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Chronic Lymphoid Leukemia in Togo: A Study of 34 Cases Collected at the Campus Teaching Hospital of Lome from 2012 to 2022

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ABSTRACT

Introduction: *With the advent of more accurate diagnostics through lymphocyte immunophenotyping, this study aimed to update the characteristics of chronic lymphocytic leukemia (CLL) in Togo.*

Method: *This was a cross-sectional, descriptive study conducted between January 2012 and December 2022 (10 years) in the clinical hematology department of the CHU Campus in Lomé. The diagnosis of CLL was based on blood lymphocytosis greater than 5,000/mm³, combined with a Matutes score of ≥ 4. The variables studied included the epidemiological, clinical, therapeutic, and disease progression aspects.*

Results: *During the study period, 34 patients were included, representing an average annual incidence of 3.4 new cases. The mean age was 61.8 ± 9.6 years (range: 45–78 years), and the sex ratio was 0.7. The primary reason for consultation was left hypochondrial discomfort (73.5% of cases). Twenty-two patients (75.9%) presented with lymphadenopathy. The mean blood lymphocytosis was 105 G/L. Prognostically, 27 patients (79.4%) were in Binet stage C. Chlorambucil was used as first-line treatment in 29 patients (85.3%), and six deaths were recorded (17.6%).*

Conclusion: *The incidence of CLL appears to be increasing in Togo. Diagnostic delays and the lack of appropriate technical infrastructure negatively affect the prognosis in most cases.*

Keywords

Chronic lymphocytic leukemia, Matutes core, Togo.

Introduction

Chronic lymphocytic leukemia (CLL) is a lymphoproliferative disorder marked by clonal B-cell expansion in the bone marrow, with subsequent infiltration of peripheral blood and lymphoid organs [1]. In Western countries, CLL ranks among the three most common hematologic malignancies, with an estimated 4,674 new cases in France in 2018 [2]. Epidemiological data from Africa remain scarce; in Côte d'Ivoire, CLL represented 9.5% of hematologic malignancies in 2014 [3]. The disease predominantly affects older adults, with a median age at diagnosis of 71 years in men and 74 years in women, and exhibits a male predominance (56.5%) [4]. According to "international workshop on CLL" (iwCLL) guidelines, diagnosis requires ≥5 G/L of monoclonal B lymphocytes in peripheral blood with characteristic cytology and surface markers, yielding a Matutes score ≥ 4 [1]. Consequently, diagnosis typically relies on complete blood count, peripheral blood smear, and lymphocyte immunophenotyping by flow cytometry. In developing countries, however, lymphocyte immunophenotyping has long represented a major technical challenge. As a result, CLL diagnosis was often based solely on cytological criteria, as illustrated by the most recent study conducted in Togo in 2018 [5]. Since 2012, access to this critical diagnostic tool through a North-South partnership has enabled more precise CLL diagnosis in Togo. In light of these diagnostic advances, we considered it essential to update the epidemiological, clinical, prognostic, and

therapeutic data on CLL in Togo.

Methods

This was a retrospective descriptive study conducted in the Clinical Hematology Department of the CHU Campus in Lomé. It included patients followed for chronic lymphocytic leukemia (CLL) between January 2012 and December 2022, covering a 10-year period. CLL diagnosis was based on a peripheral blood lymphocyte count >5 G/L and a Matutes score ≥4. Incomplete records were excluded. The study focused on patients' sociodemographic (age and sex), clinical, biological, prognostic (Binet classification), therapeutic, and follow-up data. Data were entered using EpiData version 3.1, and statistical analyses were performed with SPSS version 26. Table was generated using Microsoft Excel 365.

Results

During the study period, 126 patients presented with chronic lymphocytosis. Thirty-four records were retained, corresponding to an annual incidence of 3.4 cases (Table 1). The mean age of patients was 62 years (range 45–78), with a male-to-female ratio of 0.7. The most common presenting symptom was left hypochondrial heaviness, reported in 25 patients (73%), while diagnosis was incidental in 6 patients (17.6%). At admission, 29 patients exhibited clinical signs, with splenomegaly observed in 86% of cases.

Table 1: General characteristics of the patients.

