

CHILAITITI'S SIGN OBSERVED WITH CHRONIC LYMPHOCYTIC LEUKEMIA: A CASE REPORT

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ABSTRACT

Chilaiditi's sign, defined as the interposition of the colon's hepatic flexure in front of the liver, is a rare condition. Although it is often asymptomatic, Chilaiditi's sign can also present with symptoms and be associated with serious complications. A 65-year-old male patient diagnosed with chronic lymphocytic leukemia, considered as Rai stage 2, was admitted for observation and treatment arrangements following complaints of coughing. The air levels observed in the colonic loops between the liver and diaphragm on the posteroanterior chest radiographs were clinically and radiologically evaluated and presented as Chilaiditi's sign.

Keywords: Chilaiditi's sign, chronic lymphocytic leukemia, radiology

INTRODUCTION

Chilaiditi's sign is characterized by the anomalous positioning of the right colon between the liver and the right hemidiaphragm (1). Chilaiditi's syndrome encompasses characteristic radiological findings along with symptoms such as nausea, vomiting, anorexia, constipation, and epigastric pain (2).

While often asymptomatic and incidentally discovered, the Chilaiditi's sign can be misinterpreted as conditions such as diaphragmatic hernia, subphrenic abscess, or pneumoperitoneum due to its rarity, despite the presence of characteristic air under the unchanged diaphragm resembling haustra (1). Complications include perforation, colonic volvulus, internal hernia, subphrenic appendicitis, and acute intestinal obstruction (3, 4).

Management depends on the symptomatology. Asymptomatic cases generally require no treatment, whereas mild to moderate

symptoms typically respond to conservative measures, such as cessation of oral intake, intravenous fluids, and bowel decompression. Persistent symptoms or complications such as ischemia or perforation necessitate surgical intervention (5, 6).

This case report highlights the potential for the Chilaiditi's sign to present with non-specific symptoms and to mimic more serious conditions.

CASE REPORT

A 65-year-old male with untreated chronic lymphocytic leukemia (CLL), classified as stage 2 according to the Rai staging system, presented for advanced treatment (7). His medical history includes a prior right inguinal hernia repair and current use of atorvastatin 10 mg/day. Family history is notable for Alzheimer's disease in siblings and hypertension in a brother.

On examination, the patient appeared to be well-oriented and cooperative. Physical findings were unremarkable, except for



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splenomegaly that was palpable 6 cm below the costal margin. Respiratory examination revealed equally reduced aeration in both hemithoraces without adventitious sounds. There was no orthopnea.

Laboratory tests were performed (Table 1). The urinalysis was normal. The peripheral blood smear showed mature lymphocytes and basket cells without atypical findings.

A pre-admission chest X-ray revealed elevation of the right hemidiaphragm with air between the right hemidiaphragm and liver (Figure 1).

The presence of colonic haustral patterns was supported by thoracic computed tomography (CT) findings (Figure 2).

Thoracic CT confirmed multiple parenchymal nodules with air bronchograms in the lower lobes of the lung and anterior positioning of the liver hepatic flexure.

During the hospitalization period, the patient remained asymptomatic for tumor lysis syndrome, with appropriate nutritional and treatment guidance provided in case symptoms developed.

DISCUSSION

Anomalous placement of the colon at the hepatic flexure, though rare, can range from asymptomatic to symptomatic with potential for serious complications, as demonstrated in this case (1). Diagnosis in suspected cases, as illustrated here, can be straightforwardly confirmed by chest X-ray showing gas patterns crossing colonic haustral bands (3). CT serves as a valuable tool for supportive and differential diagnosis. Management focuses on symptomatic relief with close

monitoring for potential complications (4). Given the absence of a documented association between CLL and Chilaiiditi's sign in literature, this case underscores the importance of recognizing and managing this condition independently.

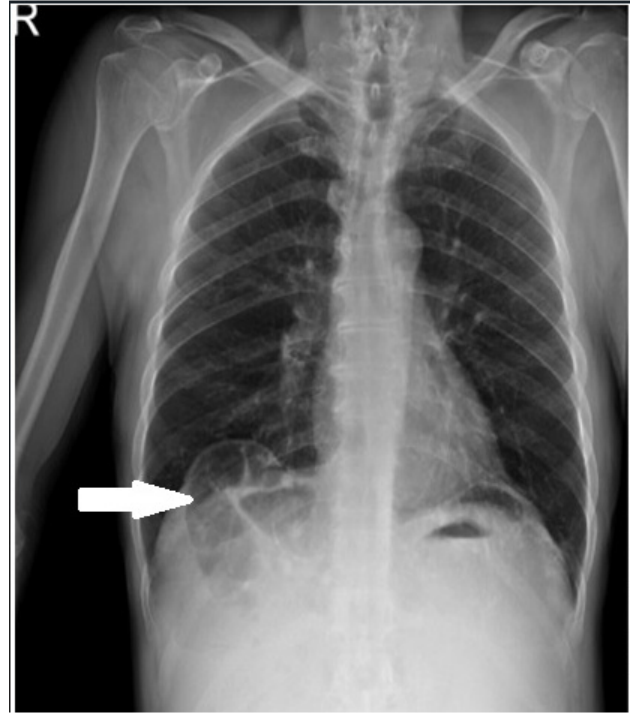


Figure 1: Chest X-ray, revealing the elevation of the right hemidiaphragm with air between the right hemidiaphragm and the liver (white arrow).



Figure 2: Thoracic CT showing the colonic haustral pattern (white arrow), multiple parenchymal nodules with air bronchograms in the lower lung lobes and anterior positioning of the liver hepatic flexure. CT: Computed tomography

Table 1: Laboratory test results of the patient.

Hemoglobin	7.1 g/dL (12-16 g/dL)
Hematocrit	23.8% (40-54%)
Leukocytes	207.02x10 ³ /μL (4-10x10 ³ /μL)
Platelets	140x10 ³ /μL (100-450x10 ³ /μL)
Blood glucose	141 mg/dL (70-105 mg/dL)
Sodium	140 mEq/L (136-145 mEq/L)
Calcium	7.5 mg/dL (8.4-10.2 mg/dL)
Potassium	4.2 mEq/L (3.5-5.1 mEq/L)
Phosphorus	3.7 mg/dL (2.3-4.7 mg/dL)
Aspartate transaminase	21 IU/L (5-34 IU/L)
Alanine transaminase	22 IU/L (<55)
Uric acid	5.8 mg/dL (2.6-6.0 mg/dL)
Creatinine	1.26 mg/dL (0.72-1.25 mg/dL)
Alkaline phosphatase	144 IU/L (40-150 IU/L)
Total protein	56.8 g/dL (64-83 g/dL)
Albumin	35.9 g/dL (35-50 g/dL)
Blood urea nitrogen	19.16 mg/dL (6-20 mg/dL)

IU: International unit

Footnote

Ethics Committee Approval: N/A

Informed Consent: Informed consent was obtained from the patient.

Conflict of Interest: The authors declared no conflict of interest.

Author Contributions: Surgical and Medical Practices: A.Ş.A., İ.Y., Concept: A.Ş.A., İ.Y., Design: A.Ş.A., Data Collection and/or Processing: A.Ş.A., Analysis and/or Interpretation: A.Ş.A., İ.Y., Literature Search: A.Ş.A., Writing: A.Ş.A., İ.Y.

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