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906.OUTCOMES RESEARCH-MYELOID MALIGNANCIES

Assessment of Incidence of Distress and Utilization of Supportive Care Services in Multiple Myeloma Patients, a Retrospective Single Center Experience

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Introduction:
Multiple myeloma (MM) is the second most common hematological malignancy. Current literature represents substantial underutilization of guideline-recommended supportive services (SS) in MM patients. Earlier studies have shown that most patients with MM have focal osseous lesions leading to skeletal-related events, fractures, pain, and debility. These events may negatively affect the treatment course and result in poor quality of life. Recent NCCN and ASCO guidelines recommend utilization of SS in all patients by early integration of cancer care for symptom control while being treated for primary malignancy. We evaluated the level of distress in patients (pts), SS utilization, ED visits, and hospitalization in pts with MM.

Methods:
We included adult patients (≥18 years) with newly diagnosed or relapsed/refractory MM at Levine Cancer Institute who had completed an electronic distress survey (EDS) within three months of diagnosis or relapse. Amyloidosis and plasma cell leukemia diagnoses were excluded. The EDS includes questions related to sociodemographic, patient-reported outcomes (PROs): distress level, physical symptoms (scale 0 - 10), screening for depression (PHQ-2, scale 0 - 6), anxiety (GAD-2, scale 0 - 6),Utilization of at least one SS (social work, palliative medicine, psych-oncology, cancer rehab, integrative medicine, and nutrition) within 6 months of EDS and emergency department visits/hospitalizations within 1 year of EDS were collected, retrospectively, from the electronic medical record. The PROs were summarized overall and compared among three distress groups [Distress score (DS) <4, 4-6, ≥7] with Wilcoxon rank sum tests for the EDS symptom scores and Fisher's exact tests for other categorical endpoints.

Results:
541 MM pts were identified with an EDS within 3 months of diagnosis or relapse (assessment date range: January 2017 - May 2022), with 71.5% of those occurring near diagnosis, and 28.5% occurring around relapse. The mean age was 64.9 years, 58.6% were male, and additional patient characteristics are presented in Table 1. There were 33.8% (n=183) pts with DS<4, 30.9% (167) with DS 4-6, and 35.3% (191) with DS of ≥7. The highest scoring EDS symptoms were pain (mean score 4.7), fatigue (5.1) and sleep disturbance (3.6). Broadly, patients with higher distress scores had higher symptom scores ($p<0.05$ for all symptoms). There were 77.6% (420) pts with anxiety GAD-2 score of 0-2, 12.9% (70) pts with a score of 3-4 and 9.4% (51) pts with a score of 5-6. Similarly, for depression, 76.9% (416) pts reported a PHQ-2 score of 0-2, 15% (81) with a score of 3-4, and 8.1% (44) with a score of 5-6. For anxiety and depression, patients with higher DS had higher depression and anxiety screening scores ($p<0.001$), as shown in Table 2.
64.3% (348) pts utilized at least one SS within six months of their initial EDS assessment. The rate of utilization of at least one SS increased with DS (49.2% in DS <4, 67.1% in DS 4-6, and 76.7% in DS ≥7; p value<0.001). Numerically, more patients with high distress had at least one ED visit within a year of EDS (25.7% DS <4, 33.5% DS 4-6, 36.1% DS ≥7, $p = 0.08$). There

was no significant difference in hospitalization within 1 year between the DS groups. There were 147 (36.8%) pts with high-risk cytogenetics, of which 43.5% had a distress score of ≥7. The rate of utilization of SS, ED visits, and hospitalizations was numerically higher in pts with newly diagnosed MM (68.5%, 34.4%, 63.1%, respectively), as compared to pts with RRMM (64.3%, 25.3%, 48.7%).

Conclusion:

The disease-specific symptoms predict clinically significant DS >4 on EDS. There were about 20% of pts with screening score >2 for anxiety (GAD-2) & depression (PHQ-2) that may warrant further exploration regarding the detail and nature of symptoms related to the diagnosis. There was a higher rate of utilization of SS and ED visits in pts with higher DS. Given these findings, there is a need to identify the optimal healthcare pathways for better utilization & incorporation of these EDS and PROs in the clinical care of distressed patients. Our study indicates that more work is needed to align needs with resources in order to optimize quality of life and disease outcomes for our pts.

