



AB042. SOH24AB_205. The impact of timing on outcomes in appendicectomy: a systematic review and network meta-analysis

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Background: Appendicectomy remains the standard treatment for appendicitis. There is a lack of clarity on the timeframe in which surgery should be performed to avoid unfavourable outcomes. We aimed to perform a systematic review and network meta-analysis to evaluate the impact the (I) time of day surgery is performed, (II) time elapsed from symptom onset to hospital presentation (patient time), (III) time elapsed from hospital presentation to surgery (hospital time), and (IV) time elapsed from symptom onset to surgery (total time) have on appendicectomy outcomes.

Methods: A systematic review was performed as per Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA)-network meta-analysis (NMA) guidelines. The time-of-day which surgery was done was divided into day, evening and night. The other groups were divided into <24, 24–48, and >48 hours. The rate of complicated appendicitis, operative time, perforation, post-operative complications, surgical site infection (SSI), length of stay (LOS), readmission and mortality rates were analysed.

Results: Sixteen studies were included with a total of 232,678 patients. Outcomes were unaffected by the time-of-day surgery was performed. The incidence of complicated appendicitis, post-operative complications and LOS were significantly better when the hospital time and total time were <24 hours. Readmission and mortality rates were

significantly better when the hospital time was <48 hours. SSI, operative time and the rate of perforation were comparable in all groups.

Conclusions: Appendicectomy within 24 hours of hospital admission is associated with improved outcomes. The time-of-day which surgery is performed does not impact outcomes. Appendicectomy should be performed promptly upon confirmation of diagnosis to reduce complication rates and improve outcomes.

Keywords: Appendicitis; appendicectomy; timing; outcomes; systematic review

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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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