



Guidelines for patients with acute uncomplicated cystitis may not be a paper tiger: a call for its implementation in clinical routine

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Received: 30 November 2018 / Accepted: 7 December 2018 / Published online: 18 December 2018
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Dear Editor,

We are very interested in the important paper by Markowitz et al. [1], exploring the recommendations and guidelines for acute uncomplicated cystitis (AUC) in women published in US medical societies' journals from 2008 to 2016 for several medical specialist associations. Markowitz et al. compiled various guidelines on AUC and found significant differences in their recommendations. Thus, the authors rightly concluded that lack of uniformity probably contributes to clinical management variance in AUC. This suggests a need for consistent recommendations which should then be stringently applied in clinical routine by doctors trained in antibiotic stewardship (ABS).

The several guidelines for patients with AUC agree that broad-spectrum antibiotics are unsuitable for first-line therapy, given their high propensity for collateral damage. We were able to verify non-adherence to these recommendations in our survey study (**M**ulti-institutional **R**econnaissance of practice with **M**ulti**R**esistant bacteria—MR2-study), conducted in 2015 with internists, general surgeons, gynecologists, and urologists at 18 German hospitals (the purpose was to evaluate self-reported knowledge about multidrug-resistant organisms and strategies for rational antibiotic prescriptions) [2]. One thousand sixty-one questionnaires (39 items) were issued, and with 456 evaluable questionnaires, the response rate was 43%. One question presented was which first-line therapy doctors would

select in the case of a 61-year-old female patient with an AUC. In total, 31% would treat this patient with broad-spectrum antibiotics as a first-line treatment, contrary to the recommendations of the various guidelines, with insignificant differences between the medical disciplines (internists 25%, general surgeons 34%, gynecologists 38%, and urologists 32%; $p = 0.328$). Only 69% would in this case forgo treatment with broad-spectrum antibiotics as a first-line therapy, adhering to the guidelines, whereas 58% would prescribe narrow-spectrum antibiotics ($p = 0.834$ between the diverse disciplines) and another 11% would favor a symptom-oriented non-antibiotic therapy ($p = 0.307$ between the diverse disciplines). In contrast, it is interesting that some 62% of the colleagues in our survey responded that they would send urine specimens for culture and sensitivity ($p = 0.209$ between the diverse disciplines). This is a reasonable approach, but not necessarily standard practice in the diagnosis of uncomplicated AUC.

Our survey results and the work by Markowitz et al. underline the tremendous need for further training in the treatment of AUC and the necessity for further implementation of structured in-hospital ABS programs. Although formal “Antimicrobial Prescribing Guidelines” are available at most institutions (and medical specialist associations), implementation of these in clinical practice is (still) questionable [3].

Acknowledgements We would like to thank Maximilian Burger, Sabine Brookman-May, Hans-Martin Fritsche, Christian Gilfrich, Philipp J. Spachmann, and Florian Wagenlehner representing the MR2 study group as well as all colleagues at the participating hospitals for their support.

Funding This study did not receive any external funds.

Compliance with ethical standards

Conflicts of interest None.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

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References

1. Markowitz MA, Wood LN, Raz S, Miller LG, Haake DA, Kim JH. Lack of uniformity among United States recommendations for diagnosis and management of acute, uncomplicated cystitis. *Int Urogynecol J*. 2018.
2. Lebentrau S, Gilfrich C, Vetterlein MW, Schumacher H, Spachmann PJ, Brookman-May SD, et al. Impact of the medical speciality on knowledge regarding multidrug-resistant organisms and strategies toward antimicrobial stewardship. *Int Urol Nephrol*. 2017;49(8):1311–8.
3. Durkin MJ, Keller M, Butler AM, Kwon JH, Dubberke ER, Miller AC, et al. An assessment of inappropriate antibiotic use and guideline adherence for uncomplicated urinary tract infections. *Open Forum Infect Dis*. 2018;5(9):ofy198.