

Prevalence of post-caesarean section surgical site infections in Rwanda: A systematic review and meta-analysis

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Abstract

Caesarean section (C-section) is the most performed major surgery worldwide. About 15% of births are delivered through C-section in Rwanda. The post-caesarean surgical section is one of the most frequent complications that follow a C-section. The purpose of this systematic review and meta-analysis is to estimate the pooled prevalence of surgical site infections following caesarean section deliveries in Rwanda. A comprehensive search was conducted across PubMed/MEDLINE, Google Scholar, DOAJ, AJOL and the Cochrane Library to identify primary studies on post-caesarean surgical site infections in Rwanda. Studies meeting predetermined criteria were included, and their quality was assessed using the JBI Critical Appraisal Tools. Heterogeneity was evaluated using I² statistics, while publication bias was examined via funnel plots and statistical tests. Pooled prevalence was calculated using Jamovi 2.3.28 software, with subgroup analysis conducted to identify sources of heterogeneity. Statistical significance was set at $p < 0.05$. From 139 articles initially searched from the databases, only 17 studies with 8, 082 individuals were finally included in the systematic review and meta-analysis. Using the random-effects model, the pooled estimate of post C-section SSIs prevalence in Rwanda was 6.85% (95% CI 5.2, 8.5). Subgroup analysis based on publication year, sample size, hospital and study design showed no much difference in SSI prevalence. The current systematic review and meta-analysis indicates that post-caesarean surgical site infections are significant in Rwanda. A collaborative effort is required to lower post-C-section SSIs and provide the best surgical care in the country.

KEYWORDS

caesarean section, global surgery, prevalence, Rwanda, surgical site infections

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