

SV8: LAPAROSCOPIC INTRACORPOREAL SUTURING SKILLS ACQUISITION DURING A PEDIATRIC LAPAROSCOPIC COURSE

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Background This study focused on the acquired abilities during a basic laparoscopic course for pediatric surgeons. In this surgical specialty one of the most essential skills is intracorporeal suturing, which is needed for most of the procedures performed on the digestive tract. The aim is assessment the learning curve in laparoscopic intracorporeal suture of novices pediatric surgeons.

Materials and methods In this course participated 14 pediatric surgeons with no previous experience in laparoscopy. The course has a total duration of 21 hours. The activity is constituted by hands-on sessions completed on simulator during the first day and on animal model during the subsequent days. After a brief expert demonstration of the knotting technique, attendants performed one simple suture on inorganic tissue at the start of the hands-on simulator session. At the end of the course, each surgeon carried out one simple seromuscular suture in the gastric wall on porcine animal model. The assessment parameters were: total completion time with each suture (limited to a maximum of 7 minutes), performance quality, tears on inorganic tissue, end knot quality and precision errors.

Results Average suture completion time significantly decreased at the end of the training activity. 6 of the 14 attendants were not able to complete the first suture in the established time limit. On the first day we observed 44.4% total errors, with a majority of precision errors (27.8%), followed by end knot quality (16.7%) and presence of tissue tears (5.6%). At the end of the course, total errors were significantly reduced to 22.2%, the most predominant being end knot quality (11.1%).

Conclusions The results obtained in this study show a significant improvement in intracorporeal suturing skills in novice pediatric surgeons, reflected by a significant decrease in performance times and an increase in simple suture quality.

Attendance to regulated hands-on courses in laparoscopic surgery at the beginning of the pediatric surgeons' learning curve lightens and possibly accelerates the acquisition of skills in laparoscopy.

Key words laparoscopic skills, intracorporeal suturing, pediatric, training