

## Surgical training

I read with much interest the article entitled "Effectiveness of repeated video feedback in the acquisition of a surgical technical skill" by Backstein and associates (*Can J Surg* 2005;48:195-9). I appreciated very much the method of repeated video feedback associated with the bench training investigated by the authors.

Unfortunately, the models used for training do not allow any apprenticeship or opportunity to gain technical skill.<sup>1</sup> In our experience of training courses on subfascial endoscopic perforator surgery (SEPS) we employed a 3-step apprenticeship, starting from the mechanical simulator, then use of an ad hoc animal model to reach the clinical setting. The models were used in the development of a fundamental sequence of drills to objectively evaluate the video-assisted procedure performances.

It is notable that, in evaluating the effect of training, the final registered times and scores of performance showed that the models (mechanical leg and abdomen of swine<sup>1</sup>) were useful for acquiring skills in surgeons familiar with laparoscopic techniques and by surgeons or residents with little experience in endoscopic techniques.<sup>2</sup> Our data, which are statistically significant, showed the importance of exercise in improving skill, not only on the simulator and on the animal model, but even in the clinical setting.

Whether performance in the training box or on the animal model may be equivalent to a real surgical performance is always difficult to assess,<sup>2</sup> but our study seemed to confirm it. Obviously, SEPS is a simple technique easy to teach, learn and evaluate since its technical steps can be readily measured.

**Francesco Rulli, MD**  
Department of Surgery  
University of Rome "Tor Vergata"  
Rome, Italy

## References

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## (Dr. Backstein replies)

Thank you for your comments regarding our study of video feedback as a means of enhancing surgical training. We are certainly in agreement with both you and the literature, which has clearly demonstrated the beneficial effect of bench model training in the development of surgical technical skills.<sup>1-6</sup> Some of these investigations have provided evidence of transfer to the human model.<sup>7</sup> In fact, much of this work has been conducted right here at our centre.

The design of our study provided ample opportunity for practice before application of the intervention to the experimental group. During 3 laboratory sessions, residents practised the surgical task and received extensive individual feedback from vascular surgeons. Residents were free to ask questions of the experts, and the experts were free to provide verbal feedback as they circulated through the work stations.

It is true that this study did not have a stepwise progression in model fidelity similar to the described subfascial endoscopic perforator surgery, but this was not the purpose of our study. Our aim was to look for any improvement among groups that was attributable to video feedback. We were not attempting to develop the best possible bench model strategy.

Our findings corroborated earlier work, which also found no significant benefits of videotaped feedback among orthopedic surgical residents

using technical skills of varying difficulty.<sup>8</sup> We believe that there is either no benefit attributable to video feedback or we do not possess measurement tools sensitive enough to recognize them. It is our opinion that a more extensive bench model training strategy such as in SEPS is unlikely to provide clear evidence that video feedback is beneficial.

**David Backstein, MD, MEd**  
Division of Orthopaedic Surgery  
Mount Sinai Hospital  
Toronto, Ont.

## References

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