SOHO ANNUAL MEETING 2024

Impact of Multiple Myeloma in Remission on Hospitalization Outcomes Among Patients With Cerebral Infarction: Insights From the 2021 National Inpatient Sample Database

Kalaivani Babu MD[1], Srinishant Rajarajan MD[1], Vasuki Anandan MD[2]
[1] Allegheny General Hospital, Pittsburgh, USA
[2] University of Michigan, Ann Arbor, USA

Allegheny Health Network

INTRODUCTION

Cerebral infarction, a leading cause of morbidity and mortality worldwide, often requires hospitalization, and imposes substantial healthcare costs. Multiple myeloma (MM), a hematologic malignancy, presents additional challenges for affected individuals. However, the impact of MM, particularly in remission, on hospitalization outcomes among cerebral infarction patients remains poorly understood. This study aims to address this gap by investigating the association between MM in remission and hospitalization outcomes in patients admitted with cerebral infarction.

METHOD

This retrospective study utilizes data from the 2021 National Inpatient Sample (NIS) database, a large administrative dataset capturing around 6.6 million hospitalizations across the United States in the year 2021. Patients admitted with a primary diagnosis of cerebral infarction are included. Multivariable regression analysis is conducted to assess the relationship between MM in remission and hospitalization outcomes, adjusting for demographic and clinical variables such as age, gender, race, Charlson Comorbidity Index, income quartile, hospital region, teaching status, and bed size

RESULTS

The analysis reveals that among the studied population of 536,904 patients admitted with cerebral infarction, approximately 0.0002887% of individuals had MM in remission. For each 1-unit increase in age, the odds of mortality increase by approximately 2%, holding other variables constant. Notably, MM in remission is associated with a significant decrease in total hospital charges by approximately $25,162.08 on multivariate analysis. Additionally, Native American patients exhibited a decrease in total charges of $11,881.91 on adjusted analysis, indicating potential disparities in healthcare utilization.

Outcome	Mortality	Total Hospital Charges	Total Hospital Charges
Variable	Age (per 1-unit increase)	MM in Remission	Native American
Measure	Odds Ratio	Coefficient ($)	Coefficient ($)
Value	1.027364	-25,162.08	-11,881.91
95% CI	[1.024369, 1.030367]	[-42,723.4, -7,600.761]	[-21,335.09, -2,428.721]
P-value	0.000	0.005	0.014

CONCLUSION

In conclusion, this study sheds light on the impact of MM in remission on hospitalization outcomes among patients with cerebral infarction. The findings suggest that MM in remission may be associated with reduced healthcare costs during hospitalization for cerebral infarction. These results underscore the importance of considering MM status in the management and resource allocation for cerebral infarction patients. Further research is warranted to explore underlying mechanisms and potential interventions to optimize outcomes in this patient population.