ELSEVIER

Blood 142 (2023) 3352–3354

The 65th ASH Annual Meeting Abstracts

POSTER ABSTRACTS

652.MULTIPLE MYELOMA: CLINICAL AND EPIDEMIOLOGICAL

Survival of Patients with Multiple Myeloma Treated with Bortezomib-Based Triplets and Autologous Hematopoietic Stem Cell Transplant As First Line in Latin America

Camila Peña, MD[1], *Virginia Bove*[2,3], *Eloisa Riva*[4], *Patricio Duarte*[5], *Cesar Augusto Samanez-Figari, MD*[6], *Cristian M Seehaus, MD*[7], *Luz Tarin-Arzaga, MD*[8], *Seisha Alana Von Glasenapp, MD*[9], *Rodrigo Meneces Bustillo, MD*[10], *Jule F Vasquez, MD*[11], *Marcos Hernandez*[12], *Claudia Shanley, MD*[13], *Moisés Manuel Gallardo-Pérez, MDMSc*[14,15], *Guillermo José Ruiz-Arguelles, FRCP*[16,14], *Romina Mariano, MD*[17], *Virginia Gilli*[18], *David Israel Garrido, MD*[19], *Patricia Graffigna, MD*[20], *Natalia Paola Schutz, MD*[21], *Dorotea Fantl, MD*[22]

[1] Hospital Del Salvador, Santiago, Chile
[2] Hospital Central de las FF.AA., Mintevideo, Uruguay
[3] Centro de Asistencia de la Agrupación Médica de Pando, Montevideo, Uruguay
[4] Clinical Hospital Dr. Manuel Quintela De Clinicas, Montevideo, Uruguay
[5] CEMIC, Buenos Aires, Argentina
[6] AUNA, Lima, Peru
[7] Hospital Italiano de Buenos Aires, Buenos Aires, ARG
[8] HU UANL, Monterrey, MEX
[9] HCIPS, Asuncion, PRY
[10] Sanatorio Allende, Córdoba, Argentina
[11] Instituto Nacional de Enfermedades Neoplasicas, Lima, Peru
[12] Metropolitano del norte universidad de Carabobo, Caracas, VEN
[13] Hospital Británico Buenos Aires, Bueno Aires, Argentina
[14] Universidad Popular Autónoma del Estado de Puebla, Puebla, Mexico
[15] Investigación Clínica, Centro de Hematología y Medicina Interna, Clínica Ruiz, Puebla, MEX
[16] Centro De Hematologia Medicina Interna, Puebla, Mexico
[17] HOSIPTAL SAN MARTIN, Buenos Aires, ARG
[18] Hospital San Martín, Parana, Argentina
[19] Hospital de Clinicas, Montevideo, URY
[20] Hospital del Salvador, Santiago, CHL
[21] Hematology, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina
[22] Hospital Italiano de Buenos Aires, Buenos Aires, ARG

Background
In transplant-eligible newly diagnosed multiple myeloma (NDMM), triplet combinations including proteasome-inhibitors and immunomodulators are the backbone of induction therapy before autologous stem cell transplant (ASCT). Post-ASCT maintenance with lenalidomide is the standard of care. This approach yields deep responses and long overall survival.
In Latin America (LATAM) there is scarce data about the outcome of bortezomib-based triplets and ASCT.
The aim of this study was to evaluate overall survival (OS) in Latin American transplant-eligible NDMM patients induced with bortezomib-based triplets and ASCT.
Methods
Retrospective international multicenter cohort study. Patients older than 18 years with MM, who received bortezomib-based triplets followed by ASCT as first line, between 2010 and 2022 were analyzed.
Data were collected from clinical records in a standardized report form. We analyzed clinical characteristics at diagnosis and frontline therapy outcomes. Descriptive statistics were performed. Comparisons of characteristics between groups were made using the Chi-square test, Student´s T-test and ANOVA, as appropriate. Survival analysis was performed using Kaplan-Meier curves, comparisons between groups by Log Rank method, and calculations of the risk relationships by Cox regression. Statistical analysis was performed by using IBM SPSS version 25.0.

Results

A total of 279 patients with NDMM were included, 124 from Argentina, 20 from Chile, 30 from Mexico, 20 from Paraguay, 43 from Peru, 33 from Uruguay, and 9 from Venezuela. Median age was 57 years (range 29-75) with a male predominance (54.8%). Most patients (58%) were treated in private centers. 56.1% were IgG subtype, 24.8% IgA and 17.3% light chain MM. According to the ISS, 69.2% were classified as ISS II or III. Bone disease was the most frequent myeloma-defining events (75.9%), followed by anemia (61.4%), renal failure (24.2%), and hypercalcemia (20.1%). Fluorescence in situ hybridation (FISH) analysis was performed in 53.4% of patients (only 41% with plasma cell sorting), del17p was the most frequent anomaly found (17.4%), followed by t(4;14) (6%), and t(14;16) (2%).

The most frequently used induction regimen was cyclophosphamide-bortezomib-dexamethasone (CyBorD) (38.7%), followed by bortezomib-thalidomide-dexamethasone (VTD) (33.7%), and bortezomib-lenalidomide-dexamethasone (VRD) (27.6%). Very good partial remission (VGPR) or better was achieved in 88.3% for VRD, 81.9% for VTD, and 76.8% for CyBorD (p=0.138). Median time from diagnosis to ASCT was 261.5 days. Only 7 patients received tandem ASCT as first-line consolidation. Maintenance treatment was administered to 88.2% of patients and was based on lenalidomide, thalidomide, bortezomib, and lenalidomide+bortezomib in 67.9%, 16.3%, 8.9% and 3.3%, respectively. Treatments and responses are shown in detail in Table 1.

