

**BP OP 3-3****Cost-effectiveness of open versus laparoscopic pancreatectomy: A population-based study using data from the Korea National Health Insurance Service**

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Introduction : It has been shown that laparoscopic pancreatic resection(LPR) is comparable to open pancreatic resection(OPR). However, cost-effectiveness analysis of LPR is rare. We performed a population-based study on the cost-effectiveness of LPR versus OPR.

Methods : Data of 9,255 patients who received pancreaticoduodenectomy(PD) (66.8%) and distal pancreatectomy(DP) (33.2%) from 2016 to 2018 were retrieved from the National Health Insurance Service. Events after pancreatectomy were categorized as no complications, intervention, reoperation, and death. Probabilities of each event and average cost during index admission(IA) and postoperative 1 year(Po1Y) were utilized to calculate incremental cost effectiveness ratio(ICER), the cost difference between two interventions divided by quality adjusted life year(QALY). QALY, a function of length and quality of life, was measured with utility values determined by researching literature.

Results : LPR was performed in 8.2% of PDs and 17.8% of DPs. For PD, LPR was associated with an increase of 0.0196QALYs for IA and 0.0493QALYs for Po1Y compared with OPR. Incremental cost was 1,212,460KRW for IA and -1,392,859KRW for Po1Y, leading to an ICER of 61,930,603KRW per QALY gained for IA and -28,275,704KRW per QALY gained for Po1Y. For DP, LPR improved 0.0671QALYs for IA and 0.0853QALYs for Po1A. Incremental cost was -1,012,637KRW for IA and -7,498,315 KRW for Po1Y, leading to an ICER of -15,095,637KRW per QALY gained for IA and -87,937,998KRW for Po1Y.

Conclusions : Except initial higher cost of LPR, LPR was a cost-effective alternative to OPR for PD and DP.

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