

Abstract Type : Poster

Abstract Submission No. : PO-1735

Laparoscopic Retroperitoneal versus Transperitoneal Adrenalectomy for Adrenal Tumour: an Updated Meta-analysis

Atika Budhy Setyani¹, Fanny Riana Ridwan²

¹Department of Research and Development, Cempaka Putih General Hospital, Jakarta, Indonesia

²Department of Urology, Cipto Mangunkusumo National General Hospital, Jakarta, Indonesia

Objectives: Recent evidence showed inconclusive results regarding superior outcomes between laparoscopic retroperitoneal adrenalectomy (LRPA) and laparoscopic transperitoneal adrenalectomy (LTPA) in adult patients with adrenal tumour. Therefore, we did a study to compare the surgical outcomes of LRPA versus LTPA for the adrenal tumor in adults.

Methods: Major medical databases were systematically searched for randomized control trials (RCTs) evaluating the utilization of LRPA compared LTPA for adrenal tumour, published until February 2020. The databases were searched with predefined protocols following PRISMA guidelines and those studies were evaluated using the GRADE approach. The pooled measures for Relative Ratio (RR) and weighted mean difference (WMD) were obtained using RevMan 5.3.

Results: Six RCTs involved 163 participants in LRPA and 164 in LTPA group. Pooled meta-analysis showed that all-cause mortality did not significantly different between the two groups (RR=1.39, 95%CI [0.31,6.26], p=0.67, I²=40%). Compared to LTPA, LRPA group had lower early (RR=0.35 [0.18,0.68], p=0.002, I²=0%) and late morbidity (RR=0.34 [0.12,0.95], p=0.04, I²=21%) after procedure without significant heterogeneity. LRPA also had significant lower blood loss during operation by 12.4 cc [-16.95,-7.82], p<0.00001, I²=37%, and 24-hour post-operative pain by 4.58 VAS score [-7.32,-1.83], p=0.001, compared to LTPA, but not duration of surgery (WMD=-1.15 hour, p<0.89), conversion for open surgery (RR=1.79, p=0.48), hospital length of stay (WMD=-0.35, p=0.26), post-operative organ complications comprising chest infection, pleural effusion, abdominal abcess, etc (RR=0.97, p=0.98). After procedure, LRPA had significant lower time to oral intake (WMD= -8.52 hours, p=0.0006 and ambulation (WMD= -5.4 hours,p<0.00001) but not time to return to normal activity WMD=-0.75 day, p=0.56), compared to LTPA.

Conclusions: LRPA was appeared superior to LTPA in terms of lower morbidity, lower postoperative pain, lower blood loss, shorter time to oral intake and ambulation. However, the other outcomes were shown comparable between those laparoscopic techniques.