Parameters	Size
Age (years)	
[45-55]	7/34 (20.6 %)
[55-65]	13/34 (38.2 %)
[65-75]	10/34 (29.4 %)
[75-85]	4/34 (11.8 %)
Sex	
Female	20/34 (58.9 %)
Male	14/34 (41.1 %)
Clinical parameters	
Splenomegaly	25/34 (86.2 %)
Lymphadenopathy	22/34 (75.9 %)
Hepatomegaly	16/34 (55.2 %)
Biological parameters	
Leukocyte count (G/L)	131.03 (6.48-513.7)
Lymphocyte count (G/L)	105.37 (5-48.7)
Hemoglobin (g/dL)	9 (5.4-13.7)
Platelet count (G/L)	162.10 (55-375)
Binet classification	
Stade A	5/34 (14.7 %)
Stade B	2/34 (5.9 %)
Stade C	27/34 (79.4 %)
Therapeutic protocol	
Chlorambucil	29/34 (85.3 %)
COP	2/34 (5.9 %)
Mini-CHOP	3/34 (8.8 %)
Outcomes	
Active follow-up	18/34 (52.9 %)
Controlled lymphocytosis	11/18 (61.1 %)
Uncontrolled lymphocytosis	7/18 (38.9 %)
Lost to follow up	10/34 (29.4 %)
Deceased	6/34 (17.6 %)

Biologically, the mean leukocyte count was 131 G/L, and the mean lymphocyte count was 105 G/L. Regarding prognostic classification, 27 patients were at Binet stage C, 2 at stage B, and 5 at stage A.

Continuous chlorambucil monotherapy, with dosage adjusted according to lymphocyte count, was the most frequently used protocol, administered to 85.3% of patients. Among the different treatment options, lymphocyte normalization was achieved in 15 patients (78.9%). Ten patients were lost to follow-up, and six deaths were recorded. The mean follow-up duration was 25.1 months (range 4–108 months).

Discussion

Of the 126 patient records with chronic lymphocytosis, only 34 (27%) were included in this study. The observed hospital incidence appears to be underestimated due to the retrospective nature of the study, with some records being poorly archived or incomplete. Furthermore, potential CLL cases may have been excluded, as several patients were unable to undergo immunophenotyping due to its cost. The incidence observed is also lower than that reported by Padaro et al. in 2018 and Sawadogo et al. in Côte d'Ivoire, who reported annual incidences of 4.35 and 5.7 cases, respectively [3,5]. This difference is likely attributable to the diagnostic criteria, as the aforementioned studies relied solely on cytological criteria, which led to the inclusion of a larger number of cases.

The mean age of patients in our study is consistent with data from both African and European literature, as CLL predominantly affects older adults [2,6-8]. In contrast, the male-to-female ratio of 0.7 observed in our study differs from previous reports [2,7], which documented a male predominance. This discrepancy may be explained by the fact that only patients who could undergo immunophenotyping were included, and by socioeconomic disparities affecting access to this blood test.

Splenomegaly was the predominant clinical manifestation in our series, consistent with the findings of Koffi et al., who reported isolated splenomegaly in 64% of cases [7]. Other African studies have also observed this predominance, suggesting that splenomegaly may be more frequent in patients of African origin than in Caucasian populations [9,10]. However, this presentation often complicates differential diagnosis with other chronic lymphoproliferative neoplasms [11], highlighting the importance of systematic immunophenotyping to confirm CLL diagnosis [1].

Biologically, lymphocytosis was consistently observed, but appeared higher than in Western series [12,13], likely due to delayed diagnosis caused by limited access to healthcare facilities and diagnostic wandering by practitioners. The low proportion of incidental findings in our study supports this observation. In developed countries, routine blood counts often allow early-stage CLL detection. In Togo, the majority of patients are diagnosed at a later stage; 79.4% were identified at Binet stage C. This trend may be associated with factors such as limited awareness and access to referral centers.

Although chlorambucil monotherapy can still help control the disease [14], BTK and BCL2 inhibitors have revolutionized CLL management. These novel agents, alone or in combination, have proven superior to traditional chemoimmunotherapy in both frontline and relapsed/refractory settings [15,16]. However, in developing countries, access to these new therapies, and even to conventional chemoimmunotherapy, remains limited due to cost and lack of adequate technical infrastructure, compromising disease control and survival outcomes.

