



O-035 - ROBOTIC VERSUS LAPAROSCOPIC DISTAL PANCREATECTOMY: A COMPARATIVE COSTS-EFFECTIVENESS STUDY

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Resumen

Introduction and objectives: The robotic surgery cost presents a critical issue which has been investigated only in few studies. In the literature there is not any study which evaluate the cost-effectiveness of the robotic distal pancreatectomy (RDP) over de laparoscopic distal pancreatectomy (LDP). We have therefore performed a prospective comparative study of RDP and LDP performed at our centre with the aim to evaluate clinical and the cost-effective outcomes.

Methods: This is an observational, comparative prospective non-randomized study which includes patients that underwent RDP and LDP reaching a minimum of 6 months of follow up from February 2014 to March 2018, at the Sanchinarro University Hospital, Madrid. An independent company performed the financial analysis and fixed costs were excluded. Outcome parameters included surgical and post-operative costs, quality adjusted life years (QALY), and incremental cost per QALY gained or the incremental cost effectiveness ratio (ICER). The primary end-point was to compare the cost effectiveness differences between both groups.

Results: A total of 35 RDP and 31 LDP have been included. Conversion rate resulted to be significant higher in the LDP (3.6% vs 19.2%; $p = 0.04$). The overall rate of pancreatic leak was 10.7% in the RDP group and 15.4% in the LDP group ($p > 0.5$). The mean number of hospital stay days was significant higher in the LDP (8.9 days vs 16.9 days, $p = 0.03$). The mean operative time was higher in the RDP (294 vs 241 min; $p = 0.02$). The overall mean total cost was similar in both groups (RDP: 9,198.64€ vs LDP: 9,399.74€; $p > 0.5$). Mean QALYs at 1 year for RDP (0.622) was higher than that associated with LDP (0.60025) ($p > 0.5$). At a willingness-to-pay threshold of 20,000 € and 30,000 €, there was a 63.58% and 76.69% probability that RDP was cost-effective relative to LDP.

Conclusions: Cost-effectiveness analysis is paramount whenever a new technology is introduced. For the first time in literature we assess the cost effectiveness of robot versus laparoscopy for distal pancreatectomy and this study might stimulate further larger, randomized studies. This study provides data of cost-effectiveness between RDP and LDP approach showing benefit for the RDP.