VALIDATING A SIMULATION TRAINING MODEL FOR ILEO-TRANSVERSE INTRACORPOREAL ANASTOMOSIS

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Background: intracorporeal ileo-colonic anastomosis has become the standard for laparoscopic right hemicolectomy. Laparoscopic suturing is challenging but specific training alternatives for this procedure are scarce.

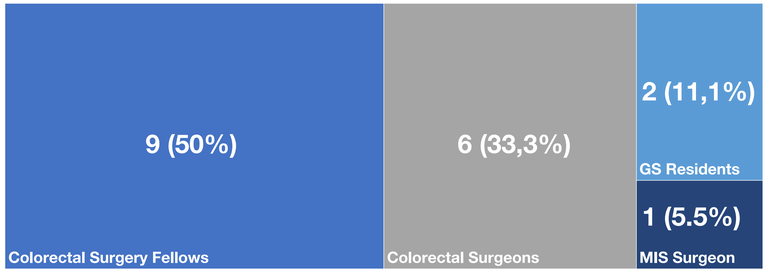
Aim: to describe the validation process of an ileo-transverse intracorporeal anastomosis (ITA) simulation-based training module.

Methods: validation study. An exvivo model was designed based on surgical videos and colorectal surgeons` experience. Residents and surgeons with variable levels of expertise were included to assess face and content validity performing an ITA in the simulated scenario.

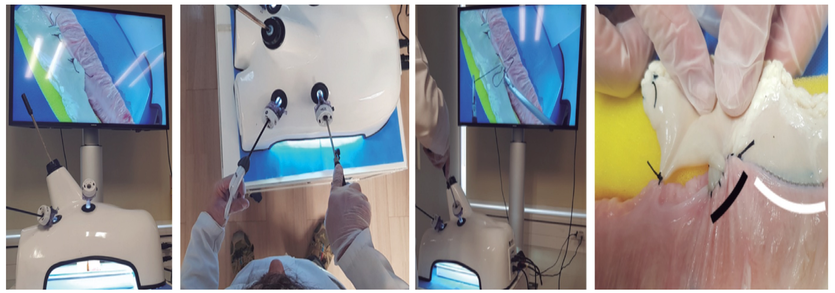
Experts were defined as:
Laparoscopy Expert: "Has performed >200 laparoscopic procedures as first surgeon *and* has participated in >200 procedures in colorectal surgery".
ITA Expert: adds to the previous criteria "Uses intracorporeal anastomosis as the standard reconstructive procedure in right hemicolectomy".

Two-blinded evaluators assessed using validated scales (OSATS and a specific rating scale for intracorporeal anastomosis (SRS)).

Participants



Results: exvivo model



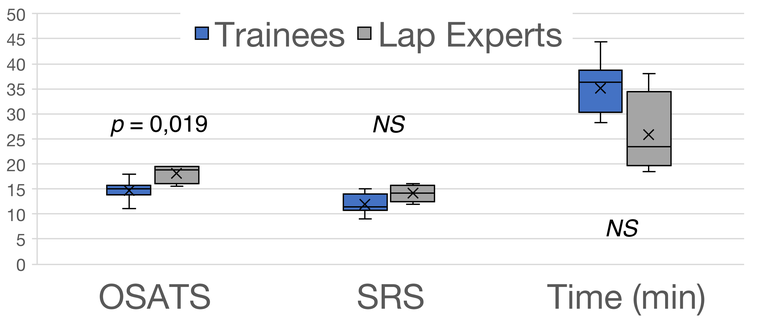
Results: face-validity

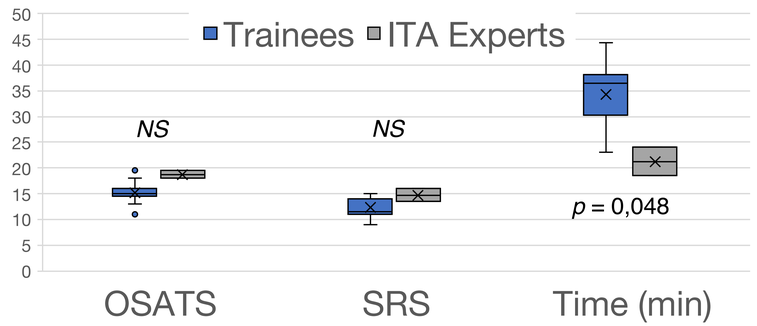
Fidelity (acceptable or maximum) of the colon	→ **83,3%**
Fidelity (acceptable or maximum) of the ileum	→ **61,1%**
Ergonomics resembles the real surgical scenario	→ **55,5%**
Anatomy resembles the real surgical scenario	→ **72,2%**

Results: content validity

When considering "Laparoscopy Experts" (n=4), they obtained a significantly higher OSATS score (18,7[17,7-19,5] vs 15[14,5-15,5], p=0,019). No other significant differences were found. Regarding "ITA Experts" (n=2), they performed significantly better in procedural time (21,26[18,53-24] vs 36,35[30,2-38,2]mins, p=0,048) and obtained better scores, although not statistically significant (OSATS:18,75[18-19,5] vs 15[14,5-16], p=0,07). SRS:14,7[13,5-16] vs 11,5[11-14], p= 0,16).

Results: content validity





Conclusion: an exvivo tissue-based model for ileo-transverse anastomosis is feasible and can effectively represent the surgical scenario. Performance in this model depends on prior surgical experience, specifically regarding laparoscopic-colorectal surgery, thus obtaining content validity.