

Antibiotics versus Surgery for Appendicitis in Pakistan: Has the Former Been the Answer All Along?

Sir,

Appendicitis is an acute inflammation of the appendix, an organ connected to our large intestines, and has long been treated as an acute surgical emergency, but recent evidence supports comparable, if not superior alternative management options. With 400,000 appendectomies performed annually in Pakistan,¹ a monumental reduction in this number can be achieved if we were to employ non-surgical treatment modes.

In light of a recent 2020 research published in the New England Journal of Medicine, the use of antibiotics for uncomplicated appendicitis is equally, if not more, effective as surgery.² This was a randomized controlled trial conducted in the US where a group of patients was given a 10-day course of antibiotics which, compared to the same number of surgically treated patients, carried a non-inferior prognosis at the end of the first month (mean difference 0.01 points, 95% confidence interval, -0.001 to 0.03). Although at the end of 3rd month, almost 1/4th of the patients from the antibiotic group did go on to require an appendectomy, 7/10 patients made a complete recovery following conservative management with antibiotics. The rate of complications in the antibiotic group was almost double compared to those undergoing appendectomy which majorly included infections, perforation, need for higher-risk extensive procedures and appendectomy in the antibiotics group. However, if we exclude patients with appendicolith from the antibiotics group, the complication rate is comparable to the appendectomy group (3.6 vs. 3.5 per 100 patients, respectively). It is also important to consider that the study was followed up to 90 days.

Changing the practice from appendectomy being the go-to intervention to the use of antibiotics can help avoid unnecessary surgical exposure and use of precious resources in a country like Pakistan with an already over-burdened health-care system and at the same time, saving patients from a myriad of potential surgical plus anaesthetic complications. This approach may also allow short hospital stays for patients while ensuring minimal recovery time which helps caregivers require less time off the work to tend to the ailing patient. Also, being able to treat uncomplicated appendicitis at the primary care level can help further offload secondary and tertiary care centres.^{3,4} If this were to become common practice, surgeons

could base their decision on clinical presentation or presence of necrosis or perforation on imaging to favour surgery over antibiotic treatment, meanwhile preferring medical management for all patients uncomplicated by these factors. While scoring systems like Alvarado and Ripasa have helped diagnose appendicitis for a while, modifications of these or the development of novel systems can help make objective decisions regarding the choice of medical over surgical management or vice versa going forward.

COMPETING INTEREST:

The authors declared no competing interest.

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MHK, HT: Substantial contribution to the conception and data collection of the study, drafting, revision, and editing process of the manuscript.

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