With a median follow-up of 45 months (range 7-140), median progression-free survival (PFS) was 33 months (95% CI, 26.7 - 39.3). Median PFS according to treatment was 21 months (95% CI, 14.3 - 27.7) for VRD, 35 months (95% CI, 22.2 - 47.8) for VTD, and 36 months (95% CI, 28 - 44) for CyBorD, p=0.004. Median OS of the whole cohort was not reached (NR), and 86% at 45 months; 75 months for VRD (95% CI, 44 - 106), and NR for CyBorD and VTD (p=0.284) (Figure 1).

In the multivariate analysis hypercalcemia (p=0.01) and extramedullary disease (p=0.03) were the only independent risk factors.

Discussion

FISH was performed only in half of our patients, and the majority without plasma cell sorting. The main used regimen was CyBorD. Although better PFS was obtained with CyBorD, no significant differences in responses or OS were found between VRD, VTD or CyBorD. The reason why VRD PFS and OS were lower merits further study. We report a high rate of maintenance treatment.

Disclosures Peña: *Janssen:* Other: Congress Travel expenses.

Table 1. Baseline characteristics of patients, treatment and response (n=279)

Characteristic	Total (n=279)(%)	CyBorD (n=108)(%)	VTd (n=94) (%)	VRd (n=77) (%)	P value
Centers					**<0.001**
Public setting	117 (41.9)	46 (42.6)	59 (62.8)	12 (15.6)	
Private setting	162 (58.1)	62 (57.4)	35 (37.2)	65 (84.4)	
Median age, years (range)	57 (29-75)	59 (31-75)	56 (29-66)	57 (29-71)	NA
Sex, male	153 (54.8)	59 (54.6)	53 (56.4)	41 (53.2)	0.918
Subtype no IgG	123 (44)	56 (51.9)	37 (39.4)	30 (39)	0.116
ISS (n=266)					
Stage 1	82 (30.8)	24 (22.2)	31 (33)	27 (35.1)	0.108
Stage 2	92 (34.6)	42 (38.9)	26 (27.7)	24 (31.2)	0.220
Stage 3	92 (34.6)	40 (37)	28 (29.8)	24 (31.2)	0.509
R-ISS (n=175)					
Stage 1	44 (25.1)	17 (15.7)	12 (12.8)	15 (19.5)	0.488
Stage 2	81 (46.3)	35 (32.4)	19 (20.2)	27 (35.1)	0.064
Stage 3	50 (28.6)	30 (27.8)	5 (5.3)	15 (19.5)	**< 0.001**
Elevated LDH (n=263)	69 (26.2)	28 (27.7)	23 (26.7)	18 (23.7)	0.826
Clinical features					
Hemoglobin <10g/dl (n=277)	170 (61.4)	75 (70.1)	53 (56.4)	42 (55.3)	0.060
Creatinine ≥2mg/dl (n=273)	66 (24.2)	39 (36.4)	17 (18.7)	11 (14.5)	**0.001**
Dialysis	16 (5.7)	12 (11.1)	3 (3.2)	1 (1.3)	**0.008**
Calcium >11mg/dl (n=273)	55 (20.1)	26 (24.3)	17 (18.9)	12 (15.8)	0.344
Osteolytic lesions (n=278)	211 (75.9)	80 (74.8)	68 (72.3)	63 (81.8)	0.333
Extramedullary disease	32 (11.5)	9 (8.3)	17 (18.1)	6 (7.8)	**0.047**
High-risk cytogenetic (n=149)					
Del17p, t(4;14), t(14;16)	30 (10.8)	11 (16.4)	11 (39.3)	8 (14.8)	**0.019**
Response to treatment					
CR	100 (35.8)	35 (32.4)	39 (41.5)	26 (33.8)	0.368
VGPR	128 (45.9)	48 (44.4)	38 (40.4)	42 (54.5)	0.170
PR	38 (13.6)	21 (19.4)	11 (11.7)	6 (7.8)	0.060
SD+PD	13 (4.7)	4 (3.7)	6 (6.4)	3 (3.9)	0.621
CR+VGPR	228 (81.7)	83 (76.9)	77 (81.9)	68 (88.3)	0.138
Maintenance	246 (88.2)	89 (82.4)	86 (91.5)	71 (92.2)	0.060
Tandem ASCT	7 (2.5)	3 (2.8)	1 (1.1)	3 (3.9)	0.487

Abbreviations: ISS, International Staging System; R-ISS, Revised-ISS; LDH, lactate dehydrogenase; FISH, fluorescence in situ hybridization; CyBorD, cyclophosphamide, bortezomib, dexamethasone; VTd, bortezomib, thalidomide, dexamethasone; VRd, bortezomib, lenalidomide, dexamethasone; CR, Complete response; VGPR, Very good partial remission; PR, Partial remission; SD, Stable disease; PD, Progressive disease; ASCT, autologous stem cell transplant

Figure 1. Kaplan-Meier plot comparing overall survival between patients treated with CyBorD, VTD, and VRD. (n=279)

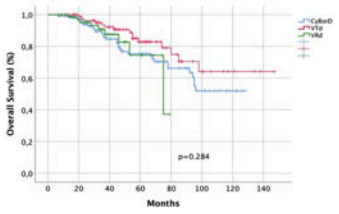

Figure 1

https://doi.org/10.1182/blood-2023-185240