

Stem Cell, Tissue Engineering and Regenerative Medicine

March 14-15, 2024 | London, UK

Volume: 14

Meta-Analysis Shows that Mesenchymal Stem Cells Therapy can be a Possible Treatment for Diabetes and Diabetic Kidney Disease

David Lawrence Greene

R3 Stem Cell and US Lead Network, USA

This meta-analysis includes the systematic literature review and meta-analysis involving clinical trials to predicate the efficacy and safety of MSCs transplantation for treating T1DM and T2DM. We searched PubMed, ScienceDirect, Web of Science, clinicaltrials.gov, and Cochrane Library for "published" research from their inception until February 2023. Two researchers independently reviewed the studies' inclusion and exclusion criteria. Our meta-analysis included 14 studies on MSC treatment for diabetes. At the last follow-up, the MSC-treated group displayed significant improvements compared to baseline. Their HbA1c levels notably decreased (MD: 0.95, 95% CI: 0.33 to 1.57, P-value: 0.003 < 0.05), resulting in reduced insulin requirements (MD: 0.19, 95% CI: 0.07 to 0.31, P-value: 0.002 < 0.05). Additionally, MSC transplantation led to a substantial reduction in FBG levels in comparison to baseline (MD: 1.68, 95% CI: 1.26 to 2.11, P-value: < 0.001). While FPG levels in the MSC-treated group were significantly lower (MD: -0.77, 95% CI: -2.36 to 0.81, P-value: 0.339 > 0.05), there was a slight increase in fasting C-peptide levels (MD: -0.02, 95% CI: -0.07 to 0.02, P-value: 0.231 > 0.05). These findings indicate that MSC transplantation positively impacts both types of diabetes mellitus, with no apparent adverse effects.

Biography

Greene is a residency and fellowship-trained orthopedic surgeon who has shifted completely into business. He started a healthcare internet marketing company, US Lead Network, that helps medical and dental practices acquire patients on the web in a pay-for-performance manner. The company is now using Artificial Intelligence for marketing which is lowering the cost per lead substantially. He has written two books on Healthcare Internet Marketing that are available for purchase on Amazon. He has been featured as a Top 20 Expert Author by Ezines.com, the top article directory site in the world. Out of over 470,000 authors, Greene ranks #15 as an Expert Author and #1 in the Pain Management category. He also started a regenerative medicine company, R3 Stem Cell, that offers marketing, an IRB-approved protocol, and top products for practices nationwide.