

**XXV National Congress of the "Società Polispecialistica Italiana dei Giovani Chirurghi"  
13-15 June 2013, Bari, Italy**

**OVERCOMING THE LEARNING CURVE OF A RETZIUS-SPARING APPROACH FOR ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY: ONCOLOGICAL AND FUNCTIONAL RESULTS ON THE FIRST 200 PATIENTS**

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**Objective:** To evaluate the learning curve of an unexperienced robotic surgeon on pelvic lymph node dissection (R-PLND) during robot-assisted laparoscopic radical prostatectomy (RALP)

**Methods:** Starting from March 2011, we prospectively recorded the pre-, intra, and postoperative data of all patients undergoing R-PLND during RALP. The related surgical experience of the PLND surgeon was 40 open PLNDs as first surgeon and 100 robotic surgeries as bedside assistant. We divided the series in 3 groups of 33 cases in order to evaluate the learning curve.

**Results:** The first 99 consecutive R-PLNDs were included. Median surgical time was 90 minutes. Five patients underwent transfusions. One of them underwent embolization of a gluteal artery branch. Overall, complications were recorded in 14% of patients. Ten patients reported temporary paresthesias; 5 patients had lymphorrhea for more than 7 days; 10 patients needed to put a drain for symptomatic lymphocele, in 2 cases concomitant with deep venous thrombosis. Considering the 3 groups, we could notice no change in median surgical time (90 minutes versus 85 versus 105 –  $p=0,23$ ) and in complications (12% versus 15% versus 15%  $p=0,12$ ); on the contrary, the median number of lymph nodes removed significantly increased in the groups (16 versus 18 versus 20 nodes –  $p=0,02$ ).

**Conclusions:** We reported the learning curve of a naïve robotic surgeon with limited open surgery experience. We believe that at least 60 robotic PLNDs have to be performed to remove an adequate number of nodes in a limited surgical time.

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**ROBOTIC-ASSISTED LIVER SURGERY: OUR EXPERIENCE AND SURGICAL OUTCOMES**

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**Objective:** The aim of this study is to present the results of our series of robotic-assisted liver surgery. Robotic-assisted technology offers solutions to the fundamental limitations of conventional laparoscopic liver resection.

**Methods:** It is a retrospective study of a series of robotic-assisted liver resection from January 2010 to January 2013. Outcomes analyzed included: pre-operative data, type of surgery, operative time, estimated blood loss, length of stay, complication rate, conversion rate to open, postoperative evolution and follow up.

**Results:** It has been included in the study a total of 8 patients: 4 women and 4 men with a mean age of 57 years. Six cases of metastases (atypical resections), one hydatid cyst and one cholangiocarcinoma (right hepatectomy). There were no cases of conversion to open surgery. Mean operative time was 210 minutes (range: 130-360 minutes) and there were not intraoperative complications. The average number of red blood cells transfused was 0.6 (range: 0-3 units). Later ICU stay average was 3 days and overall hospital stay of 12 days. This series includes the first case of complete robotic hepatectomy performed in Spain.

**Conclusions:** The study shows that robot-assisted liver surgery is a feasible and safe tool for the minimally invasive resection of hepatic lesions. It has similar results to those obtained by laparoscopic and open surgery described in literature. However, further prospective randomized studies are needed to confirm these data.

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**PARENCHYMAL SPARING ROBOTIC LIVER SURGERY**

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**Objective:** In recent years the concept of metastatic liver disease has dramatically changed. Reports of surgical approach to multiple bilobar metastases increased. Laparoscopic treatment of metastatic liver disease was first described twenty years ago and its limitations are well known: approach to posterior segments and size lesions over 5 cm as reported in Luisville's Consensus Conference of 2008. Introduction of robotic technology overcame technical difficulties of laparoscopic approach for hepatic resections.

**Methods:** Video shows parenchymal sparing liver resection for metastatic disease. Intraoperative ultrasonography is performed to detect lesions and parenchymal resection is achieved by bipolar forceps and monopolar scissors. 3D-vision, endowrist tools and surgical field stability overcame technical limitations of traditional laparoscopic surgery, allowing to realize accurate and safe dissections of liver parenchyma.

**Results:** Since September 2012 we performed 10 full robotic procedures for liver metastatic disease. Mean age was 74 years. Total number of metastases removed was 18 and histological exam revealed negative margins in all cases. Mean operative time was 342 minutes (range 250-480 min); mean blood loss were 250 ml (range 100-320 ml); there was no conversions.

**Conclusions:** Robot assistance facilitates parenchymal sparing surgery, providing good results in terms of bleeding and biliary leakage.

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**ROBOTIC TOTAL MESORECTAL EXCISION FOR RECTAL CANCER**

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**Objective:** Robotic approach may increase the precision of rectal dissection and overcome technical difficulties of laparoscopy. This study evaluate feasibility and oncologic results of a consecutive series of patients.

**Methods:** From July 2008 to December 2012, 75 patients received a robotic total mesorectal excision.

**Results:** Patients' median age was 64 years, median BMI was 24 kg/m<sup>2</sup>. ASA status was 1 in 14 patients, 2 in 49 patients, 3 in 12 patients. 48% of the patients received a neoadjuvant treatment. Surgical procedure was an anterior resection in 52 patients (69%) and an abdomino-perineal resection in 31 (31%). Median surgical time was 240 minutes. Two conversion to open surgery were necessary. Major complications requiring reoperation occurred in 5 patients (6.6%). First bowel movements were observed in 2 postoperative day, median hospital stay was 6 days. AJCC stage was 0 in 13 patients, I in 18 patients, II in 10 patients, III in 27 patients and IV in 7 patients. Distal resection margin was positive in one patient, median distal resection margin was 3 cm. Circumferential resection margin was positive in two patients; median number of removed lymph nodes per patient was 18 (range 4-49). At a median follow up of 23 months (range 1- 53), overall survival is 89% and disease-free survival is 72%.

**Conclusions:** Robotic-assisted surgery of the rectum is a feasible technique with good clinical and oncologic results. Further studies are necessary to evaluate potential advantages of robotic technique in rectal cancer.

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