HSD35

Treatment patterns in the management of multiple myeloma in a Colombian HMO during 2015-2023: a Real-World Data study

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BACKGROUND

- Multiple myeloma (MM), characterized by clonal plasma cell proliferation in the bone marrow, is the second most common hematologic malignancy[1].
- The objectives in managing MM focus on symptomatic relief, eliminating of myeloma cells from the bone marrow, reducing the amount of M protein, improving quality of life, generating the longest possible period of response, and enhancing overall survival rates[2].
- The main treatments of MM are composed by immunomodulatory drugs (such as thalidomide, lenalidomide, and pomalidomide), proteasome inhibitors (bortezomib, carfilzomib, and ixazomib), monoclonal antibodies (elotuzumab, daratumumab and isatuximab), and bispecific antibodies (teclistamab, talquetamab, and elranatamab) which depend on transplant eligibility[3].
- MM is still considered an incurable disease. Although there are several therapies that have led to longer remission periods, patients develop relapse and/or become refractory to treatment needing new approaches[4-5].
- In Colombia, there are no available studies on the treatment patterns used to manage MM.

OBJECTIVE

- To identify treatment patterns in the management of multiple myeloma (MM) in a Colombian Health Maintenance Organization (HMO) between 2015-2023.

METHODS

- A retrospective, descriptive cohort study of MM patients from 2015 to 2023 was conducted.
- Patients were identified based on the C90.0 code for MM.
- The index date was when MM was diagnosed, and patients were followed until death, insurance discontinuation, or December 31th, 2023, whichever occurred first.
- Demographics, treatment, and medical care were assessed at the index and during follow-up using available databases, including but not limited to: EHR, claims records, laboratory, diagnostic imaging records, and clinical records.
- According to International Myeloma Working Group, refractory myeloma is a disease that is non-response to therapy or progresses within 60 days of the last line, and relapsed myeloma is previously treated myeloma that has progressed after prior therapy and requires new therapy[6]. In this study, a patient that failed the first line of treatment was considered relapsed or refractory MM.
- Patients who achieved strict complete response, complete response, very good partial response or partial response were classified as responders.
- The frequency of treatments was presented by line of treatment as well as the percentage of responders.

RESULTS

- N=700 patients were included. At diagnosis, approximately 50.5% of these patients presented arterial hypertension, with a median age of 64 years (IQR 16, Q1-Q3: 55-71) and more than half (51.3%) of the patients were at Stage III (A or B) of the Durie-Salmon classification (Table 1).
- At the last contact, 65% were alive, 51.3% had registered a complete response, and 23.1% had progressed.

RESULTS (cont)

- The most common first-line (1L) treatment was cyclophosphamide/bortezomib/dexamethasone (44.8%), where 85.0% were responders and 13.4% progressed. The second most common treatment was bortezomib/lenolidomide/dexamethasone (16.7%), with 91.4% of these patients responding (Figure 1).
- At 2L (513 patients), autologous transplant was the preferred option (n=229, 44.6%) where majority of patients (94.8%) were responders and 5.2% progressed. The following treatments most frequent were Bortezomib/lenolidomide/dexamethasone treatment scheme (8.6%), bortezomid/dexamethasone (6.2%), and daratumumab/lenalidomide/ dexamethasone (6.0%) were with progression in 18.2%, 12.5%, and 16.13%, respectively.
- At 3L (271 patients), autologous transplant (18.5%), bortezomib/lenolidomide/dexamethasone (12.5%), and daratumumab/bortezomib/dexamethasone (9.9%) were the most common treatment strategies.
- The proportion of patients with later line data was small (4L = 18.4%, 5L = 8%, 6L = 2.7%, and 7L = 0.6%).
- The regimen bortezomib/lenolidomide/dexamethasone was frequently used in 1L, 2L, and 3L. Daratumumab increased its used after 2L.
- 297 patients (42.4%) were treated with autologous transplant, mainly in 2L (77% of patients) (Figure 1).
- Although there was a 66% response rate at 4L, this rate was decreasing with each subsequent line of treatment (Figure 2).
- Bortezomib/cyclophosphamide/dexamethasone (n=170) and bortezomib/lenalidomide/dexamethasone (n=44), and bortezomib/dexamethasone (n=37) were the most common regimens at 1L for autologous transplant.
- 127 patients (18.14%) had triple-class refractory MM. The most frequent treatment after triple refractory were daratumumab/bortezomib/dexamethasone (14.2%), daratumumab/carfilzomib/dexamethasone (12.6%), daratumumab/dexamethasone (11.0%), and daratumumab/lenalidomide/dexamethasone (10.2%) (Table 4).

