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Clinical Characteristics and Survival Outcomes of Patients with Mantle Cell Lymphoma – a North Indian Tertiary Care Center Experience

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Background

Mantle cell lymphoma (MCL) is an aggressive variant of non-Hodgkin's lymphoma. Clinical and survival data from India is scarce owing to its rarity in south-east Asia[1]. Till now, studies have not shown overall survival benefit with rituximab maintenance (RM).

Objectives

To assess clinical characteristics, overall survival (OS), event-free survival (EFS) of MCL patients and impact of RM on OS and EFS.

Design

Ambispective clinical data of 98 (survival data 96) transplant-ineligible MCL patients treated at BRA-IRCH, AIIMS, New Delhi, India between Jan'13-Dec'23 was analysed using STATA version 13.0.

Method

- Primary outcome was OS, secondary outcome was EFS.
- Rituximab-based induction wall used in all patients as per institutional protocol.
- RM used in 31 (32.0%) patients due to financial constraints.
- Response was assessed by modified Cheson's lymphoma response evaluation criteria.
- Clinical and tumor characteristics and response rates were similar in both RM and non-RM groups.
- Survival assessed by Kaplan-Meier analysis and log-rank test.
- Effect of RM on OS and EFS was adjusted for other factors in multivariate analysis by Cox proportional hazards model and expressed as adjusted hazards ratio [95% confidence interval]; aHR [95%CI].
- P value < 0.05 defined statistical significance.

Baseline characteristics

- Median age (range) was 60 (36-83) years
- Male-female ratio was 3:1.

Table 1: Clinical characteristics of MCL patients. (N=98)

Parameters	n (%)
B-symptoms	52 (53.0)
Bulky disease (≥7.5cm)	19 (19.0)
ECOG PS ≥2	38 (39.0)
Generalised lymphadenopathy	85 (87.0)
Splenomegaly	48 (49.0)
Extra-nodal involvement	77 (79.0)
Advanced stage (III, IV)	91 (93.0)
High risk IPI score (4-5)	15 (15.0)
High risk MIPI score (6-11)	54 (55.0)

Overall survival

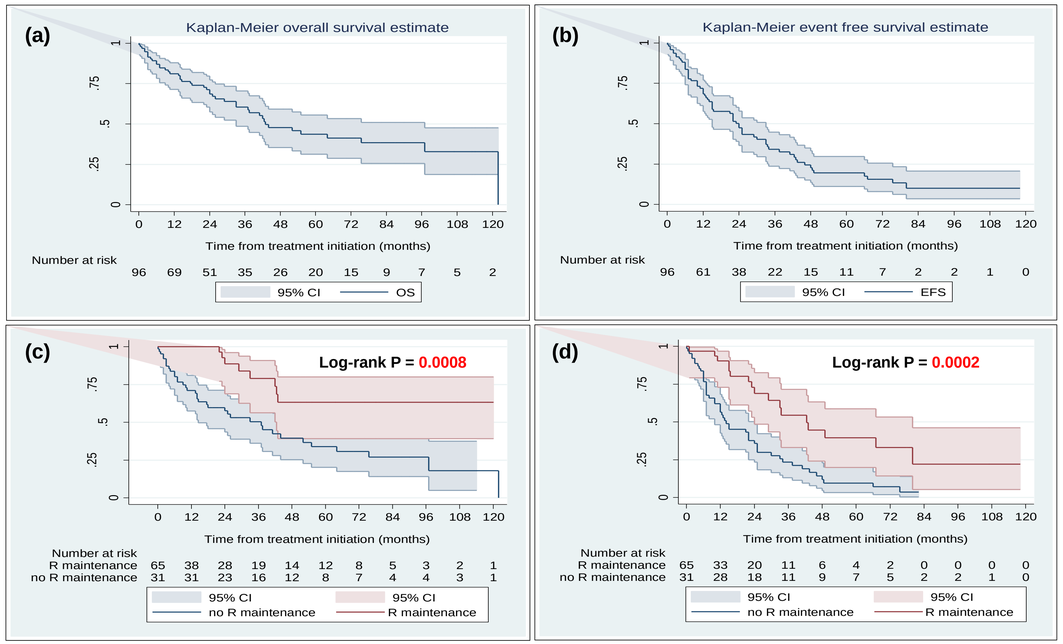
- Fifty-one (53.0%) patients were alive with median follow-up of 63.0 months (IQR 29.0-88.5 months).
- Median OS was 43.0 months (IQR 33.0-97.0 months); 37.0 months vs not reached in non-RM vs RM groups.
- RM was associated with better OS (aHR [95%CI]: 0.31 [0.13-0.72], P < 0.01).
- ECOG PS ≥2 (aHR [95%CI]: 2.61 [1.30-5.25], P < 0.01) and advanced stage (aHR [95%CI]: 10.40 [1.25-86.69], P = 0.03] were associated with poor OS.

Event-free survival

- Median EFS was 24.0 months (IQR 15.0-33.0 months); 14.0 months vs 42.5 months in non-RM vs RM groups.
- ECOG PS ≥2 (aHR [95%CI]: 1.83 [1.01-3.34], P < 0.05) and advanced stage (aHR [95%CI]: 5.77 [1.58-21.03], P < 0.01) were associated with poor EFS.

Kaplan-Meier survival curves

Image 1: OS and EFS curves of entire cohort [(a), (b)], and stratified by use of RM [(c), (d)]. (N=96)



Conclusions

This study from south-east Asia was first of its kind to demonstrate the impact of RM in MCL. RM significantly improved OS and EFS. However, randomised controlled trials are needed to concretise the evidence of OS benefit. Advanced stage and ECOG PS ≥2 were associated with both poor OS and EFS.

Reference

1. Das ChK, Gogia A, Kumar L et al. Mantle Cell Lymphoma: A North Indian Tertiary Care Centre Experience. Asian Pac J Cancer Prev. 2016 Oct 1;17(10):4583-4586.