

LETTER TO THE EDITORS

Confidence and skills for transplant surgery can be trained with hands-on courses

doi:10.1111/tri.12263

Dear Sirs,

Hands-on courses for the training of surgical skills are well accepted in many fields of surgery, especially in laparoscopic procedures and in the development of new surgical techniques before they are implemented into clinical practice. For the training of young surgeons within Europe, these courses will play an important role for residents who—because of restrictions by the European working time directive—are not allowed to attend surgical procedures as intensive as it has been years before.

The “Transplant-Operative-Procedure-Course” (TOP-Course) is a well-established training course for transplant surgeons. It was founded in 1999 and since then has a structured 5-day program with the aim of teaching the attendees basic as well as elaborate technical surgical skills in the field of transplant surgery. Accompanied by theory and practical exercises on vessels, suturing complex transplant procedures are carried out by the attendees in a realistic, heart-beating pig model.

To find out how effective this course might be, the attendees were evaluated by the experienced tutors according to their individual state of training and performance twice. One focus was the “felt ability” to perform a procedure independently, the other focus was the time needed to finalize a standardized anastomosis. The technical skills of participants were evaluated using a modified established score (0–25 points; [1]) while the improvement in self-confidence of attendees to perform a procedure was determined by using standardized questionnaires at the beginning and end of course. The data of 45 participants of practical tests and questionnaires were analyzed thoroughly.

The evaluation of participants showed a significant improvement in self-confidence after attending the course (Fig. 1). This was true for simple procedures (suturing of vascular anastomosis) as well as high-complex procedures (e.g., liver transplantation). The highest increases in self-estimated confidence were found in performing a kidney (rise from 40–80%; $P = 0.003$) and a liver (from 20 to 58%; $P = 0.001$) transplant procedure. The same

improvement was seen in technical skills of participants: for the first day, a mean skills-score of 17 (9–25) was found. This increased on the 5th day significantly to a mean value of 24 (17–25; $P < 0.001$) while in parallel the time needed to finish a standardized vascular anastomosis decreased significantly (754 vs. 535 s at the end of the course ($P < 0.001$)). In short, this course is an effective training of young transplant surgeons.

In many special fields of surgery such as visceral, trauma, or vascular surgery, the training of surgeons is exactly regulated. This is still not true for transplant surgeons who still train themselves on a learning by doing basis without a widely accepted curriculum.

Because of the European working time, regulation directive in medicine residents in surgery do not have as much exposure to surgical procedures as in former times. The significantly restricted timely presence of trainees in operating theatres on their way to the surgical independence of a consultant indicates the need to translocate individual training steps from the clinical setting into courses supporting practical training [2]. These involve technical skills and efficiency of operative activities in the operation room. Today, there is a huge number of training courses for the operative disciplines being intensively promoted taking place apart from daily routine [3,4]. The herein presented course is a tool to improve the training of transplant surgeons in different aspects.

A critical point of these training courses still is the transfer into practice. However, different studies could demonstrate significant improvements in various techniques in clinical setting after being trained in a hands-on course [5,6]. Although detailed research in assessing the value of animal and maybe cadaveric workshops is still required [7], some studies showed that skills, learned in courses, can be transported effectively to the operating theatre [8,9]. For this very reason, hands-on courses such as the TOP-course, as being presented herein, will play a more and more important crucial role in the training of surgeons, especially in the field of transplant surgery.

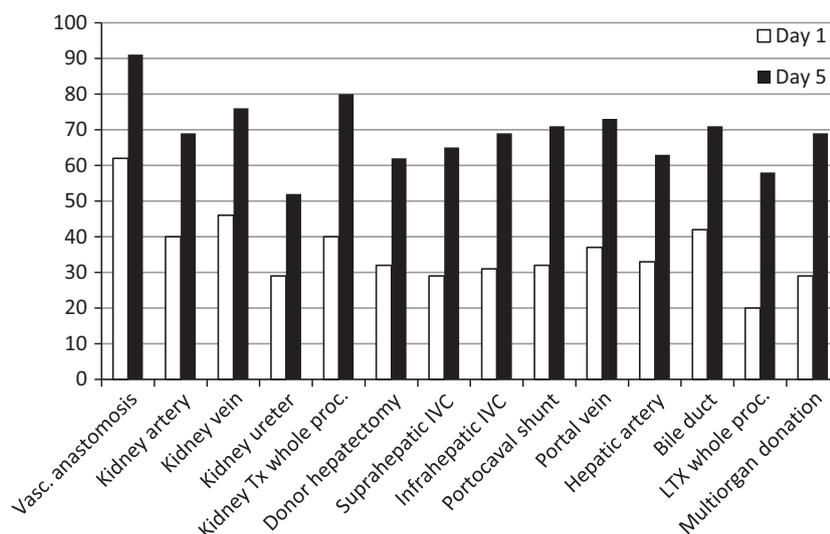


Figure 1 Evaluation of self-confidence: white columns: day 1; black columns: day 5; percentage of attendees who presume to be able to do the procedure on their own (significant improvement in self-confidence from first to second evaluation in different procedures ($P < 0.001$ – 0.011 ; $n = 45$).

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Conflict of Interest

None.

Funding

The hands-on courses are continuously supported by Astellas Pharma GmbH.

Acknowledgements

We thank Astellas Pharma GmbH for continuously supporting the hands-on courses as well as founders and tutors of the TOP-course (M Anthuber, H Bockhorn, F Braun, J Brockmann, T Becker, KH Dietl, S Farkas, P Friend, C Graeb, C Mönch, R Obermaier, A Pascher, G Puhl, N Richter, W Schareck, A Schnitzbauer, T Vogel, H Wolters and C Zülke).

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