

Risk Assessment and Learning Curve in Laparoscopic Transperitoneal Adrenalectomy – Early and Late Experience of a Single Team

Adrian Miron, Octavian Enciu, Elena Adelina Toma, Valentin Calu
Department of Surgery, Elias University Emergency Hospital, Bucharest, Romania

Abstract

Since its first description in 1992, laparoscopic adrenalectomy has become the standard of treatment for most benign and low grade small adrenal tumors but due to the low incidence of adrenal disease, it remains a rarely performed intervention outside referral or excellence centers. Although laparoscopic surgery had a positive impact on complications of adrenalectomy, surgical risk should be thoroughly assessed when it comes to secreting or large tumors. This is a retrospective analysis of laparoscopic adrenalectomies performed in the first 4 years of practice 2007-2010 - the early experience including the learning curve of the senior surgeon, and our late experience from 2016 to 2019. All interventions were performed by a single team led by a senior surgeon with extensive experience in advanced laparoscopic surgery, using the lateral transperitoneal approach. In total, 82 cases were included, out of 153 laparoscopic adrenalectomies performed between 2007 and 2019. Only one conversion was recorded during the early experience and two laparoscopic reinterventions were needed for hemostasis and drainage. Non-secreting adenoma was the most frequent indication for surgery (26 cases) followed by Cushing's Syndrome (22 cases) while adrenocortical carcinoma was diagnosed in 3 cases. Significant differences were found between the two periods regarding operative time and length of postoperative hospital stay ($p<0.001$). With growing experience in laparoscopic transperitoneal adrenalectomy, less complications and shorter operative time and postoperative hospital stay are to be expected.

Key words: laparoscopic transperitoneal adrenalectomy, surgical risk, learning curve