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Design and Evaluation of a Synthetic Tissue for Simulation of Laproscopic Knotting and Suturing

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Introduction: The training of a surgical resident should include practical exposure to knowledge that has been translated into motor skills. The skills of suturing and knotting by laparoscopy are usually the first exposure in simulation centers, where the possibility of repeated practice improves the final performance in the residents. Finding in the market a product, that simulates real tissue, like the intestine, easily and affordably, is difficult in our environment. We developed a synthetic tissue, that was manufactured at home, which is economic, reusable, with consistency similar to the intestine and easy to use in the laparoscopic simulation environment.

Materials and Methods: A descriptive observational study was carried out with 25 laparoscopic surgeons who evaluated them entioned tissue through laparoscopic suturing and knotting, by means of a semi-structured perception survey.

Results: The overall score of the experience had a median of 9 on a visual analog scale from 0 to 10 in regard to the specific characteristics of the tissue, the perception that it allows a simple and continuous suture to be per-formed easily, was 68% (n = 17) and 52% (n = 13) respectively and to perform laparoscopic intracorporeal knotting with muchease was 76% (n = 19).

Conclusion: The proposed tissue fulfills the desired characteristics and provides a useful simulation model to improve the learning of knotting and suturing by laparoscopy.

Biography:

Dr. Liliana Cuevas-López is a graduated medical doctor and a general surgeon from Pontificia Universidad Javeriana in 2008 and 2014, respectively. Since then she have been working in the San Ignacio University Hospital (Bogota, Colombia) as a general surgeon and she was assigned in 2015 as an assistant professor by the Department of Surgery of the Javeriana university where she is in charge of the simulation laboratory. In last 4 years she has focused her research in surgical education and minimally invasive surgey.