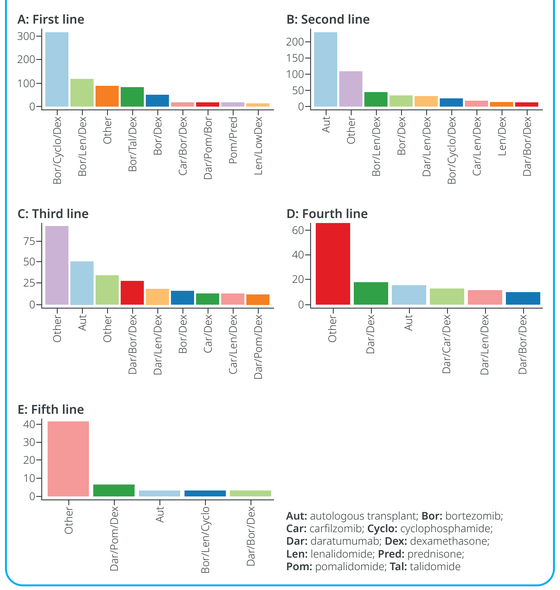
Table 1. Clinical and demographic characteristics of patients included in the study

Caracteristics	(n=700, %)
Women (%)	367 (52.4)
Age (mean (SD))	62.9 (11.3)
Raze	
African american	12 (1.7)
White	65 (9.3)
Indigenous	1 (0.1)
Mestizoes	466 (66.6)
Mulatto	1 (0.1)
Raizales	1 (0.1)
Zambaigo	1 (0.1)
Non information	153 (21.9)
International Staging System (ISS) Stage	
I	98 (14.0)
II	257 (36.7)
III	345 (49.3)
Durie Salmon Stage	
IA	78 (11.1)
IB	7 (1.0)
IIA	193 (27.6)
IIB	63 (9.0)
IIIA	248 (35.4)
IIIB	111 (15.9)

RESULTS (cont)

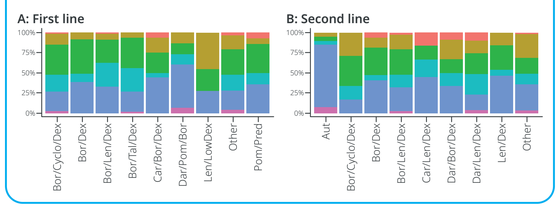
ECOG	
0	74 (10.6)
1	356 (50.9)
2	210 (30.0)
3	54 (7.7)
4	6 (0.9)
Skeletal-related events	**578 (82.6)**
Bone fractures	342 (48.8)
Hypercalcemia	183 (26.2)
Spinal cord compression	135 (19.3)
Radiation therapy	82 (11.7)
Dialysis at diagnosis	66 (9.4)
Plasmapheresis	13 (1.90)
Spinal cord decompression surgery	48 (6.9)

Figure 1. Treatment patterns of Colombian patients with MM diagnosed between 2015 to 2023



Aut: autologous transplant; **Bor:** bortezomib; **Car:** carfilzomib; **Cyclo:** cyclophosphamide; **Dar:** daratumumab; **Dex:** dexamethasone; **Len:** lenalidomide; **Pred:** prednisone; **Pom:** pomalidomide; **Tal:** talidomide

Figure 2. Response by treatment Line (per IMWG Criteria) for patients initiating treatment in 2015 to 2023



RESULTS (cont)

Figure 2. Cont.

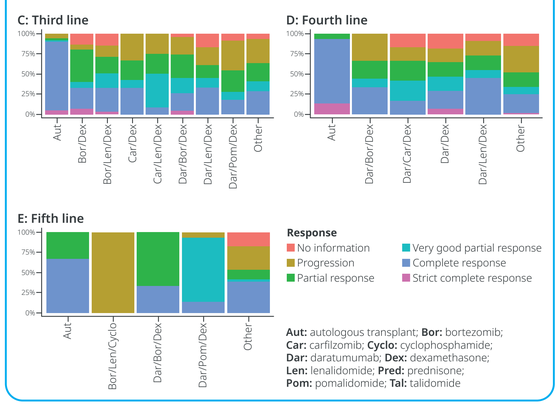


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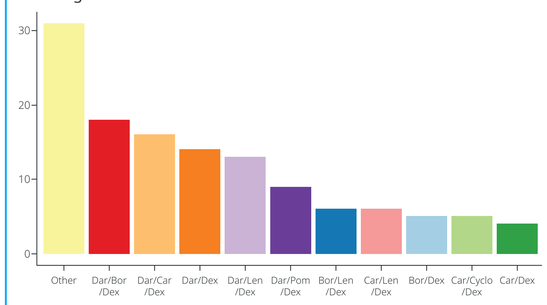
Figure 3. Treatment patterns of Colombian patients with triple refractory MM diagnosed between 2015 to 2023



Bor: bortezomib; **Car:** carfilzomib; **Cyclo:** cyclophosphamide; **Dar:** daratumumab; **Dex:** dexamethasone; **Len:** lenalidomide; **Pom:** pomalidomide

CONCLUSION

- Patients were in later stages of the disease according to Durie-Salmon, most of them achieved complete response at final contact, and cyclophosphamide/bortezomib/dexamethasone was the preferred treatment for first line and autologous transplant for the second and third lines.

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