Letter to the Editor

Gender, age and diagnosis effect on self-perceived pain in hematological patients: retrospective analysis of two case series

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We have read with great interest the paper by Ahmed and colleagues (1), entitled "Does gender affect self-perceived pain in cancer patients? -A meta-analysis". The authors illustrated the results of a literature meta-analysis of papers reporting on the effect of gender on pain perception in cancer patients; the results were consistent with the lack of an effect of gender on pain intensity, as perceived by patients affected by cancer; nevertheless, in 4 out of the 15 cohorts included in the meta-analysis, mean pain severity was reported as significantly different in one gender group (females in 3 and males in 1 cohort). The results of the paper by Ahmed (1) are similar to what emerged from previous meta-analysis, as stated by the authors (2). Prompted by this paper, we would like to provide some data from our personal experience on patients affected by hematological disease. We extracted data from two different data sets: (I) patients managed by our Home Care (HC) Unit for hematological patients; (II) patients undergoing hemopoietic stem cell transplantation (SCT) for hematological disease in our Bone Marrow Transplantation Unit and in the other Transplantation Units of the Rome Transplant Network. For the two cohorts, pain intensity data were collected at the entry and during follow up in the context of a comprehensive evaluation of symptoms burden and quality of life (QoL) during the daily clinical practice; obtained data were integrated with the other clinical information in the patient medical record. Ethical committee authorization and patient written consent for use in daily clinical practice of standardized patient-reported outcome instruments was obtained.

Home care hematological patients

From September 2011 and February 2016, 130 patients (72 female) were admitted in our HC service; at admission median age was 81.5 years (range, 42.5–99.6 years); diagnosis data are reported in *Table 1*. In this cohort, QoL was measured with MDASI and pain intensity at admission were extracted from MDASI and reported as a 0–10 score (0 no pain, 10 worst pain). Any-grade pain, moderate-to-severe pain and severe pain were reported in 95 (73.1%), 70 (53.8%) and 28 (21.5%) patients, respectively. In univariate analysis, mean pain score at admission was higher among females, older patients and patients affected by multiple myeloma, chronic myeloproliferative neoplasm, anemia in solid cancer and non-neoplastic anemia (see *Table 1*). However, in multivariate analysis, only diagnosis maintained a statistically significant correlation with pain severity (see *Table 1*).

Patients undergoing hematopoietic SCT

One hundred forty-five transplant recipients (69 female) with completed QoL data at admission (before starting

Table 1 Anagraphic, disease and pain data in the two cohorts

Characteristics	Home care cohort				Transplant cohort			
	n=130	Pain score [0–10]	OR (range)	P value	n=145	Pain score [0–100]	OR (range)	P value
Gender								
Female	72	4.5			69	21.0		
Male	58	3.2	0.663 (0.315–1.397)	0.280	76	15.6	0.930 (0.477–1.181)	0.832
Age								
Median (years)	81.5				56.6			
≤ median		3.5				21.0		
> median		4.3	1.067 (0.482–2.359)	0.873		15.0	0.607 (0.303–1.216)	0.159
Diagnosis								
Non-neoplastic anemia	23	4.8						
Anemia in solid cancer	8	3.6						
AML/ALL	34	2.7			6	31.0		
LYM	14	3.5			58	16.0		
MDS	29	4.2						
MM	11	4.6			79	19.0		
CMPN	11	4.8						
Amiloidosis					2	33.0		
Low pain risk			0.339 (0.150–0.768)	0.010			0.480 (0.236–0.974)	0.042

AML, acute myeloid leukemia; ALL, acute lymphoblastic leukemia; LYM, lymphoma; MDS, myelodysplastic syndromes; MM, multiple myeloma; CMPN, chronic myeloproliferative neoplasm.

chemotherapy conditioning for transplantation) were included in the present analysis; transplants were performed from January 2016 and January 2018; median age was 56.6 years (range, 19.6–69.2 years); diagnosis data are reported in *Table 1*. QoL was measured with EORTC QLQ C30 questionnaire; pain score was derived from pain domain (pain intensity + pain interference) and reported as a 0–100 score (0 no pain, 100 worst pain). Any-grade pain, moderate-to-severe pain and severe pain were reported in 78 (53.8%), 15 (10.3%) and 3 (2.1%) patients, respectively. In univariate analysis, mean pain score was higher among females; on the contrary, it was lower among patients affected by lymphoma (in comparison with other diagnosis) and older patients. Again, in multivariate analysis, only diagnosis maintained a statistically significant correlation with pain severity (see *Table 1*).

Final suggestions

The analysis of these two cohorts showed that diagnosis, more than gender and age, impacts on patient-reported pain. Nevertheless, our model suggested that both gender and age could have a mild influence on pain perception (especially gender for HC cohort and age for SCT cohort). Worst pain was reported among patients affected by multiple myeloma (in both cohorts) and myelodysplastic syndromes, chronic myeloproliferative neoplasms and non-neoplastic anemia (in the HC cohort). In multiple myeloma, high pain burden is sadly expected due to both disease (osteolysis) and treatment (iatrogenic neuropathy) (3,4). For the mainly chronic/non-aggressive conditions associated with higher pain burden in the HC cohort, we could advocate the important role of comorbidity (such as arthrosis) on inducing pain. Secondarily, the present analysis confirms the high frequency of pain syndromes among patients affected by hematological diseases, as previously reported (5-10), but also the differences existing between severity of pain among patients with present disease (HC cohort) and patients with controlled disease (SCT cohort). Prospective focused studies are required to give an answer to the several questions arising from our preliminary analysis. We strongly trust the hematological patients should be considered a rich terrain for further research on pain, as well as the other QoL issues.

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None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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