Clinical Diversity of Multiple Myeloma Over Time, From First Presentation to Diagnosis in Kurdistan Region - Iraq

soho22 TENTH ANNUAL MEETING

Background

Multiple myeloma (MM) is a malignancy of the plasma cells preceded by asymptomatic premalignant monoclonal gammopathy of undetermined significance (MGUS), these cells proliferate and accumulate in the bone marrow and other body tissues, and tend to locally destroy bones and inflict remote pathological effects and organ damage.

Objective

To know the clinical diversity of MM at presentation, the time lapse from the first symptoms to diagnosis, and the association of this time lapse with the International Staging System (ISS) of MM.

Patients & Methods

A retrospective observational study conducted on multiple myeloma patients admitted to three hematology - oncology healthcare facilities in Kurdistan region, Iraq from October 2010 to December 2019. ISS of MM was used to assess possible effects of time lapse on patient's clinical outcomes.

The study participants included all patients diagnosed with MM from the above-mentioned centers. and the exclusion criteria were patients with MGUS, amyloidosis, and Smoldering myeloma. patients' information was collected from the hospitals electronic databases. Demographic characters of age, gender, body mass index (BMI), residency, and detailed clinical features, including the time lapse from appearance of the first symptoms and signs, were recorded.

Results

The mean age and SD was (60.58 ± 11.54 years), and the majority of the patients (52.27%) were from Sulaymaniyah governorate. Most of them had a body mass index (BMI) of more than normal (63.63%). Most of the patients had bone pain (78.98%) and (32.39%) presented with ≥2 lytic lesions. Regarding the disease stage (75.1%) of them were stage II and III of ISS of MM at the time of diagnosis, Furthermore, the mean ± SD of the time lapse from the first symptom to diagnosis was 3.01 ± 3.18 (ranged from 0.25 to 18 months) and its association with ISS was not statistically significant.

Table (1): The clinical units where the MM patients referred from

The clinical area referred from	Frequency	Percent
Rheumatology	26	14.77
Neurosurgery	19	10.80
Internal medicine	42	23.86
Neuro-Medicine	2	1.14
Gynecology	2	1.14
Orthopedic	43	24.44
General surgery	2	1.14
Nephrology	10	5.68
Him/Herself	2	1.14
Cardiology	2	1.14
Oncology	2	1.14
Outpatient consultation	23	13.7
Total	176	100

Table (2): Staging of MM patients

International Staging	Frequency	Percent
Stage I	41	23.2
Stage II	77	43.8
Stage III	55	31.3
Unknown	03	1.7
Total	176	100%

Table (3): Radiographic findings of the MM patients

Radiological findings		Frequency	Percent
Lytic lesion		108	61.36
Osteopenia		45	25.57
Extraoseous plasmacytoma of tonsil		1	0.57
Degenerative change with disc prolapse		1	0.57
Lumbosacral spine and right radius bone plasmacytoma		1	0.57
Osteoporosis		3	1.70
Frequency of bone lesion	0	28	15.91
	1	42	23.86
	2	36	20.45
	>2	56	31.82
	>3	1	0.57
Site of Bone lesion	Spine	53	30.11
	Skull and spine	28	15.91
	Skull	10	5.68
	Skull and pelvis	5	2.84
	Skull, spine, and pelvis	12	6.8
	Pelvis and spine	12	6.8
	Spine and thoracic cage	4	2.27
	Pelvis	4	2.27
	Skull, spine, and humerus	3	1.70
	Skull, spine, and femur	2	1.14
	Femur	2	1.14
	Not recorded	41	23.30

Table (4): Association of time lapse to the outcome assessed by the International Staging System

Time lapse to diagnosis (month)	International Staging of multiple myeloma			Total (%)	*p*-value*
	Stage I (%)	Stage II (%)	Stage III (%)		
0.25 - 5	34 (19.7)	71 (41)	43(24.9)	148 (85.5)	
6-10	5(2.9)	4 (2.3)	8(4.6)	17 (9.8)	
12	1(0.6)	2 (1.1)	2(1.1)	5 (2.9)	0.349
18	1(0.6)	0 (0)	2(1.1)	3 (1.7)	
Total	41(23.7)	77 (44.5)	55(31.8)	173 (100)	

* Measured by Chi-Squared test

Conclusion

The clinical features of MM at diagnosis are diverse and mostly nonspecific, and may be shared by a wide range of clinical conditions. However, patients who have fatigue, bone pain, fractured bones, renal impairment, pallor, and infective events should arouse the clinical suspicion of MM and a myeloma work up should be triggered for them.

References

- Byun JM, Kim D, Shin DY, Kim I, Koh Y, Yoon SS. Combination of Genetic Aberration With International Staging System Classification for Stratification of Asian Multiple Myeloma Patients Undergoing Autologous Stem Cell Transplantation. In Vivo. 2019;33(2):611-619.
- Eslick R, Talaulikar D. Multiple myeloma: from diagnosis to treatment. Aust Fam Physician. 2013;42(10):684-8.
- Friese CR, Abel GA, Magazu LS, Neville BA, Richardson LC, Earle CC. Diagnostic delay and complications for older adults with multiple myeloma. Leuk Lymphoma. 2009;50(3):392-400.
- Goldschmidt N, Zamir L, Poperno A, Kahan NR, Paltiel O. Presenting Signs of Multiple Myeloma and the Effect of Diagnostic Delay on the Prognosis. J Am Board Fam Med. 2016;29(6):702-9.
- Howell DA, Hart RI, Smith AG, Macleod U, Patmore R, Cook G, et al. Myeloma: Patient accounts of their pathways to diagnosis. PLoS ONE. 2018;13(4): e0194788.
- Howell DA, Smith AG, Jack A, Patmore R, Macleod U, Mironska E, et al. Time-to-diagnosis and symptoms of myeloma, lymphomas and leukaemias: a report from the Haematological Malignancy Research Network. BMC Hematol. 2013;13(1):9.

Truska A. Amin, Zeki A. Mohamed, Ali I. Mohammed et al. Kurdistan High Council of Medical Specialties – Clinical Hematology Program. Duhok – Erbil And Sulaymaniyah Training Centers