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612.ACUTE LYMPHOBLASTIC LEUKEMIAS: CLINICAL AND EPIDEMIOLOGICAL

Real World Clinical Characteristics, Treatment Patterns and Outcomes of R/R B-Cell ALL Adult Patients in Latin America

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Introduction. Acute lymphoblastic leukemia (ALL) frequently affects mainly children and young adults. ALL has seen important progresses in diagnosis techniques and treatment approaches in the last decade. However, in some developing countries, there are inequalities in ALL management, such as heterogeneous access to diagnosis technologies (e.g., cytogenetic and molecular profiling) and access to target therapies treatments. To date, there is scarce data on those impacts in treatment patterns and real-world outcomes of adult relapsed/refractory (R/R) B-cell ALL (R/R ALL) patients in Latin America (LA). Therefore, this study aims to describe treatment patterns, clinical characteristics, and outcomes of R/R ALL adult patients treated in LA.

Methods. This was a retrospective multicenter non-interventional study to evaluate treatment patterns, clinical characteristics and outcomes conducted in Argentina, Brazil, and Colombia. The study included patients ≥ 18 years old at diagnosis with confirmed R/R ALL between January 1, 2015, to December 31, 2019 that received at least one line of treatment for R/R ALL. Data collected from medical records was considered for the analysis, which was descriptive in nature, as no hypothesis has been tested.

Results: A total of 71 patients diagnosed with R/R ALL were included in the study (23 from Argentina, 27 from Brazil, and 21 from Colombia). Table 1 shows the demographics and clinical characteristics. The median age at diagnosis was 31 years (Q1-Q3: 24.0-46.0), 56.3% were male, and 50% were White/Caucasian patients. At diagnosis, the most common comorbidities were diabetes, hypertension, gastrointestinal disease, and thyroid disease, with 11% each. At diagnosis, most patients presented with poor or intermediate cytogenetic risk prognosis, in 55.1% and 31.6%, respectively. Most of the patients presented with good performance status, 50.9% ECOG 0 and 36.8% ECOG 1. As for treatment patterns, patients received up to six treatment lines (LOT-1 to LOT-6), with a median of 2.0 LOTs (Q1-Q3: 1.5-3.0) within the R/R setting. Fifty-three (74.6%) out of the 71 patients enrolled in the study received two lines of R/R treatment (up to LOT-2), and 27 patients (38%) received 3 lines (up to LOT-3). The median treatment duration of LOTs were 3.4 months (Q1-Q3: 1.14 - 5.7), 1.4 months (Q1-Q3: 0.62 - 2.6) and 0.9 months (Q1-Q3: 0.4 - 2.1) for LOT-1, -2 and -3, respectively. The most frequently used treatment regimens at LOT-1 were the Hyper-CVAD (22.9%), BFM (20.0%) and GRAAL (15.7%). The most reported reasons for patients discontinuing their regimen in LOT-1 were progression of disease (37.5%), followed by adverse events (25%). For LOT-2 discontinuation, adverse events and/or toxicity (33.3%) were most frequently reported, followed by progression of the disease (25%). Of the total number of R/R ALL patients, 26 (36.6%) underwent stem cell transplantation (SCT), with a median time from diagnosis to transplantation of 9.6 months. All those patients (n=26) received allogeneic hematological SCT (100%), and haploidentical donors were most common (42.3%), followed by identical (matched) related (34.6%), mismatched unrelated donor (15.4%),

and identical (matched) unrelated donors (7.7%). For R/R ALL patients, the median overall survival (mOS) was 18.96 months, with a probability of survival of 66.6% at 1 year, 32.3% at 3 years, and 16.2% at 5 years. Philadelphia Chromosome (Ph) molecular results were reported in 53 patients: 38 (71.7%) were Ph- and 15 (28.3%) were Ph+. The mOS in Ph+ patients was 31.5 months, numerically longer than the 17.7 months seen in Ph- patients (p = 0.500); however, the Kaplan-Meiers crossed over and separation was not clearly evident within the follow-up period (Figure 1).

