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Background

Acute colonic diverticulitis is a frequent cause of emergency department (ED) visits. Recent evidence suggests that in uncomplicated cases (Hinchey 1a according to the most accepted radiological classification), outpatient management without antibiotics may be a safe alternative to traditional treatment, to the point that avoiding antibiotics in such cases is recommended by the World Society of Emergency Surgery guidelines. Nevertheless, adherence to these recommendations remains highly variable across different clinical settings, and the role of antibiotics in influencing patient outcomes continues to be a subject of debate, even in common practice.

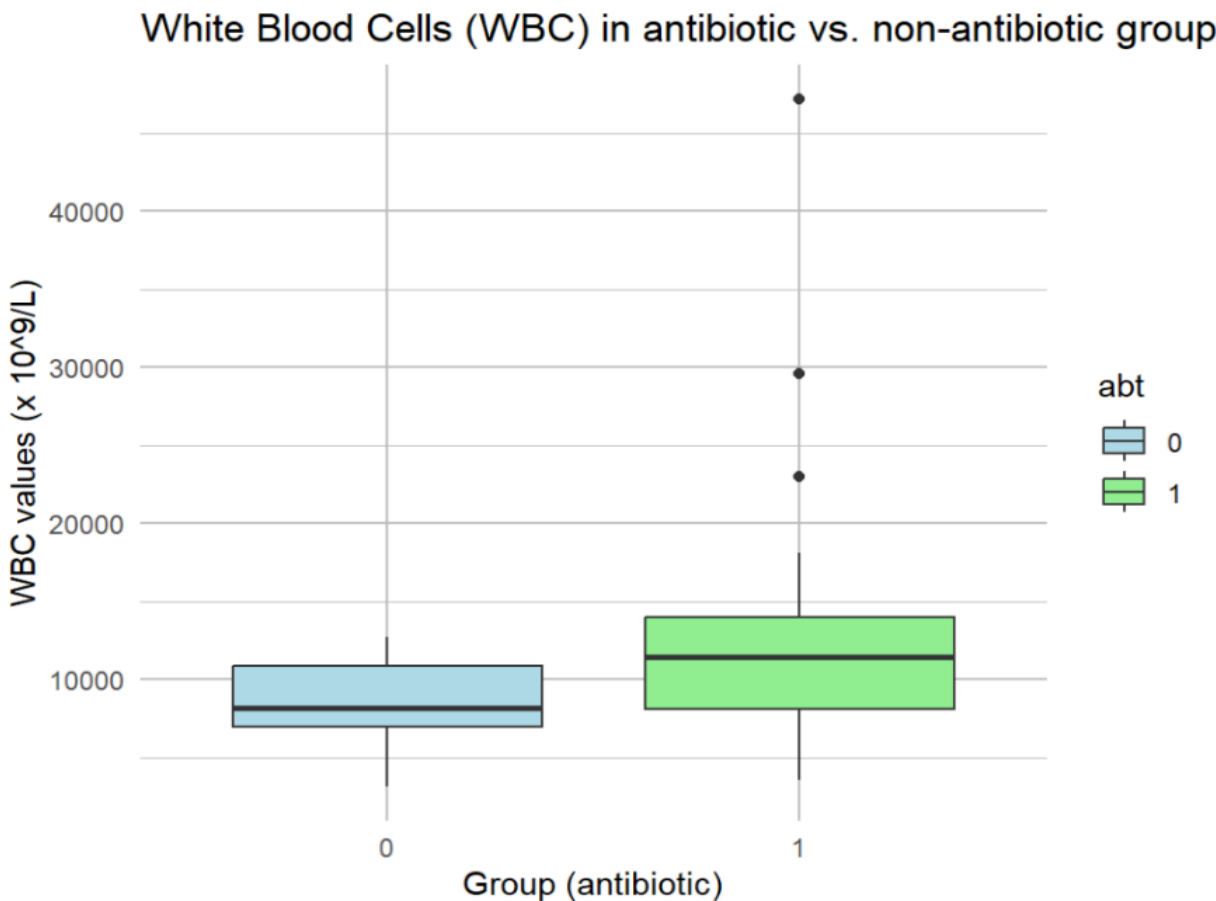
Methods

We conducted a retrospective observational study at Humanitas Research Hospital, analysing 87 adult patients discharged from the ED with a diagnosis of diverticulitis between March 1, 2024, and March 1, 2025. For each patient, demographic, clinical, laboratory, and management data were collected. Patients were then stratified into two groups based on antibiotic therapy, and differences between groups were compared using the Wilcoxon test for continuous variables and Fisher test for categorical variables, with a threshold for statistical significance set at $p < 0.05$.

Results

Among the 87 patients, 75 (86.2%) received antibiotics and 12 (13.8%) did not. Median age was identical in both groups (59.4 years). WBC values were significantly higher in the antibiotic group ($p = 0.028$), while CRP showed no significant difference. No significant differences were found between groups in complications, surgery, surgical consultations, or re-admissions ($p > 0.05$ for all outcomes).

Variable	Antibiotic Group (n = 75)	No Antibiotic (n = 12)	p-value (Fisher)
Complicated cases	7/75 (9.3%)	1/12 (8.3%)	1.000
Surgery performed	1/75 (1.3%)	1/12 (8.3%)	0.258
Surgical consult	24/75 (32.0%)	5/12 (41.6%)	0.524
Re-admission	4/75 (5.3%)	2/12 (16.6%)	0.191



Discussion

Our findings are consistent with recent international evidence and guideline recommendations questioning the necessity of antibiotics for uncomplicated acute diverticulitis. While patients in the antibiotic group presented with significantly higher WBC values (despite being in absolute level not much above the common threshold of 10,000 x 10⁹/L) – likely influencing the decision to prescribe antimicrobials – clinical outcomes such as complication rates, need for surgery, re-admission, and specialist consultation did not significantly differ between groups. These data support a very selective, severity-based approach to antibiotic use, rather than a routine, blanket prescription strategy. However, we acknowledge that the retrospective design limits the ability to draw causal inferences and is subject to potential biases in data collection. Also, the relatively small size of the non-antibiotic group reduces the statistical power, increasing the risk of type II error.

Conclusions

In our cohort, antibiotic therapy did not significantly impact key clinical outcomes in patients with uncomplicated acute diverticulitis. These results reinforce the emerging paradigm that in diverticulitis care "less is more", and while we move toward a more individualized, severity-guided treatment, “less is more” at the moment is more of a dream.

References

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