Novel Approach to Teaching Maneuvers for Relieving Sedation-Related Laryngospasm

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Introduction: Laryngospasm is an infrequent but dreaded complication of sedation in the pediatric population. Relief of complete and partial laryngospasm requires prompt recognition and rapid intervention using a systematic approach. We sought to build a virtual reality (VR), competency-based training module for portable and efficient training of a systematic method for relief of laryngospasm.

Methods:

Utilizing internally developed VR education software, (Enduvo, Inc. Peoria, IL), we built a training module in VR. The educational objectives were a) Discuss incidence, outcomes, and recognition of laryngospasm, b) describe maneuvers to correct laryngospasm, and c) perform a systematic and algorithmic approach to correct laryngospasm. The VR module employs a combination of 2D video, 3D models and adjuncts to achieve these objectives. The expert interacted within the virtual environment, imported diagrams and images as well as the 2D filmed footage to create a customized VR learning experience.

Results:

We successfully built a VR experience targeting the stated objectives. The VR experiences consisted of 3 modules focused on the learning objectives with competency measures.

Discussion:

VR holds the promise of creating more effective and efficient training in an asynchronous digital media format. This format allows for scalable distribution of training complete with competency training metrics to better meet the challenge of distributing specific sedation expertise. This emerging training modality shows promise for training sedation principles for a wide range of applications, which are difficult to simulate with conventional training modalities.

Refs:

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