Conclusions: This study enabled a better understanding of R/R ALL in LA in the real-world. Data from this study demonstrate the high heterogenicity within first salvage (LOT-1) treatment patterns in R/R ALL, likely due to no established single standard of care in the region and highlights that only a fraction of the patients undergo SCT, which should be the treatment goal following induction therapy. In addition, our study reinforces already published data that overall survival on R/R ALL adult patients remain poor. Consistent guidelines and access to new treatments and are needed to remove inequalities in the management of ALL in LA.

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Table 1. Demographics and clinical characteristics

N (%)	71
Age at diagnosis, years	
Total available information, N	71
Mean (SD)	36.6 (15.5)
Median (Q1 - Q3)	31.0 (24.0 - 46.0)
Min - Max	8.0 - 77.0
Gender - N(%)	
Total available information, N	71
Male	40 (56.34%)
Female	31 (43.66%)
Race/Ethnicity - N(%)	
Total available information, N	66
American Indian	9 (13.64%)
Asian	0
Black or African American	4 (6.06%)
White or Caucasian	33 (50.0%)
Other	20 (30.3%)
Comorbidities at diagnosis, N(%)	
Total available information, N*	23
Cardiovascular disease	1 (2.78%)
Cerebrovascular disease	0
Chronic pulmonary disease	2 (5.56%)
Depression	1 (2.78%)
Diabetes	4 (11.11%)
Dyslipidemia	2 (5.56%)
Hypertension	4 (11.11%)
Hepatitis B	1 (2.78%)
Gastrointestinal disease	4 (11.11%)
Obesity	3 (8.33%)
Renal disease	1 (2.78%)
Thyroid disease	4 (11.11%)
Other	9 (25.0%)
*Unique patients with at least one comorbidity	
Eastern Cooperative Oncologic Group (ECOG) performance	
Total available information, N	57
0	29 (50.88%)
1	21 (36.84%)
2	7 (12.28%)
3	0
4	0
Cytogenetic risk, N(%)	
Total available information, N	48
Good prognosis	1 (2.04%)
Intermediate prognosis	15 (30.61%)
Poor prognosis	27 (55.1%)
Undetermined prognosis	6 (12.24%)
Number of Lots per patient	
Total available information, N	71
Mean (SD)	2.4 (1.3)
Median (Q1 - Q3)	2.0 (1.5 - 3.0)
Min - Max	1.0 - 7.0
Health Care Access - N(%)	
Total available information, N	71
Private	44 (61.97%)
Public	27 (38.03%)

Figure 1. Overall survival of R/R B-cell ALL patients according to Philadelphia chromosome expression (p = 0.500)

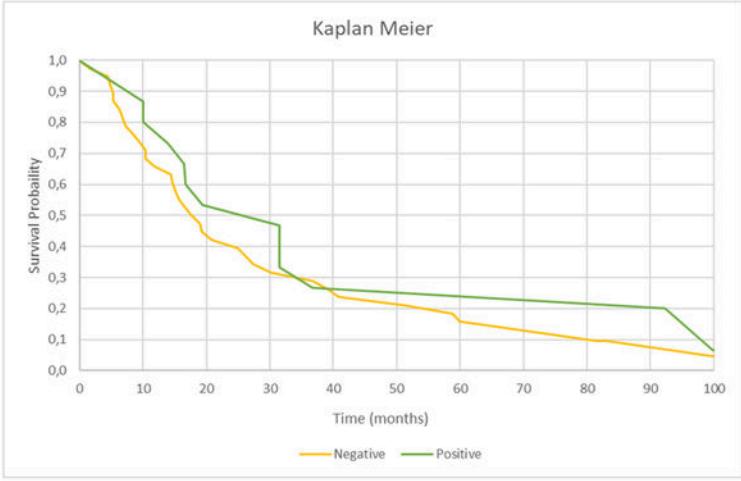

Figure 1

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