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OPEN PEER REVIEW

A Retrospective Cross-sectional Study on Prevalence and Susceptibility Pattern of Bacterial Pathogens Causing Urinary Tract Infections at a Teaching Hospital in Tehran, Iran

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

2 comments · 15 Sep 2022 – 8 Nov 2022

Referee 1 Reviewer

MINOR REVISION 15 Sep 2022

The authors evaluated the bacterial etiological agents in cases of UTI and their drug resistance patterns to commonly used antimicrobial agents among hospitalized patients. In addition to the fact that the study requires ethical approval, the following points in the manuscript also require explanation.
Title and abstract
- In the title of the manuscript, the type of project is said to be retrospective, but in the abstract, it is said to be prospective. Please clarify which one is correct.
Methods
- The sample size of the study is large, and this is one of its strengths.
Results
Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders. Give information separately for exposed and unexposed groups if applicable.
Discussion
- Please summarize key results with reference to study objectives.
- Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both the direction and magnitude of any potential bias.

Referee 2 Reviewer

ACCEPT 8 Nov 2022

Dear author
Thank you for the manuscript.

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Response to Reviewers

Manuscript Title: " A retrospective cross-sectional study on prevalence and susceptibility pattern of bacterial pathogens causing Urinary Tract Infections (UTI) at a teaching hospital in Tehran, Iran "

Submission ID: 120903

Dear Editor in Chief,

We would like to take this opportunity to thank you and the reviewers for the useful and instructive comments on our manuscript “A retrospective cross-sectional study on prevalence and susceptibility pattern of bacterial pathogens causing Urinary Tract Infections (UTI) at a teaching hospital in Tehran, Iran”.

We sincerely appreciate your time, effort and patience and we feel that addressing the reviewers’ comments have essentially improved the quality of this work, which we hope you will now find it acceptable for publication in “Archives of Pediatric Infectious Diseases”. All corrections and suggestions were incorporated into the text of the manuscript and the changes are highlighted in yellow.

Yours sincerely,

Hossein Dabiri, PhD

Comments from the Editors and Reviewers:

Reviewer #1:

Authors evaluated the bacterial etiological agents from cases of UTI and their drug resistance pattern to commonly used antimicrobial agents among hospitalized patients. In addition to the fact that the study requires Ethical Approval, the following points in the manuscript also require explanation.

Title and abstract

In the title of the manuscript, the type of project is said to be retrospective, but in the abstract, it is said to be prospective. Please clarify that which one is correct?

Response: First of all, thank you very much for putting your valuable time and effort towards improving our study. "prospective" word in the abstract was replaced with "retrospective".

Methods

The sample size of the study is large and this is one of its strengths.

Response: We sincerely thank the Reviewer #1 for this nice feedback on the current study.

Results

Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders. Give information separately for exposed and unexposed groups if applicable.

Response: With full respect to the Reviewer #1 comment, at this moment this is impossible for us to get access patient's information.

Discussion

-Please summarize key results with reference to study objectives.

Response: Yes, we agree with this suggestion. We added and highlighted this interpretation in "Discussion" section.

- Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias.

Response: Yes, that's right. We added and highlighted the limitations of the study in "Discussion" section.

Reviewer 2:

Dear author, Thank you for the manuscript.

Response: We would like to thank Reviewer #2 for the precious positive feedback on the present manuscript.

Reviewer 3:

Dear colleague I read your article I would be grateful if you could explain and correct the following:

1. Modifying the type of study in the fourth line

Response: We agree with this point. The type of study was changed in the mentioned section.

2. No explanation was given about the age of the males

Response: With full respect to the reviewer's suggestion, we used the mean age of the all patients in the "result" section of the manuscript. Also, at the moment, due to the inability to access the patient health records we are unable to separately report ages of males and females.

3. Considering that the most common antibiotic used in hospitalized patients is ceftriaxone, do you have any information about the level of resistance to this drug?

Response: Yes, you are right. Ceftriaxone is one of the most common antibiotics used in hospitalized patients. Although, in the studied hospital "Loghman hospital", other antibiotics of cephalosporins including cefotaxime, cefoperazone, and ceftazidime were frequently used for UTI. Therefore, we analyzed the rate of resistant for these antibiotics. Moreover, due to the economic issues, it is impossible to measure the rate of ceftriaxone resistance for the current work. however, it would be measured in our next project.

4. It would be better that the articles used as references were from the last 5 years

Response: Thank you so much for this suggestion. We updated the references of the article including reference number "2", "3", "12" and "27".

2. Byron, Julie K., Urinary tract infection. Veterinary Clinics: Small Animal Practice, 2019. 49(2): p. 211-221.

3. Behzadi, Payam, et al., The role of gram-negative bacteria in urinary tract infections: current concepts and therapeutic options. Advances in Microbiology, Infectious Diseases and Public Health, 2020: p.35-69.

12. Gajdács M, et al., Resistance Levels and Epidemiology of Non-Fermenting Gram-Negative Bacteria in Urinary Tract Infections of Inpatients and Outpatients (RENFUTI): A 10-Year Epidemiological Snapshot. Antibiotics (Basel), 2019. 8(3): p. 143.

27. Porreca, Angelo, et al., The clinical efficacy of nitrofurantoin for treating uncomplicated urinary tract infection in adults: A systematic review of randomized control trials. Urologia Internationalis, 2021. 105(7): p. 531-540.

5. According to the investigation of organisms and their antibiotic resistance, it is better to add " microorganism " in the title .

Response: We agree with this point. Title of the article was modified to "A retrospective cross-sectional study on prevalence and susceptibility pattern of bacterial pathogens causing Urinary Tract Infections (UTI) at a teaching hospital in Tehran, Iran"

6. What is the meaning of the "ND " in table number 3

Response: Many thanks for reminding this point. Full explanation of "ND" was added to the legends of the tables.

Reviewer 4:

Thank you for sending such an article. A few comments regarding your manuscript are as following:

1- Please define rate of ESBL in your study if possible.

Response: We appreciate the Reviewer #4 for the useful comments on our study. At the moment, due to the economic issues, it is impossible to analyze the rate of ESBL for the current work, however, it would be measured in our next project.

2- Please mention why nitrofurantoin is still the second preferred antibiotic for treatment of UTI, in spite of low renal tissue penetration?

Response: We added and highlighted some sentences about the "Use of nitrofurantoin as the second preferred antibiotic for treatment of UTI" in "Discussion" section. The related references for this statement were also added including reference numbers "27" and "32"

27. Porreca, Angelo, et al., The clinical efficacy of nitrofurantoin for treating uncomplicated urinary tract infection in adults: A systematic review of randomized control trials. Urologia Internationalis, 2021. 105(7): p. 531-540.

32. Gardiner, Bradley J., et al., Nitrofurantoin and fosfomycin for resistant urinary tract infections: old drugs for emerging problems. Australian prescriber, 2019. 42(1): p. 14.

Final Response: On behalf of all the authors, we hope that the text of the manuscript has been improved by incorporating the suggestions of reviewers into the text. We hope this version is suitable for publication in *"Archives of Pediatric Infectious Diseases"*.

Yours sincerely,

Hossein Dabiri, PhD

2 Revision 1

2 comments · 9 Jan 2023 – 27 Feb 2023

Referee 3 Reviewer

ACCEPT 9 Jan 2023

Accept

Referee 4 Reviewer

ACCEPT 27 Feb 2023

Dear author:
Thanks for your time and effort. I think your article is OK for publication.
Sincerely yours