THE KOREAN SOCIETY OF NEPHROLOGY
APCN & KSN 2024
June 13(Thu) - 16(Sun), 2024 Coex, Seoul, Korea
APSN
Promoting Sustainable Kidney Health: The Asia-Pacific and Beyond

Submission No. : CKD2-0001
Session Title : Chronic Kidney Disease 2
Session Topic : Translational Research and Nover Therapeutic Targets in CKD
Date & Time, Place : June 14 (Fri) / 10:30-12:00 / Room 3 (GBR 104-105)

Stem Cells and Chronic Kidney Disease

CAI-MEI ZHENG
Shuang-Ho Hospital, Taipei Medical University, Taiwan

Chronic kidney disease (CKD) represents a significant challenge to global health, progressively impairing renal function and straining healthcare systems. Stem cell therapy, especially using allogeneic adipose tissue-derived stem cells (ADSCs), has emerged as a promising regenerative approach. Our phase I clinical trial assessed the safety and preliminary effectiveness of ELIXCYTE® in individuals with moderate to severe CKD. In this trial, 12 patients were categorized into three dosing groups and administered ELIXCYTE® intravenously, with subsequent monitoring over 48 weeks to evaluate safety and kidney function. The trial outcomes indicated a positive safety profile and potential improvement in kidney function among certain patients, highlighting the prospective role of ADSCs in slowing CKD progression. These encouraging results advocate for additional studies to refine treatment methodologies, ascertain long-term impacts, and determine the most suitable candidates for stem cell therapy. The initial success of this phase I study facilitates further investigation into ADSCs for CKD management, albeit acknowledging the obstacles in transitioning from laboratory research to clinical application. The field of stem cell biology and regenerative medicine is rapidly evolving, offering fresh perspectives on therapeutic mechanisms, such as anti-apoptotic, anti-fibrotic, and anti-inflammatory properties of stem cells. In summary, our ELIXCYTE® study introduces stem cell therapy as an innovative treatment paradigm for CKD, with the potential to revolutionize patient care and improve outcomes. This pioneering research emphasizes the importance of continuous collaboration and scientific exploration to fully exploit the therapeutic capacity of stem cells in addressing kidney diseases.

Keywords: Chronic kidney disease (CKD), Stem cell therapy, Phase I clinical trial, Safety profile, Regenerative medicine