

*Research Article***Demographic data in patients with Chronic Lymphocytic Leukemia**

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**Abstract**

**Introduction:** Chronic lymphocytic leukemia is a heterogeneous group of clonal neoplastic pathologies characterized by the proliferation of mature B or T lymphoid cells. It is a neoplastic disease characterized by a monoclonal proliferation of slow-division, immunologically incompetent B cells that mature in the bone marrow, lymph nodes and peripheral blood. **Aim of the work:** Aim of this study is to show the difference of demographic data in patients with chronic lymphocytic leukemia and its correlation with each other and with hematological parameters. **Subjects and methods:** After approval of the university ethical, this study was conducted in Minia University hospital and Upper Egypt oncology center during the period from April 2019 to May 2020. It was conducted on 30 newly diagnosed CLL patients and 30 apparently healthy individuals as control. All the study subjects were submitted to history taking considering age, fever, bleeding tendency, easy fatigability and history of hemolytic attacks and to clinical examination including pallor, purpura, hepatomegaly, splenomegaly and lymph nodes enlargement. Also all subjects submitted to routine laboratory investigations that include: CBC, ESR, renal function test, liver function test and LDH. **Results:** High percentage of smudge cells in peripheral blood films are associated with early stages or low to moderate CLL prognostic index in CLL patients.

**Key words:** Chronic Lymphocytic Leukemia and CLL prognostic index.

**Introduction**

Chronic lymphocytic leukemia is a heterogeneous group of clonal neoplastic pathologies characterized by the proliferation of mature B or T lymphoid cells (Carbone and Gloghini, 2017).

Chronic lymphatic leukemia (CLL) is a neoplastic disease characterized by a monoclonal proliferation of slow-division, immunologically incompetent B cells that mature in the bone marrow, lymph nodes and peripheral blood (Liu et al., 2017)

Several prognostic markers are used for this prognostic importance and indicate CLL prognostic index such as: Binet and RAI staging of CLL patients (Wu et al., 2019).

Some studies found the presence of smudge cell in peripheral blood of CLL patients. These cells present because the cell are more fragile than normal cells and prone to traumatic

disruption during blood film preparation (Al-Kahiry et al., 2018).

**Aim of the work**

Evaluate the demographic data in patients with chronic lymphocytic leukemia and its correlation with hematological parameters and clinical staging.

**Subjects and methods**

After approval of the university ethical committee, this study was conducted in Minia University hospital and Upper Egypt oncology center during the period from April 2019 to May 2020. It was conducted on 30 newly diagnosed CLL patients and 30 apparently healthy individuals as control. All the study subjects were submitted to history taking considering age, fever, bleeding tendency, easy fatigability and history of hemolytic attacks and to clinical examination including pallor, purpura, hepatomegaly, splenomegaly and lymph nodes enlargement. Also all subjects

submitted to routine laboratory investigations that include: CBC, ESR, renal function test, liver function test and LDH.

### Results

The selected subjects included in the study were divided into two groups; Group I (patients group) which included 30 newly diagnosed patients with B-CLL, 18 males and 12 females and group II (control group) that included 30 apparently healthy individuals with matched age and sex, 20 males and 10 females.

There was no significant difference between group I and group II regarding the age.

There was no significant difference in sex between group I and group II (p-value 0.7).

There was significant decrease in HB level in group I when compared to group II (p<0.0001).

There was significant increase found in WBCs when comparing group I to group II (p<0.0001).

There was significant increase in absolute lymphocytic count in group I when compared to group II with (p< 0.0001).

There was significant increase found in ESR when comparing group I to group II (p<0.0001).

### Discussion

In this study, HB and packed cell volume were significantly lower in patients group when compared with control group. The results of the present work were in agreement with (Hampel et al., 2018) who reported that CLL patients develop anemia, the majority of it is due to bone marrow replacement by tumor cells. In addition (Demir and Ekinici, 2017) who reported that some of CLL patients develop auto-immune hemolytic anemia as the most common auto-immune hematological disorder observed in CLL.

There was a decrease in platelet count in patients group when compared with control group. This was agreed by (Rashid et al., 2018) who explained that cytopenia in patients with CLL has multiple causes e.g., bone marrow failure, hypersplenism, chemotherapy, sepsis and autoimmunity.

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