

O1045 Predictors of infections in patients with newly diagnosed multiple myeloma at admission and during the first chemotherapy cycle

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Background: The aim of the study was to evaluate predictors of infections in patients with newly diagnosed multiple myeloma (MM) at admission and during the 1st chemotherapy cycle (CC).

Materials/methods: Patients with newly diagnosed MM were included in the study (Jan 2013 till Jun 2018). All patients received bortezomib.

Results: A total of 174 patients with MM (median age 61 years) were included in the study. Follow-up period was 21–82 days (median 24 days). Infections occurred in 85 (48.9%) of patients, of them 33 (38.8%) at admission and 52 (61.2%) throughout the 1st CC. More than one site of infection had 31 (36.5%) of patients. Pneumonia (62.4%) was observed more frequently, followed by urinary tract infections (25.9%) and herpes viral infections (24.7%). 28.2% of patients with infections were afebrile. Risk factors associated with infections at admission and during the 1st CC are shown in table. Infections were uncommon in patients with ISS stage I MM (7%). Mortality after the 1st CC was in 3 patients (1.7%) due to pneumonia.

Conclusions: Nearly half of patients with newly diagnosed MM during the 1st CC had infections with a prevalence of pneumonia. Risk factors for the infections were advanced disease stage, poor performance status, immunoparesis, renal failure, transfer from another hospital, previous exposure to antibiotics.

Table. Risk factors associated with infections in patients with newly diagnosed MM

Variable	Infections on first admission	Infections during the 1st CC		
	OR (95 % CI)	<i>p</i>	OR (95 % CI)	<i>p</i>
Durie-Salmon stage III	9.39 (1.24-71.46)	0.007	2.21 (0.99-4.89)	0.055
ISS stage III	1.97 (0.87-4.44)	0.1	3.41 (1.81-6.42)	<0.001
Polyclonal IgG <6 g/L	N/A	<0.001	2.37 (1.17-4.82)	0.02
Polyclonal IgM <0.48 g/L	N/A	<0.001	2.77 (1.23-6.22)	0.01
ECOG performance status 3-4 score	6.36 (2.58-15.67)	<0.001	4.24 (2.24-8.02)	<0.001
Transfer from another hospital	7.39 (3.24-16.84)	<0.001	6.39 (2.91-13.99)	<0.001
Renal failure	2.03 (0.94-4.42)	0.1	3.19 (1.63-6.24)	<0.001
Use of antibiotics during 1 month prior to CC	10.46 (4.29-25.47)	<0.001	7.00 (2.54-19.33)	<0.001

