

Safety of Elective Laparoscopic Cholecystectomy in Residents of General Surgery: The Ecuadorian Experience



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Background: High-quality surgical care is a constant concern, especially in teaching hospitals, which guarantees standardized surgical training. Very few studies have been conducted about the impact of seniority, in terms of safety and outcome of Elective Laparoscopy Cholecystectomy (ELC) performed by residents of General Surgery. Hospital Luis Vernaza is a non-profit tertiary referral center of Guayaquil and the biggest academic hospital of the Ecuadorian Coast. It gives attendance to an important part of our population. A significant number of physician are involved in the General Surgery Training Program of that institution.

Aim: To assess safety of ELC performed by residents that are undergoing training in General Surgery.

Material and methods: A retrospective analysis was conducted from a database of patients operated electively due to cholelithiasis at Hospital Luis Vernaza, between September–2015 and August–2016. Patients with acute

cholecystitis, choledocholithiasis, undergoing cholecystectomy as a part of a more extensive surgery and patients with gall-bladder cancer were excluded. Group 1 included patients operated by residents of second and third year of General Surgery Training Program, under supervision and assistance of a certified General Surgeon, and with at least 50 LC previously performed. Group 2 included patients operated by a specialist in General Surgery. The end points of the study were: overall length of surgery time, number of complications, number of conversions to the open technique, exchange of the operator and length of hospitalization. Both groups were compared according to those parameters, using Chi-squared test for categorical variables and Mann-Whitney U-test for continuous variables.

Results: We analyzed 486 patients, 245 (50.4%) in Group 1. 411 (84.6%) were female. There were significant statistical difference between Group 1 and 2 in age (43.15 ± 12.3 vs. 49.58 ± 14.7 ; $p=0.001$) and gender (Female 411, 84.6% vs. Male 75, 15.4%; Ratio: 11:2; $p<0.001$). Mean overall length of surgery time was 34.86 ± 7.3 minutes – 35.25 ± 7.8 in Group 1 and 34.47 ± 6.8 in Group 2 ($p=0.078$). Only one complication (bleeding) has occurred (0.2%) – 1 (0.4%) in Group 1 and 0 (1.7%) in Group 2 ($p=0.321$). Any conversion to the open technique or exchange of the operator occurred. Average length of hospitalization was 1.00 ± 0.1 days – 1.01 ± 0.1 in Group 1 and 1.00 in Group 2.

Conclusions: ELC performed by residents under attending specialized physician supervision is a safe procedure. High-quality surgical care standards are essential for quality of care improvement reduction of post operatory complications

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