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Table 1:	Distress <4 N=183	Distress 4-6 N=167	Distress ≥7 N=191	Total N=541
Age at EDS, years				
Mean (SD)	65.4 (10.4)	65.2 (11.1)	64.2 (10.7)	64.9 (10.7)
Timing of EDS Assessment, n (%)				
Diagnosis	125 (68.3%)	119 (71.3%)	143 (74.9%)	387 (71.5%)
Relapse	58 (31.7%)	48 (28.7%)	48 (25.1%)	154 (28.5%)
Gender, n (%)				
Male	110 (60.1%)	98 (58.7%)	109 (57.1%)	317 (58.6%)
Female	73 (39.9%)	69 (41.3%)	82 (42.9%)	224 (41.4%)
Race, n (%)				
White	128 (70.0%)	121 (72.5%)	123 (64.4%)	372 (68.8%)
Black	51 (27.9%)	41 (24.6%)	63 (33.0%)	155 (28.7%)
Other/Unknown	4 (2.2%)	5 (3.0%)	5 (2.6%)	14 (2.6%)
Ethnicity, n (%)				
Non-Hispanic	175 (95.6%)	160 (95.8%)	179 (93.7%)	514 (95.0%)
Hispanic	3 (1.6%)	2 (1.2%)	7 (3.7%)	12 (2.2%)
Patient Declined	5 (2.7%)	5 (3.0%)	5 (2.6%)	15 (2.8%)
High Risk Cytogenetics*, n (%)	22 (15.8%)	18 (14.8%)	24 (17.4%)	64 (16.0%)
High Risk Cytogenetics* (including 1q21), n (%)	46 (33.1%)	41 (33.6%)	60 (43.5%)	147 (36.8%)

*High Risk defined as: deletion 17p, t(4;14), t(14;16); cytogenetics information available for n=399 subjects (CG within 6 months of diagnosis or relapse as applicable)

Table 2:	**Distress <4 N=183**	**Distress 4-6 N=167**	**Distress ≥7 N=191**	***p-value****	**Total N=541**
EDS Symptoms, mean (SD)					
Pain	2.5 (2.5)	4.3 (2.5)	7.2 (2.7)	*<.001*	***4.7 (3.2)***
Fatigue	3.1 (2.5)	5.3 (2.3)	6.9 (2.4)	*<.001*	***5.1 (2.9)***
Nausea	0.3 (1.0)	0.8 (1.8)	1.8 (2.8)	*<.001*	***1.0 (2.1)***
Sleep	2.1 (2.4)	3.5 (2.7)	5.2 (3.3)	*<.001*	***3.6 (3.1)***
Diarrhea/constipation	1.2 (2.0)	2.8 (3.0)	3.6 (3.3)	*<.001*	***2.5 (3.0)***
Sexual concerns	1.8 (3.0)	2.5 (3.3)	3.6 (3.9)	*<.001*	***2.6 (3.5)***
Swelling	1.1 (1.9)	1.8 (2.8)	2.0 (3.0)	*.031*	***1.6 (2.6)***
Tingling	1.7 (2.4)	2.6 (2.9)	3.2 (3.5)	*<.001*	***2.5 (3.0)***
Eating/swallowing	0.5 (1.3)	1.4 (2.3)	2.1 (3.1)	*<.001*	***1.3 (2.4)***
Memory/concentration	1.2 (2.0)	2.2 (2.3)	3.2 (3.1)	*<.001*	***2.2 (2.7)***
Communication	0.4 (1.2)	1.1 (1.9)	1.8 (2.7)	*<.001*	***1.1 (2.1)***
Anxiety (GAD-2), n (%)					
0-2	171 (93.4%)	139 (83.2%)	110 (57.6%)	*<.001*	***420 (77.6%)***
3-4	9 (4.9%)	21 (12.6%)	40 (20.9%)		***70 (12.9%)***
5-6	3 (1.6%)	7 (4.2%)	41 (21.5%)		***51 (9.4%)***
Depression (PHQ-2), n (%)					
0-2	176 (96.2%)	139 (83.2%)	101 (52.9%)	*<.001*	***416 (76.9%)***
3-4	4 (2.2%)	24 (14.4%)	53 (27.8%)		***81 (15.0%)***
5-6	3 (1.6%)	4 (2.4%)	37 (19.4%)		***44 (8.1%)***
Utilization of Supportive Services**	90 (49.2%)	112 (67.1%)	146 (76.4%)	*<.001*	***348 (64.3%)***
ED visits†					
>=1, n (%)	47 (25.7%)	56 (33.5%)	69 (36.1%)	*.078*	***172 (31.8%)***
Hospitalizations†					
>=1, n (%)	100 (54.6%)	101 (60.5%)	118 (61.8%)	*.333*	***319 (59.0%)***

Figure 1

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