EARLY RELAPSE AFTER AUTOLOGOUS STEM CELL TRANSPLANT IN MULTIPLE MYELOMA SINGLE CENTER EXPERIENCE IN SALAMANCA, SPAIN

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Background

High-dose melphalan, followed by autologous stem cell transplant (ASCT), has been the first-line standard of care for patients with multiple myeloma (MM) because of the longer progression-free survival (PFS) compared to chemotherapy alone. This benefit has been sustained when novel agent-based combinations have been incorporated to the MM treatment landscape. However, there is a subgroup of patients with a PFS after ASCT shorter than expected and our study focused on this population.

Objective

Analyze the baseline characteristics, cytogenetic abnormalities, response, and outcomes of patients who relapse early, within 24 months post-ASCT as part of first-line therapy.

Materials & Methods

Retrospective study. We performed a systematic review of our transplant-eligible MM patients until January 2021, identifying those who relapsed within 2 years after ASCT.

Results

We identified 19 out of 67 patients (28%) managed and followed in our center who early relapsed after ASCT. Clinical characteristics are resumed in Table 1. Most of them, 16/19 (84%), had ISS 2 or 3. Ten out of these 19 patients (53%) presented any high-risk cytogenetic abnormalities (HRCA), and 5 of them, more than 1 CA was identified.

In the early relapse subgroup, only 6/19 pts. (31,5%) were in ≥CR before ASCT vs 25/48 (52%) patients in the no early relapse and ASCT upgraded the response to ≥CR in 1 pts and 6 pts in the early and non early relapse, respectively. After a median time of follow-up of 38 months (range 18–66 months), only 8/19 (42%) were alive in the early relapse subgroup vs 41/48 (85,4%) in the non early relapse subgroup. In the univariate analysis for PFS in our series, early relapse emerged as a strong prognostic factor (Figure 1 median PFS of 11 months vs. median not reached, p=0.00), together with ISS(R) 2-3 (1: 40 months vs. 2–3: 19.5 months, p=0.017), presence of HRCA (Image 2) (HRCA: 18 months vs. non-HRCA: 35 months, p=0.026), and the presence of more than 1 genetic abnormality (≤1: 36 months vs. >1: 9 months, p=0.000).

Table1

Clinical Characteristics	Early Relapse (n=19)		Non Early Relapse (n=48)		Total (n=67)	
	n	%	n	%	n	%
ISS (R)						
Stage I	3	15,79%	17	35,42%	20	29,85%
Stage II	8	42,11%	15	31,25%	23	34,33%
Stage III	8	42,11%	16	33,33%	24	35,82%
Cytogenetics						
Gain 1q	2	10,53%	9	18,75%	11	16,42%
t(4;14)	6	31,58%	4	8,33%	10	14,93%
t(14;16)	0	0,00%	1	2,08%	1	1,49%
del (17p)	3	15,79%	7	14,58%	10	14,93%
Non HRCA	7	36,84%	9	18,75%	16	23,88%
>1 CA	5	26,32%	7	14,58%	12	17,91%
No mutation	6	31,58%	26	54,17%	32	47,76%
Disease Status at ASCT						
CRe	2	10,53%	14	29,17%	16	23,88%
CR	4	21,05%	11	22,92%	15	22,39%
VGPR	7	36,84%	7	14,58%	14	20,90%
RP	0	0,00%	13	27,08%	13	19,40%
Estable Disease	4	21,05%	2	4,17%	6	8,96%
Progression	2	10,53%	1	2,08%	3	4,48%

Image 1

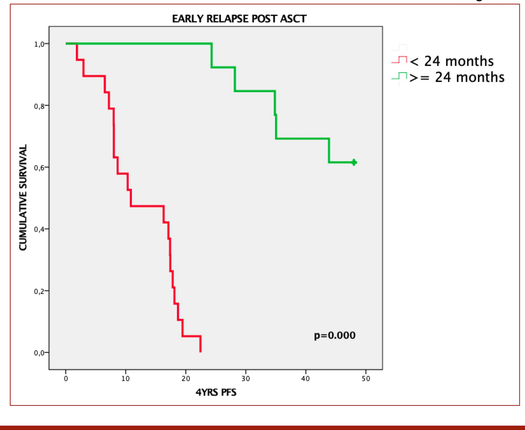
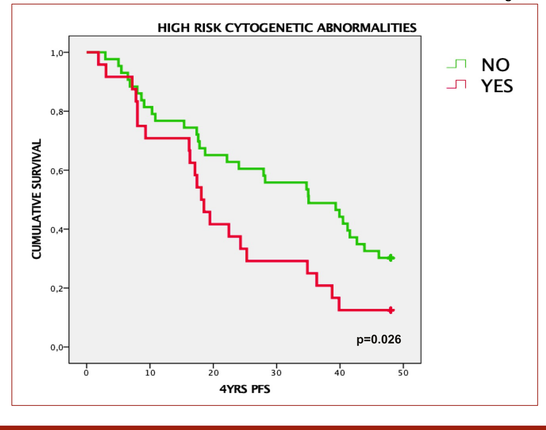


Image 2



Conclusion

Our data are similar to data reported by other groups, confirming that early relapse after ASCT is an independent risk factor for poor outcomes. Although most of these patients had advanced ISS and/or HRCA, there is a subgroup of patients who would require further characterization to unravel the reason for early relapse and the prioritization of new or more aggressive therapeutic approaches to improve PFS is necessary

References

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