EVOLUTIONARY PROFILE OF MYELOMA PATIENTS WITH RENAL INSUFFICIENCY

Evolutionary profile of myeloma patients with renal insufficiency
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Introduction

Renal impairment (RI) is a common complication in patients with multiple myeloma (MM), and its presence at diagnosis negatively affects prognosis[1]. It complicates clinical management and requires a rigorous approach to improve disease outcomes.

Aim

To evaluate the impact of renal impairment on overall survival (OS) and progression-free survival (PFS) at 2 years in patients newly diagnosed with multiple myeloma (NDMM).

Objectives

To assess renal recovery rate, predictive factors for RR, and factors associated with OR.

Methods

A prospective study was conducted on 118 newly diagnosed MM patients. Clinical, biological, radiological, and therapeutic parameters were assessed. The glomerular filtration rate (GFR) was estimated using the MDRD formula, and renal and hematologic responses (RR, HR) were evaluated according to the IMWG criteria.

Results

Forty patients had RI associated with MM at diagnosis.

Renal function improvement was observed in 35% of patients, with complete response in 20% after initiation of specific treatment.

The 2-year OS was 50% for patients with RI, with a median of 17 months (Figure 1).

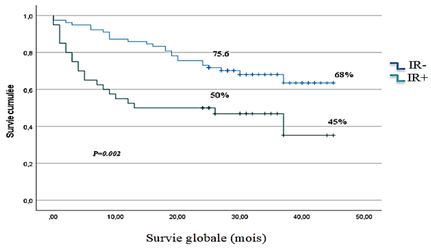


Figure 1: Kaplan–Meier curve comparing OS of patients according to the presence or absence of RI.

PFS at 2 years (Figure 2):

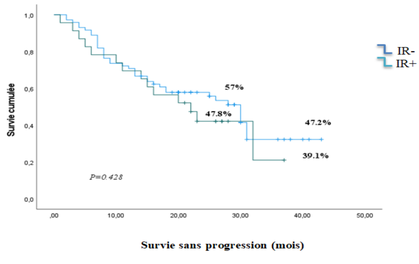


Figure 2: Kaplan–Meier curve comparing PFS in patients with versus without RI

Factors associated with OS: Multivariate analysis revealed that RI was not an independent factor for poor prognosis, unlike LDH and ISS III (Table 1).

Results

Table 1: Univariate and multivariate analysis of factors associated with survival

	Univariée			Multivariée		
	HR	**IC (95%)**	**P**	**HR**	**IC (95%)**	**P**
DFGe<40ml/min	2.30	1.30-4.10	**0.002**	1.50	0.85-2.65	0.85
Albumin<35g/L	1.80	1.15-2.80	**0.034**	1.40	0.90-2.25	0.156
β2M ≥3.5	1.90	1.00-2.85	**0.042**	1.25	0.75-2.07	0.361
ISS stage III	3.25	1.80-5.60	**<0.001**	2.10	1.20-3.75	**0.008**
Elevated LDH	3.50	2.05-5.90	**<0.001**	2.00	1.30-3.25	**0.010**
Elevated uric acid	2.20	1.15 -3.70	**0.006**	1.50	0.95-2.35	0.100
CRP ≥ 6 mg/L	2.80	1.40-5.20	**0.012**	1.60	0.85-3.00	0.136

Predictive factors for RR: the baseline GFR was an important indicator, with threshold of 22.5 mL/min.

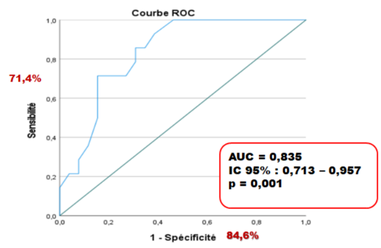


***Figure 30**: Courbe ROC indiquant la performance du DFG de base pour rédire la réponse rénale.*

Summary

RI at diagnosis negatively affected outcomes in NDMM patients. RR was achieved in 35% of cases, with complete recovery in 20%. At 2 years, OS was significantly lower in patients with RI, while PFS showed a modest reduction. High LDH and ISS stage III were independent adverse prognostic factors, and baseline GFR was a strong predictor of RR.

Discussion

Our results show that baseline RI did not significantly affect PFS, although patients without RI tended to fare better. Two-year OS was 67% in the whole cohort, but only 50% in patients with RI, with a median OS of 17 months. These findings are in line with both national and international studies [2,3]. Elevated LDH and ISS stage III emerged as major adverse prognostic factors. In the RI subgroup, only elevated LDH retained independent prognostic significance, underscoring its importance in this context [4]. Although RI is frequently associated with poor outcomes in NDMM, in our study it was not an independent predictor of survival, in line with previous reports [3,5].

References

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