ASSESSING THE EFFECTIVENESS OF VIDEO-BASED COACHING AS A COMPONENT OF SIMULATION FLEXIBLE ENDOSCOPIC TRAINING AMONGST FIRST YEAR SURGICAL RESIDENTS - A PILOT STUDY

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Background

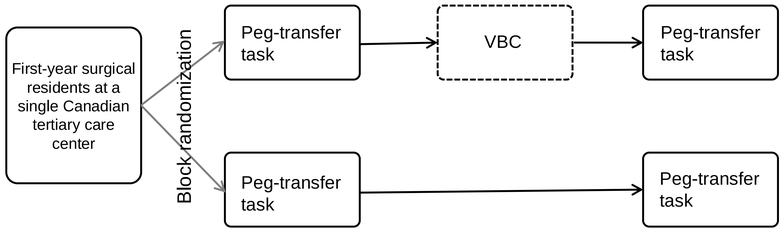
- Video-based coaching (VBC) is an emerging training modality for surgical trainees, with two meta-analyses showing improved technical outcomes, especially among novice trainees.
- VBC has the potential to facilitate the competency by design (CBD) training model.
- Endoscopy is a challenging technical skill and an important component of general surgeons' practice.

Objective

The aim of this pilot randomized trial was to assess the impact of VBC on technical scores of novice trainees on a simulated endoscopic task.

Video-based coaching does not improve technical skills scores for novices performing a simulated endoscopic task.

Methods



Descriptive and non-parametric statistical analysis were used including Wilcoxon signed-rank for within arms, and Wilcoxon rank-sum for between arms.

Results

- Five participants completed the coaching trial, and eight participants completed the control trial.
- After two rounds, the mean score in the coaching arm was 62.26 compared to 62.28 in the control arm.
- No significant difference was found between coaching and control arms in the scores for the endoscopic task (p =0.34).
- No significant difference was found within the coaching (p=0.20) and control (p=0.06) arms between the two rounds of tasks.

Discussion

- Findings contrast previous literature on VBC in surgery.
- Reasons include:
  - Small sample size, higher likelihood of type II error.
  - Long duration between two rounds of endoscopic tasks.
  - Single coaching session as opposed to multiple.
  - Inherent reliance on 'feel' for endoscopy, which cannot be assessed via VBC.
- This is the first randomized trial studying VBC for endoscopic technical skill acquisition using a validated scoring system, affordable tabletop simulator, and a structured coaching framework (Wisconsin Framework).

Conclusions

Future research can use lessons and challenges from this pilot trial to design robust trials exploring the utility of VBC in endoscopy. Examples include timeframe of data collection, participant attrition via incorporation into official curriculum, and multi-session VBC.

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