Patient follow-up also posed a major challenge in our study, with a high loss-to-follow-up rate (29.41%), half of which occurred within three months of diagnosis. Similar results were reported by Kueviakoe et al. [17]. Long-term follow-up required for CLL is often hindered by the distance to care centers and financial or sociocultural constraints, which may lead some patients to abandon treatment in favor of traditional medicine. Koffi et al. reported a median survival of 8.22 years in Côte d'Ivoire, with a five-year survival probability of 58.8%, and independent factors influencing survival including age, lymphadenopathy, hepatomegaly, and leukocyte count [7]. In our study, assessment of overall survival was limited by the high number of patients lost to follow-up and poor treatment adherence. Further studies are needed to better understand the factors affecting patient survival in our context.

Conclusion

This decade-long study conducted in Togo highlights the clinical and epidemiological realities of chronic lymphocytic leukemia (CLL) in an African context, where diagnostic and therapeutic constraints remain significant. Strengthening healthcare infrastructure, expanding access to novel treatments, and raising awareness among healthcare providers and the general population about the importance of early diagnosis are essential. Further prospective studies are needed to better assess the impact of these interventions on patient survival and quality of life.

References

1. Hallek M, Cheson BD, Catovsky D, et al. Guidelines for the diagnosis and treatment of chronic lymphocytic leukemia: a report from the International Workshop on Chronic Lymphocytic Leukemia updating the National Cancer Institute-Working Group 1996 guidelines. Blood. 2008; 111: 5446-5456.
2. https://www.registre-cancers-44-85.fr/wp-content/uploads/2019/12/rapport-estimations-nationales-incidence-mortalite-cancer-France-1990-2018-hemopathies-malignes.pdf
3. Sawadogo Dl, Yapo V, Sangaré M, et al. Epidemiological features of patients suffering from malignant haemopathies in Abidjan during the ten years from 1995-2004. J Afr Cancer. 2009; 1: 4-10.
4. Jacque N, Leblond V. Chronic lymphocytic leukemia. Presse Med. 2019; 48: 807-815.
5. Padaro E, Layibo Y, Kueviakoe IDM, et al. Characteristics of chronic lymphocytic leukemia in Togo. Pan Afr Med J. 2019; 34: 84.
6. Sall A, Touré AO, Sall FB, et al. Characteristics of chronic lymphocytic leukemia in Senegal. BMC Hematol. 2016; 16: 10.
7. Koffi KG, Nanho DC, Tolo A, et al. Chronic lymphocytic leukemia in Subsaharian Africa: clinical outcome experience of Côte d'Ivoire. Bull Cancer. 2009; 96: 901-906.
8. Pfeil AM, Imfeld P, Pettengell R, et al. Trends in incidence and medical resource utilisation in patients with chronic lymphocytic leukaemia: insights from the UK Clinical Practice Research Datalink (CPRD). Ann Hematol. 2015; 94: 421-429.
9. Izzia K. Les leucémies lymphoïdes chroniques au Zaïre (Congo Démocratique) à propos de 39 cas. Med Afr Noire. 1997; 24: 225-258.
10. Malam-Abdou B, Brah S, Djibrilla A, et al. Leucémie Lymphoïde Chronique au Niger: une Étude de 99 cas au Service d'Onco-Hématologie de l'Hôpital National de Niamey. Health Sci Dis. 2018; 19: 93-96.
11. Alaggio R, Amador C, Anagnostopoulos I, et al. The 5th edition of the World Health Organization Classification of Haematolymphoid Tumours: Lymphoid Neoplasms. Leukemia. 2022; 36: 1720-1748.
12. Kay NE, Hampel PJ, Van Dyke DL, et al. CLL update 2022: A continuing evolution in care. Blood Rev. 2022; 54: 100930.
13. Gauthier M. Chronic lymphocytic leukemia. Rev Med Interne. 2022; 43: 356-364.
14. Catovsky D, Else M, Richards S. Chlorambucil-still not bad: a reappraisal. Clin Lymphoma Myeloma Leuk. 2011; 11: S2-6.
15. Chatzikonstantinou T, Scarfò L, Minga E, et al. Therapeutic strategies and treatment sequencing in patients with chronic lymphocytic leukemia: An international study of ERIC, the European Research Initiative on CLL. HemaSphere. 2024; 8: e70004.
16. Shadman M. Diagnosis and treatment of chronic lymphocytic leukemia: a review. Jama. 2023; 329: 918-932.
17. Kueviakoe IM, Agbetiafa K, Padaro E, et al. Traitement de la leucémie lymphoïde chronique (LLC) au Togo. J Rech Sci L'Université Lomé. 2012; 14: 125-129.