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DELAYING CHEMOTHERAPY IN DIFFUSE LARGE B-CELL LYMPHOMA HAS NO IMPACT IN OUTCOMES

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INTRODUCTION

Diffuse large B-cell lymphoma (DLBCL) is the most common type of non-Hodgkin's lymphoma. Standard first-line treatment consists of 6 cycles of 21-day R-CHOP. Longer time from diagnosis to treatment has been associated with shortened progression free survival (PFS) and overall survival (OS)[1]. Chemotherapy cycle delays are relatively common in patients with cancer[2]. Whether the delay in chemotherapy administration has any clinical implication has not been described.

AIM

To determine whether delaying chemotherapy has clinical implications.

METHODS

Design: retrospective cohort study.
Setting: data were collected from the database of a single referral center in Mexico City from 2017 to 2021.
Patients: adult patients (>18yo) with a diagnosis of DLBCL who had received 6 cycles of R-CHOP21 as first-line therapy.
Interventions: there were no interventions. We collected data such as chemotherapy dates, dose-adjustment, objective response rate (ORR) as assessed by PET scan and overall survival (OS). Delayed chemotherapy was defined as cycles longer than 28 days.
Main outcome measures: ORR evaluated according to Lugano criteria.

RESULTS

Eighty-five patients were included, the mean age was 62 years (SD 14.1).
A total of 510 cycles of chemotherapy were administered. 60% of the patients complied with the administration of chemotherapy in all cycles, a total of 40% were delayed in some of them.
Delays were more common in women (67.6%), age ≥ 60 years (67.6%), clinical stage III-IV (73.5%) and poor prognosis R-PI (58.8%) (see table 1).
The longest delay was observed between cycles 1 and 2 with a median of 24 days (Q_1-Q_3 21-32.3) and cycles 3-4 with a median of 23.5 days (Q_1-Q_3 21-29.8) p<0.0001.
The ORR was 85.9% and the complete response (CR) rate was 78.8% for the entire cohort. The probability of achieving a CR is the same in patients who have delayed dosing (p=0.621) (see figure 1).
Follow up of 49.3 months (Q_1-Q_3 25-67.9), 16.5% of the patients were dead. The 5-year OS was 77.39% for those who were not delayed compared to 84.21% for those who were delayed (p=0.700) (see figure 2).

Table 1. Baseline Characteristics of the Cohort of Patients

Variable, n (%)	Total *n*=85	No delay *n*=51 (60)	Delay *n*=34 (40)	p
Sex				0.061
Women	47 (55.3)	24 (47.1)	23 (67.6)	
Men	38 (44.7)	27 (52.9)	11 (32.4)	
Age in years	62 ± 14.1	60.5 ± 15	64.4 ± 12.5	0.203
< 60 years	34 (40)	23 (45.1)	11 (32.4)	
≥ 60 years	51 (60)	28 (54.9)	23 (67.6)	
ECOG				0.165
Favorable (0-1)	55 (64.7)	30(58.8)	25 (73.5)	
Unfavorable (2-4)	30 (35.3)	21 (41.2)	9 (26.5)	
Clinical stage				0.118
Early (I-II)	31 (36.5)	22 (43.1)	9 (26.5)	
Advanced (II-IV)	54 (63.5)	29 (56.9)	25 (73.5)	
Extranodal sites				0.586
< 2	52 (61.2)	30 (58.8)	22 (64.7)	
≥ 2	33 (38.8)	21 (41.2)	12 (35.3)	
LDH				0.286
≤ normal	46 (54.1)	30 (58.8)	16 (47.1)	
< normal	39 (45.9)	21 (41.2)	18 (52.9)	
R-IPI				0.360
Very good (0)	10 (11.8)	7 (13.7)	3 (8.8)	
Good (1-2)	33 (38.8)	22 (43.1)	11 (32.4)	
Poor (3-5)	42 (49.4)	22 (43.1)	20 (58.8)	
CNS-IPI				0.155
Low-risk (0-1)	28 (32.9)	20 (39.2)	8 (23.5)	
Intermediate-risk (2.3)	28 (32.9)	13 (25.5)	15 (44.1)	
High-risk (4-6)	29 (34.1)	18 (35.3)	11 (32.4)	
Treatment				0.078
R-CHOP	69 (81.2)	44 (86.3)	25 (73.5)	
R-CHOP like	13 (15.3)	7 (13.7)	6 (17.6)	
Other	3 (3.5)	0	3 (8.8)	
Response treatment				0.621
CR	67 (78.8)	42 (82.4)	25 (73.5)	
PR	6 (7.1)	3 (5.9)	3 (8.8)	
EE / P	12 (14.1)	6 (11.8)	6 (17.6)	
Radiotherapy				0.295
Yes	27 (31.8)	14 (27.5)	13 (38.2)	

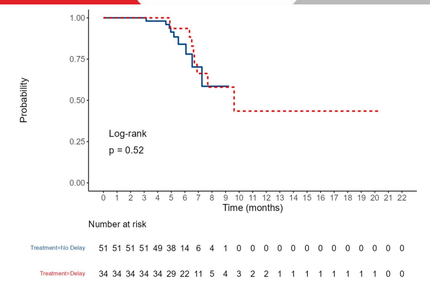


Figure 1. Kaplan-Meier time to complete response according to whether or not there was a delay in any treatment cycles.

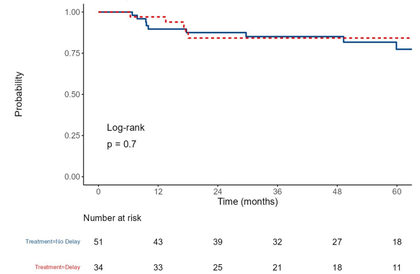


Figure 2. Kaplan-Meier overall survival according to whether or not there was a delay in any treatment cycles.

CONCLUSION

In situations where dose delay and dose reduction may minimize the effectiveness of the chemotherapy and lead to poorer clinical outcomes[2].
In this retrospective analysis, the ORR, CR rate and OS were not reduced by the delay in chemotherapy administration.
As a limitation of the study, we cannot describe the reasons for delays in treatment, this was not one of the objectives.
In conclusion, delays in chemotherapy cycles were relatively common. However, this did not have a clinical impact on ORR or OS.

REFERENCES

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CONTACT INFORMATION

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