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Virtual Reality (VR) technology in the absence of general anaesthesia during radiotherapy procedure for paediatric oncology patients

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VR is a three-dimensional (3D) computer-generated environment that enables the user to explore and interact within a different environmental perspective. It could be in the form of a realistic-artificial environment or a 3D imaging that is presented to the user as a real atmosphere with made-up information. The VR has been considered as a non-pharmacologic form of analgesia through exerting attention processes on the body's intricate pain system. It does so through profoundly immersing the body and mind by delivering enough sensory information to the extent where it suspends any disbelief that one is in a virtual environment. The aim of the study is to eliminate the General Anaesthesia (GA) procedure used on paediatric oncology patients undergoing multiple fractions of Radiotherapy. We aimed to utilise the VR technology as a replacement for the GA. Typically, the radiotherapy session under GA takes around 30 minutes from the machine time and that session can be repeated daily for several weeks. As a result, VR Technology was an excellent alternative in most of the patients treated with radiotherapy for non-Head/Brain Tumours. There were significant reductions on the number of the GA sessions. That reduction has a great impact on reducing side effect of GA and save more time on the Radiotherapy machine that can be used to treat more patients.

Biography

Faisal Ashour has completed his bachelor's degree in Modeling, Simulation, and Visualization Engineering in 2015 from Old Dominion University, USA along with an associate degree in Electrical Engineering and Engineering Management. He gained his fellowship in Medical Simulation from INCASL in 2016. He joined the Ministry of National Guard Health Affairs-King Saud bin Abdulaziz University for Health Sciences-Jeddah in 2015 as a military and medical simulation engineer. The Personal Investigator for this research is Dr. Suliman Al-Ghamdi, MD, FRCPC. He is a Radiation Oncologist, and the head of Radiation Oncology at Princess Noorah Oncology Center. Dr. Suliman is also the deputy chairman of Princess Noorah Oncology Center and head of King Abdullah International Medical Research Center Jeddah (KAIMRC-J).

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