *
Bilirubin, Total	0.6 *
Bilirubin, Direct	
AST	112 * ▲
ALT	348 * ▲
Alkaline Phosphatase	77 *
Gamma GT	125 * ▲
CK, Total	47 *
Magnesium	
Lipase	
Hemoglobin A1C	
eAG, EST AVG Glucose	
Ferritin	953 * ▲
Iron	89 *

Figure 2: This was the initial lab work that prompted additional workup of the elevated LFTs.

	10/16/2019 0712	8/14/2019 0659
CHEMISTRY ROUTINE		
Fasting Status:		
Glucose	93	85
BUN	20	17
Creatinine	1.36 ▲	1.17
Sodium	140	142
Potassium	3.5	4.0
Chloride	103	106
Carbon Dioxide	27	31
Anion Gap	10	5
GFR, Calculated	49 * ▾	59 * ▾
Albumin	3.6	3.8
Calcium	8.9	9.5
Protein, Total	6.4	6.7
Bilirubin, Total	0.7	0.9
AST	22	39
ALT	58 ▲	89 ▲
Alkaline Phosphatase	52	59
Hemoglobin A1C		
eAG, EST AVG Glucose		
Ferritin		

Figure 3: This is the most up to date labs showing near resolution of the elevated LFTs.

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