The effect of a self-administered performance based intra-procedural checklist on the laparoscopic learning curve of novice surgeons

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BACKGROUND:
Surgical checklists are used for error reduction. Checklists are infrequently applied during procedures and have been limited to lists of procedural steps as aid memoires.

AIM:
To study the effect of a self-administered performance based checklist on the laparoscopic learning curve of novices when applied during a standardised task.

METHODS:
Twenty novices were randomised into two equal groups, those receiving paper feedback (control group), and those receiving paper feedback and the checklist that was applied at 20 seconds intervals (study group). Both groups performed the task of laparoscopic double knots, repeated over 5 separate stages in a Laparoscopic Endo Trainer. The task was divided into 4 subtasks and 26 steps. Human reliability assessment technique was used for error analysis.

RESULTS:
2341 errors were detected in 141 tasks, 408 subtasks and 2249 steps during the 5 stages. During the first stage, the errors were not significantly different between groups. The study group committed significantly fewer errors as compared to the control group during all the later 4 stages (p<0.01).

CONCLUSION:
The self-administered performance based intra-procedural checklist appears to have a significant accelerating effect on the acquisition of technical skills when applied by novices during a standardised lab-based laparoscopic task.

REFERENCES: