

Optimization of antibiotic use after appendectomy for uncomplicated appendicitis in adults: further evidence supporting restriction of postoperative antibiotic therapy

Optimierung des Antibiotikaeinsatzes nach Appendektomie bei unkomplizierter Blinddarmentzündung bei Erwachsenen: weitere Belege für eine Einschränkung der postoperativen Antibiotikatherapie

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Letter to the editor

Dear editor,

We read with great interest the recent article by Beltz et al. [1], in which the authors described the positive impact of implementing a standardized protocol based on antimicrobial stewardship principles on postoperative antibiotic management in pediatric appendicitis. They demonstrated significant improvements in the quality of antibiotic therapy, including reduced postoperative antibiotic exposure without an increase in complications.

We would like to provide additional evidence supporting this strategy in the setting of emergency surgery in adult patients.

At our secondary-level hospital, we conducted a retrospective pre–post quality improvement study to evaluate the effect of a low-cost educational intervention on postoperative antibiotic prescribing after appendectomy for uncomplicated acute appendicitis. The intervention, carried out between October and December 2025 as part of our Antimicrobial Stewardship Program (ASP), consisted of educational sessions for the surgical team, dissemination of updated recommendations, and reminder posters placed in surgical and inpatient areas.

During the pre-intervention period (January–September 2025), 25 of 139 patients with uncomplicated appendicitis (17.9%) received postoperative antibiotic therapy despite adequate surgical source control. Following the intervention, only 4 of 39 patients (10.3%) received postoperative antibiotics during the post-intervention period (January–March 2026), representing a relative reduction of 42.9%, without an increase in postoperative complications.

Our results were similar to those reported by Beltz et al. [1], despite involving an adult population and a different hospital setting. In both studies, a substantial proportion of postoperative antibiotic exposure after appendectomy appeared to remain avoidable and was mainly related to persistent clinical variability and routine antibiotic use rather than evidence-based indications.

Current guidelines do not recommend postoperative antibiotic therapy for uncomplicated appendicitis after adequate appendectomy and proper source control [2], [3], [4]. Nevertheless, this practice remains common in daily clinical care. Such unnecessary exposure is not harmless and contributes to bacterial resistance, adverse drug reactions, *Clostridioides difficile* infection, prolonged hospital stay, and increased healthcare costs. Recent recom-

recommendations from the Surgical Infection Society and the WSES guidelines have emphasized the importance of introducing antimicrobial stewardship strategies in emergency surgery [3], [4].

In our experience, relatively simple educational interventions achieved clinically relevant improvements without requiring complex structural changes or additional economic resources. Therefore, the implementation of standardized protocols and continued educational reinforcement may help improve adherence to evidence-based recommendations.

Recent large-scale analyses of pediatric appendicitis care have shown a progressive reduction in unnecessary post-operative antibiotic use over recent years [5]. This likely reflects greater incorporation of antimicrobial stewardship programs into surgical practice. However, considerable variability between centers still persists, suggesting substantial room for improvement.

We agree with Beltz et al. [1] that antimicrobial stewardship principles should be systematically integrated into appendicitis management pathways. Prospective multi-center studies, in both pediatric and adult populations, would be valuable to confirm these findings and support broader implementation of these strategies in routine clinical practice.

Notes

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Funding

This research has not received funding from public sector agencies, commercial entities, or non-profit organisations

Competing interests

The authors declare that they have no competing interests.

AI usage statement

Artificial intelligence was used exclusively for linguistic enhancement. All scientific content and writing are the sole work of the author.

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Please cite as

Mellado-García M, Dahmouni-Dahmouni H, Sandoval-Marín J, González-Valverde M. Optimization of antibiotic use after appendectomy for uncomplicated appendicitis in adults: further evidence supporting restriction of postoperative antibiotic therapy. *GMS Hyg Infect Control*. 2026;21:Doc71.
DOI: 10.3205/dgkh000680, URN: urn:nbn:de:0183-dgkh0006802

This article is freely available from

<https://doi.org/10.3205/dgkh000680>

Published: 2026-10-07

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