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652.MULTIPLE MYELOMA: CLINICAL AND EPIDEMIOLOGICAL

Impact of Diabetes Mellitus in Hospital Outcomes Among Patients with Multiple Myeloma Undergoing Autologous Stem Cell Transplantation: A NIS 2016 to 2020 Database Study

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Impact of Diabetes Mellitus in Hospital Outcomes among Patients with Multiple Myeloma undergoing stem cell transplantation: A NIS 2016 to 2020 database Study.

Background.

Diabetes Mellitus (DM) is one of the comorbidities included in the Hematopoietic Cell Transplant-Specific Comorbidity Index (HCT-CI), which predicts the risk of non-relapse mortality (NRM) and overall mortality (OM) after transplantation. Therefore, they refrained from getting an Autologous stem cell transplant (ASCT) due to the concern of higher toxicity. However, limited data exist to assess this association. In this analysis, we intend to find the impact of DM on hospital outcomes in MM undergoing ASCT.

Methods:

A retrospective analysis of the NIS database was conducted using International Classification of Diseases (ICD-10) codes to identify hospitalization with ASCT for multiple myeloma and obesity with BMI > 30 kg/m2. STATA version MP14.2 was used for analysis. We used Fischer's exact test to compare proportions, the student's t-test to compare continuous variables, and multivariate regression analysis to calculate the adjusted odds ratio after controlling age, gender, primary payer, and CCI. Transplant complication includes (transplant rejection, transplant failure, and transplant infection).

Results:

Among 31,390 hospitalizations, 5475 (17.44%) were Diabetic. The mean age to get ASCT was 63 vs. 61, $P < 0.001$) with DM and without DM. Both groups had male predominance, with Caucasians being the most common race. The mean Charlson comorbidity index (CCI) in DM was 3 vs. 2.32 without DM. After Multivariate analysis, we found ICU admission (AOR: 0.28, 95% CI: 0.14-0.54, $P < 0.001$), length of hospital stay (16.53 vs. 16.79, $P < 0.001$) and acute kidney injury (AOR: 0.70, 95% CI: 0.56-0.87, $P = 0.02$) was significantly decreased with DM. However, there was no significant difference in the rate of blood transfusion (AOR: 0.87, 95% CI: 0.68-1.11, $P = 0.87$), transplant complication (AOR: 0.66, 95% CI: 0.42-1.01, $P = 0.06$), hospital mortality (AOR: 0.45, 95% CI: 0.19-1.03, $P = 0.06$). The only increase in the patient with DM was Mean hospital charges ($206,796.4 vs. $200,878.3, $P = 0.013$).

Conclusion:

This analysis shows that while some complications were decreased, blood transfusion rate and hospital mortality were not significantly affected. The study highlights the potential implications of DM in this patient population and warrants further investigation to individualize and optimize transplant outcomes.

Disclosures Dhakal: *Janssen, Karyopharm, GSK, Arcellx, GSK, Sanofi, Genentech, Pfizer:* Consultancy, Honoraria, Speakers Bureau.

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