Complete Response Rate in Mantle Cell Lymphoma with Induction Chemotherapy – Experience of a North Indian Tertiary Care Center

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Context

Mantle cell lymphoma (MCL) is a rare, aggressive variant of non-Hodgkin lymphoma. Data from Indian sub-continent is scarce, with regards to response rate in MCL and factors affecting it.

Objectives

To assess complete response (CR) rate in MCL patients following induction chemotherapy and identify clinico-pathological factors affecting it.

Study design

Ambispective data of 74 transplant-ineligible MCL patients, treated between January'2013 to December'2024 at IRCH-AIIMS, New Delhi, India was analysed.

Outcome measure

Response rates were assessed by modified Cheson's lymphoma response evaluation criteria, based on Lugano classification. Sixty-five patients received rituximab-based induction. STATA 13.0 was used to identify factors affecting response rates by logistic regression analysis; expressed as odd's ratio (OR), 95% confidence interval (CI). *p*-value <0.05 defined statistical significance.

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Results

Median age was 60 years with male-female ratio of 3:1. CR at end of induction chemotherapy was seen in 49 (66.0%) patients. CR was better in rituximab-based [45/65 (69.0%)] than non-rituximab-based [4/9 (44.0%)] induction groups (Figure 1), though it did not reach statistical significance (Fisher-exact p=0.16). Partial response (PR) was seen in 15 (20.0%), stable disease in 1 (1.0%) and progressive disease in 9 (12.0%) patients. Twelve (18.0%) patients in rituximab-based induction group showed PR. Splenomegaly [OR (95%CI): 0.34 (0.13-0.93), p=0.04], B-symptoms [OR (95%CI): 0.24 (0.08-0.68), p<0.01] and leucocytosis [OR (95%CI): 0.25 (0.09-0.72), p=0.01] at presentation were associated with non-attainment of CR. Use of rituximab-based induction chemotherapy did not confer statistically better CR [OR (95%CI): 3.03 (0.73-12.51), p=0.13], even in logistic regression analysis.

Figure 1: Response rates of mantle cell lymphoma patients with induction chemotherapy.

Response	All patients (N=74.0)	Rituximab-based induction (N=65.0)	Non-rituximab-based induction (N=9.0)
CR	49.0 (66.0%)	45.0 (69.0%)	4.0 (44.0%)
PR	15.0 (20.0%)	12.0 (18.0%)	3.0 (33.0%)
SD	1.0 (1.0%)	1.0 (2.0%)	0.0 (0.0%)
PD	9.0 (12.0%)	7.0 (11.0%)	2.0 (22.0%)
ORR (CR+PR)	64.0 (86.0%)	57.0 (88.0%)	7.0 (77.0%)

CR, complete response; ORR, objective response rate; PD, progressive disease; PR, partial response; SD, stable disease
All percentages are rounded off, hence may not add up to 100.0%

Conclusions

Complete response was seen in two-third MCL patients from this part of the world. Response rates were higher with rituximab-based induction chemotherapy, however, statistically insignificant. Splenomegaly, B-symptoms and leucocytosis were associated with non-attainment of complete response.