Abstract:

Background: Chimeric Antigen T cells (CAR-T) therapy is an innovative treatment in Cellular Therapy for patients with hematologic malignancies. The most common side effects of CAR-T therapy include cytokine release syndrome (CRS) and immune effector cell associated neurotoxicity (ICANS). CRS presents like sepsis from fevers to multiorgan failure. ICANS presentation can range from mild tremors to seizures and loss of consciousness (LOC). Variations in identification and grading of CRS/ICANS amongst healthcare professionals (HCP) can impact overall severity and patient outcomes.

Objectives: The aim of this article is to reveal that the implementation of the CARTOX™ application (app) amongst HCP improves recognition, grading and timeliness of interventions.

Methods: HCP participated in a simulation with the CARTOX™ app and then implemented CARTOX™ app use into their practice. Pre and post electronic medical record (EMR) review was conducted.

Findings: The CARTOX™ app was found to be an effective tool that can be easily implemented into clinical practice as a clinical decision assistive tool improving recognition, grading and timeliness of intervention. There was a 34% improvement from time of toxicity onset to intervention post-simulation with intervention within 45 minutes of onset, lower than national benchmark of 60 minutes