**CO02   ULTRASOUND-GUIDED CRICOTHYROTOMY IN A LOCALLY-DESIGNED PORCINE MODEL–A PSYCHOMETRIC STUDY**

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Introduction:Cricothyrotomy is the most frequent technique for an emergency Front-of-Neck Access and is the last step in managing a difficult airway. Lack of experience is the main reason for the failure of this technique, so its training is essential. To increase the opportunities of training we developed a low-cost partial-task trainer simulator with porcine upper airway.

Objectives: (1) Evaluate the participants’ self-perceived theoretical-practical knowledge, experience and confidence to perform the technique before and 3 months after the course; (2) Estimate the realism of the simulator; (3) Study the psychometric properties of Objective Structured Assessment Ultrasound Skill (OSAUS) scale and Global Rating Scale (GRS) for ultrasound-guided cricothyrotomy.

Methods:Prospective and experimental study for Anesthesiology interns. After theoretical-practical session, the participants’ performance was video-recorded anonymously. Participants reported self-perceived theoretical-practical knowledge, experience and confidence to perform the technique before training and after 3 months. Realism of the model was also evaluated. Three assessors used OSAUS scale and GRS for assessment the videos. Internal consistency and inter-rater reliability were studied, as well as correlation between scales.

Results:Self-perceived theoretical-practical knowledge, experience and confidence for the cricothyroidotomy task improved significantly from the course to 3 months after (p=<0.001, Wilcoxon Signed Rank Test). Participants considered the model structurally relevant for teaching and training. All participants recommended the training with this model.Internal consistency for OSAUS scale and GRS for Cricothyrotomy were 0.73 and 0.90, respectively. The intraclass correlation coefficient was 0.60 for OSAUS scale and 0.84 for GRS. There was a positive and significant correlation between the two scales (r=0.55; p<0.001, Pearson correlation).

Conclusion:Our simulator is a suitable model for ultrasound-guided cricothyrotomy training in anesthesia residency program. Both scales can be used with high reliability to assess participants' performance in a simulation environment. Further studies are needed to complete the validation of the scale in a workplace-based assessment.

**Keywords**: cricothyrotomy; GRS; OSAUS; partial-task trainer; simulation; training; ultrasound.