AISP - 36th National Congress. **Bologna, Italy. October 4-6, 2012**

Laparoscopic *Versus* Open Left Pancreatectomy: Short Term Outcome and Cost-Benefit Analysis

Maria Rachele Angiolini, Gianpaolo Balzano, Nicolò Pecorelli, Riccardo Ariotti, Renato Castoldi, Paolo Baccari, Marco Braga

Unit of Pancreatic Surgery, Department of General and Specialist Surgery, IRCCS San Raffaele Hospital. Milan, Italy

Context An increasing number of surgeons are today performing laparoscopic left pancreatectomy (LLP), since available nonrandomized studies demonstrated its feasibility, safety and oncologic adequacy. However, most existing data come from small single-institution reports or from heterogeneously composed multicenter comparisons. Moreover, there is very limited information about economic implications of minimally invasive pancreatic surgery. **Objective** This study reports our experience in laparoscopic left pancreatectomy compared with open technique (OLP), assessing perioperative outcomes and financial impact of this procedure in a high volume surgical setting. **Methods** Between February 2009 and June 2011 we performed 112 left pancreatectomies, 53 of which (47%) were LLP. Excluding the initial learning curve, the remaining 43 patients were matched with a control group selected from our perspective electronic database. Match criteria were gender, age, ASA score, BMI, lesion site, malignant or benign disease. **Results** Mean operative time was similar (LLP 216±61 min; OLP 214±7 min; P=0.885), blood loss was reduced in LLP (388±371 mL vs. 571±599 mL, P=0.092), especially in cancer patients (514±350 mL *vs*. 946±787 mL, P=0.072); intraoperative transfusion and unplanned splenectomy rates were similar. Larger lesions were associated with increased unplanned splenectomy rate. Conversion rate (CR) was 18%; higher BMI (>30 kg/m^2) and pancreatic body site were associated with increased CR. There were no differences in positive margin rates, number of nodes examined and number of N1 patients. There was no mortality in both groups. Overall morbidity was equable (63% in LLP, 60% in OLP; P=0.958), as well as major complication rate (7% in LLP, 3% in OLP; P=0.604). Clinically significant pancreatic fistula rate was 14% in LLP and 9% in OLP (P=0.728). No grade C fistulas were observed. An equal proportion of patients in each group was discharged before removing surgical drain. Delayed gastric empting, wound and urinary tract infection were more frequent in OLP. Mean LOS was 8.37 days in LLP *vs*. 8.81 days in OLP (P=0.481); LOS in non complicated patients was 6.96 days in LLP *vs*. 7.50 days in OLP (P=0.220). Mean number of diagnostic test, transfusion rate, antibiotic administration and readmission rate were similar. Each patient of LLP group saved €168.47 because of shorter LOS and slightly fewer complication cost, generating however an extra cost of €767,01 due to more expensive surgical instruments. **Conclusion** This study confirms safety and oncologic adequacy of this technique, identifying probable risk factors for conversion and demonstrating economic sustainability of LLP. Final balance still have to be realized considering indirect costs as shorter home convalescence, quality of life and better cosmetic result.