Case Report

Chronic lymphatic leukaemia in a civil aircrew : An unusual Presentation

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ABSTRACT

Chronic Lymphatic Leukemia (CLL), a neoplasm of the activated B cell, is a rare form of leukemia in the Indian subcontinent. We document a case of CLL in a 56 year male, asymptomatic civil aircrew, with no abnormality on clinical evaluation who presented with marginal leucocytosis and lymphocytosis on routine blood counts. Lymphoid marker studies revealed dual expression of B cell antigens and T cell antigen on the cells, confirming the diagnosis of CLL and differentiating it from reactive lymphocytosis. The case reported comes under International Workshop on CLL staging classification A (O), which has a good prognosis, with a median survival of around 10 years. These patients require no treatment and need only regular follow up. The experienced Airline pilot has therefore been permitted to fly as pilot in command, along with another qualified and experienced pilot, with periodical reviews at AFCME.

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Chronic Lymphatic Leukemia (CLL) is a neoplasm of the activated B Cell. It is a relatively common form of chronic leukemia in the United States and the Western World, but is a rare form of leukemia in the Indian subcontinent. An unusual case of CLL in an asymptomatic civil aircrew with marginally elevated total white cell count, who came for medical evaluation to AFCME is reported, along with the relevant detailed workup to distinguish it from reactive lymphocytosis.

Case report

A 56 year male Airline Pilot with 13840 hours of flying experience and presently Captain on Boeing 747 - 400, reported to AFCME in June 2000 for medical evaluation. He had undergone TURP for Benign Prostatic Hypertrophy (BPH) at a civil hospital at Mumbai in April 2000. He was symptom free. On clinical evaluation there was no evidence of pallor, peripheral lymphadenopathy or hepat-osplenomegaly. Other systemic examination were normal. Blood counts revealed a Total Leucocyte Count (TLC) of 19,400/cmm with a Differential Leucocyte Count (DLC) of P 28 L 67 E04 M01. The peripheral smear was reported as reactive lym-

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phocytosis. He was temporarily taken off flying duties for 04 weeks and advised for review with relevant investigations He reported for review in July 2000 with the investigation reports.

Investigation

Hb: 14 gm/dl; TLC : 21,000/cmm ; DLC : P17 L 80 E 02 M 01 ; Platelets : 2.0 Lac/cmm ; *Peripheral smear* : Normocytic normochromic, No blast cells seen. Lymphocytes morphologically mature with occasional plasmacytoid cells present. Platelets adequate. Findings consistent with CLL; Lymphoid *Markers* : CD 5 (80% Positive), CD 19 (99% Positive), CD 20 (80% Positive) & CD 22 (43% Positive); Serum Uric acid : 4.8mg% ; LDH *: 1*10 IU/L ; Other Biochemical parameters within normal limits ; lmmunofixation Electrophoresis ; No presence of any predominant light chains; Inaaaunoglobin Profile : Normal levels of Serum IgG. IgA & IgM; HIV & Hepatitis B : Negative ; HCV Antibody : Negative

Discussion

CLL may be discovered as an incidental finding -complete blood counts. It is usually ■ patients over the age. of 50 years with a preponderance. The diagnosis in most cases e node on the basis of physical examination nien of peripheral blood smear, which shows a large number of morphologically normal, mature small lymphocytes. In cases with anemia, lymph node enlargement, splenomegaly or history of intercurrent infection the diagnosis becomes simple. The problem comes in differentiating early CLL from reactive lymhocytosis, in asymptomatic patients, as in the present case. In such cases lymphoid marker studies help, as the dual expression of B cell antigens (CS19, CD20, CD21 & CD24) with a T cell antigen (CD5) on the cells is diagnostic. The case reported comes under Rai stage A, or International Workshop on CLL staging classification A (O). Patients with early -stage CLL (stage A) have a good prognosis, with a median survival which exceeds 10 years. These patients require no treatment and need only regular follow up. The experienced airline pilot has therefore been permitted to fly as pilot in command, along with another qualified and experienced pilot. He will be reviewed periodically.

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