



Laparoscopic surgical training in laboratory animals.

Authors: Galvao Neto, Manoel; Ziberstein Bruno; Cohen Ricardo; Guimarães, Pedro; Fahel, Edvaldo; Gama-Rodrigues Joaquim.

Institution: Digestive System Surgery of the Gastroenterology Department of the Sao Paulo University of Medicine

**INTRODUCTION:** The majority of the of experimental training models of video surgery uses pigs and dogs with inconveniences of high cost, needs of specific logistic conditions nonexistent in most medical schools. The use of laboratory animals in the training of the video surgery can solve these inconveniences. The Research Nucleus of Experimental Surgery of the Bahia School of Medicine and Public Health has developed video surgery models in laboratory animals, as much in rats as in rabbits. In rats, were developed the models of diagnostic video laparoscopy, pneumoperitoneum open and closed, esophagomyotomy, fundoplication, vagotomy, hepatectomy, esplenectomy, video assisted enterectomy, inguinal hernia repair, nefrectomy and a original model of orquidectomy. To evaluate the training model, this prospective study was design. **OBJECTIVE:** To evaluate the efficacy of specific training model in video laparoscopic surgery, in comparative way, when applied to medical students and doctors with basic experience in laparoscopic method. **METHODS:** 63 participants divided in two groups. Group 1 (36 doctors) and Group 2 (27 medical students). They participate in same theoretical training with theoretical class, training in simulators and accomplishment of laparoscopic surgical procedure (orquidectomy) in wistar rats using regular 10 and 5mm trocars and laparoscopic instruments with no adaptation in a close pneumoperiteum, under orientation. The training was evaluated by a protocol specifically elaborated for this end, and the results were compared and statistically analyzed (statistical significance =  $P < 0,05$ ). **RESULTS:** Difference was evidenced in the phase of the simulator training, where group 2 was better ( $p = 0,00182$ ). Group 1 was better in the laparoscopic procedure in the phases of pneumoperitoneum ( $p = 0,0148$ ) and laparoscopic surgical procedure ( $p = 0,0000019$ ). All participants of the study completed the phases of pneumoperitoneum. In the other variables evaluated, the groups had similar results. **CONCLUSION:** The group of medical students got better in one of the phases of the training in simulator. The group of doctors got better utilization in the laparoscopic surgical procedure. The training model adopted was validated by its results and by the elevated acceptance by two groups of the study. The evaluation model of the training, specifically developed for this end, allowed adequate interpretation of the results. In the conditions presented, medical students and doctors can be trained to accomplish laparoscopic surgical procedure in laboratory animal.

