No-cable and smartphone/tablet: A functional laparoscopic training box “Fu-Lap T-Box”

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When compared to open surgery, laparoscopy requires development of unique psychomotor skills, preferentially in a sequential manner starting using the simulators and dry lab, then wet lab and finally transfer the accumulated experience to the real life procedures. It has been shown that the box trainers are associated with increased physical resemblance and trainee satisfaction when compared to virtual reality trainers making them the preferred models for basic laparoscopic skills development.[1] Several attempts were done to develop easily available and cheap models.[2] Now we have several well designed and validated laparoscopy training models and steps to be used in urology.

The authors in this study developed a laparoscopic training model which is ergonomic, cheap, easy to transfer and setup and do not need extra video or light source. The system uses a standard tablet or a cell phone. The main problem with this training model is that the monitor used for the laparoscopic surgery is not located on the patient but usually in a different place that mandates the surgeon performing the procedure while the hands are located outside the visual field of the eyes. This is one of the surgical skills that should be improved during the training period. Therefore, the main superiority of their training model (being no cable, no energy source, with just tablet/cell phone) which the authors stressed several times may actually be their main drawback.

Furthermore, the authors did not evaluate the benefits of the training model if any to the trainee’s laparoscopic skills. Further studies demonstrating the educational role of their model and also confirm the validity.

Nevertheless, this study could provide an inspiration for development of models mimicking the real time conditions resembling those of clinical practice such as stress, noise, alternating visual dynamics due to heat changes, smoke or bleeding or working while clutching the working instruments against the camera.

References
