

# Chronic Lymphocytic Leukemia Presenting as Recurrent Pulmonary Infections

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Sir,

A 57 years old male presented to the pulmonary OPD with cough with sputum, fever, and loss of appetite. He gave a history of frequent hospitalization for cough and fever thrice in the recent past within one month in a nearby hospital. Discharge summary and his past investigations were studied in detail which were suggestive of recurrent pneumonia of left lung and was treated with cefotaxime one gram intravenously B.D., anti-tussives and multivitamin tablets. His total leucocyte count was 19,400 cells/cu.mm with 65% lymphocytes at that time. On examination, he was moderately built, mild pallor, febrile, had mild hepatosplenomegaly and was coughing. All the routine blood investigations including chest X-ray and Mantoux test were advised.

## Table showing routine investigation results.

|                       |                     |
|-----------------------|---------------------|
| Hemoglobin            | 10.2 g/dl           |
| Urea                  | 28 mg/dl            |
| Total leucocyte count | 49,600 cells/ cu.mm |
| Creatinine            | 1.1 mg/ dl          |
| Neutrophils           | 26%                 |
| Total Serum bilirubin | 0.7 mg/ dl          |
| Lymphocytes           | 72%                 |
| SGOT                  | 32 IU/ dl           |
| Monocytes             | 02%                 |
| SGPT                  | 35 IU/ dl           |
| Eosinophils           | 00%                 |
| Random glucose        | 100 mg/dl           |
| Platelet count        | 1.7 Lakhs/ cu.mm    |
| ESR                   | 22 mm/ I hour       |

Peripheral smear shows lymphocytic leucocytosis with many smudge cells and Montoux test was Negative.

His routine investigations were shown in the Table 1. Complete blood picture revealed total leucocyte count of 49,600 cells/ cu.mm with 72% lymphocytes with many smudge cells (Figure 1) which were suggestive of chronic lymphocytic

leukemia (CLL). X-ray examination revealed bronchitis and pneumonia of lower lobe of left lung. HRCT scan of the chest and paranasal sinuses revealed bilateral bronchiectatic changes with superadded infective changes, mediastinal lymphadenopathy, bilateral pleural effusion (Figure 2) and bilateral sinusitis of frontal, ethmoidal and maxillary sinuses. Flow cytometry showed the lymphocytes to be positive for CD5 and CD19 suggesting the monoclonal B cell origin and confirming the CLL. Patient was treated with higher antibiotics and responded well. On subsequent follow up, the total count was increased to 72,300 cells/ cu.mm. He was started on chemotherapy with fludarabine, cyclophosphamide and rituximab. He received four courses, repeated every four weeks and was doing well.

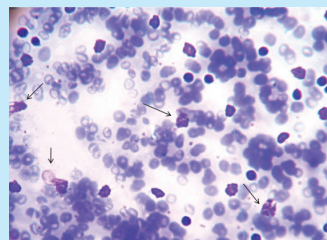


Figure 1



Figure 2

Figure1-Peripheral smear showing lymphocytosis with many smudge cells (arrows) (High power view).

Figure 2- HRCT scan showing bilateral cystic bronchiectasis

Chronic lymphocytic leukemia (chronic lymphoid leukemia, CLL) is a monoclonal disorder characterized by a progressive accumulation of functionally incompetent lymphocytes<sup>1</sup>. The incidence of CLL is higher among whites than blacks. The incidence of CLL is higher in males than in females, with a male-to-female ratio of 1.7:1. CLL is a disease that primarily affects the elderly, with the median age of presentation being 72 years<sup>1</sup>. Median age is 58 years in familial cases. Our case was of 57 year old and was not having any family history.

Onset is insidious, and it is not unusual for CLL to be discovered incidentally after a blood cell count is performed

for another reason; 25-50% of patients will be asymptomatic at time of presentation. Our case presented with past history of recurrent pulmonary infections.

Patients with CLL present with a wide range of symptoms and signs. Symptoms include enlarged lymph nodes, hepatomegaly, splenomegaly, recurring infections, loss of appetite or early satiety, fatigue, night sweats and abnormal bruising (late-stage symptom). CLL presenting with chylothorax were reported by Scholz et al, Doerr et al. and Zimhony et al<sup>2, 3, 4</sup>

Chemotherapy is not needed in CLL until patients become symptomatic or display evidence of rapid progression of disease. A variety of chemotherapy regimens are used in CLL. These may include nucleoside analogues, alkylating agents, and biologics, often in combination such as fludarabine, cyclophosphamide, and rituximab<sup>5</sup> Allogeneic stem cell transplantation is the only known curative therapy.

The case is reported because of its presentation with recurrent secondary infections and was not diagnosed until the leucocyte count was raised with smudge cells in the peripheral smear.

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