AB114. SOH21AS235. Robotic versus laparoscopic versus open hepatectomy for colorectal liver metastases: a systematic review and network meta-analysis

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Background: Despite developments in minimally invasive technology, there is a lack of consensus among surgeons regarding the optimal technique for resection of colorectal liver metastases. The aim of this study was to compare outcomes for robotic hepatectomy (RH), laparoscopic hepatectomy (LH) and open hepatectomy (OH) via a systematic review and network meta-analysis.
Methods: A systematic literature search was performed using the PubMed, Scopus and Cochrane databases. Only randomised controlled trials or propensity score matched studies were considered for inclusion. Studies reporting on patients undergoing hepatectomy for indications other than colorectal liver metastases were excluded. Studies comparing non-operative management, liver ablation or other treatment strategies were excluded. Outcomes included intraoperative blood loss, operative time and survival, amongst others.
Results: Seventeen papers, with 5,534 patients, were found to meet the inclusion and exclusion criteria. RH was associated with a significantly lower length of stay in comparison to LH and OH. There was no significant difference in intraoperative blood loss or operative time between the groups. Five-year survival was 50.5% for OH, 67.5% for LH and 42.5% for RH.
Conclusions: RH is associated with reduced length of stay in comparison to LH and OH. Intraoperative blood loss and operative time did not differ between the groups. LH appears to infer an improved 5-year survival in comparison with RH.
Keywords: Colorectal liver metastases; laparoscopic hepatectomy (LH); network meta-analysis; open hepatectomy (OH); robotic hepatectomy (RH)

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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