



Intracorporeal laparoscopic suturing training during Covid19 pandemic



Computers Vs the Instructor

A. Lazaridis, S. Iliodromiti, R. Navaratnarajah, J. Odejinmi

Purpose:

The unprecedented training decline due to Covid19 restrictions led to the design of a computer-based video instruction (CBVI) package to test the training potential (primary outcome) and effectiveness (secondary outcome) when compared to the traditional instructor guided simulation training (IGST) for intracorporeal laparoscopic suturing.

Methods:

20 medical students

Zero experience

2 groups matched for sex, right/left hand dominance, previous exposure to video games or musical instruments and surgical career aspirations.

IGST group 10

60 min training

2 x assessments @ training & after 4 weeks

CBVI group 10



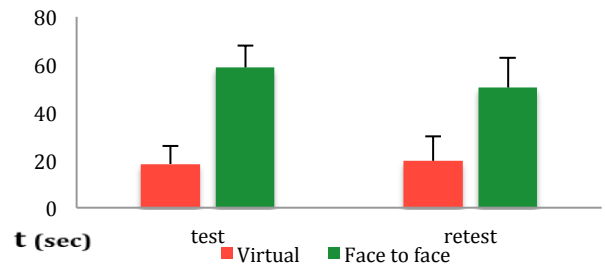
*Acknowledgements:

Many thanks to the 3rd&4th year medical students from Barts - QMUL that volunteered and supported this pilot study.

** No conflicts of interest to declare

Results:

Both groups showed similar performance outcomes for task completion, an **intracorporeal laparoscopic knot** ($P = 0.267$) and the secondary outcomes (needle driving and knot tying), without statistical difference.



On the 4-week skills retention assessment individuals of the CBVI group performed significantly better compared to the IGST for needle loading time ($F = 9.758, P = .014$) (fig).

Conclusion:

This is the first study of its kind where there is a direct comparison of CBVI and IGST and we have demonstrated that it is feasible to acquire advanced laparoscopic skills only via computer-based video instructions without the need of face to face expert or peer feedback.

Moreover, when we take into account costs for travelling and hiring of training facilities as well as considerable faculty time commitments, then the video-only training is a more effective training approach for laparoscopic suturing and potentially other complex laparoscopic skills training; especially during Covid19 restrictions.