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What is "Open Peer Review" process?

An "Open Peer Review" process is making the details of all review process (including reviewers, associate editors, and EICs comments) as "Public" as it is agreed by EIC, Authors, and reviewers.

Advantages of "Open Peer Review" process

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Peer Review Report for "Epidemiology and Antimicrobial Susceptibility Pattern of Uropathogens in Patients with the Community- and Hospital-Acquired Urinary Tract Infections at a Tertiary Hospital in Somalia"

Author(s): Abdikarim Hussein Mohamed, Mohamed Farah Yusuf Mohamud, Hussein Ali Mohamud

Review Timeline:

Submit Date: 20 Jul 2020
Revised Date: 6 Oct 2020
Accepted Date: 6 Nov 2020

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (0)

15 Sep 2020

Dear AE,
In this manuscript, the authors isolated the MDR bacteria and antibiotic sensitivity and resistance patterns defined by the disk diffusion method.
This manuscript has the following problems:
- The title is very long and insufficient.
- The method of bacteria identification and its specificity did not mention.
- The type of statistical methods used did not mention and it is not clear how the comparisons did. (For example Table 2)
- The scientific name of the bacteria misspelled for example inline 96, instead of Staphylococcus aureus, it wrote Staph Aureus.
This manuscript needs to rewriting.
Thanks.

Farhad Safarpoor Dehkordi: Reviewer | **Revision (0)** 17 Sep 2020

Dear AE,

Comments to authors:

Well, this is an original research and full-length paper about the Epidemiology and antimicrobial susceptibility pattern in the era of extensively high antimicrobial resistance against uropathogens for the patients with the community and hospital-acquired urinary tract infections at a tertiary hospital in Somalia. Authors described that E.coli was the most predominant pathogen in all age categories, both gender groups and in community and hospital-acquired UTIs about 63.4% followed by Klebsiella pneumonia in 13.3%. Ceftriaxone, Trimethoprim/sulfamethoxazole, Ampicillin, Cefuroxime, and Cefixime revealed the highest resistance level about 82-100% against uropathogens. Ciprofloxacin (67.7%) and Levofloxacin (54.2%) divulged increasing resistance rates toward uropathogens. Tigecycline, Colimycin, Vancomycin, and Teicoplanin expressed the most powerful sensitivity rate (100%). Moreover, fosfomycin, nitrofurantoin, and amikacin manifested a significant sensitivity rate ranging from 86-95%. The ESBL cases constitute 10.2% of the total cases and MRSA about 0.6%. Acitinobacter buaminni was the most prevalent pathogen that belonged to multidrug and extensively drug-resistant patterns in 69.1%. E.coli and Klebsiella pneumonia showed similar multidrug resistance patterns in 35.2% of the cases.

Authors concluded increased trends of antimicrobial resistance in Trimethoprim/sulfamethoxazole (85.1%) and Fluoroquinolones (61%) against E.coli that exceeded the recommended local resistance level for empirical therapy in < 10% respectıvely. The study suggests using fosfomycin and nitrofurantoin for UTI empiric treatment and prescription of other antibiotics carefully with knowledge and good judgment. However, the main findings of this study were interesting but there were so many defects in the text of the manuscript which should address before its full acceptance. Thus, I potentially invite authors to address the following comments one by one:

My decision: Major revision

Comments:

1. All parts of the manuscript need re-checked by a native English speaker. There were several grammatical and typographical mistakes in the text.
2. Ethical consideration is essential for this study.
3. Please add the method of sampling
4. Please add the method of determination of the sample size.
5. Please add the method used for isolation and identification of bacteria.
6. Please add the method of statistical analysis of data.
7. Please add the valid references for antibiotic susceptibility test.
8. Please add the method of antibiotic susceptibility test, completely.
9. Please add the reasons for the selection of these antibiotic agents.
10. Please add the results of statistical analysis into all attached tables.
11. We need a considerable comparison between all data and groups presented in this work.
12. As far as I know, there were so many frequent bacteria other than those brought in this paper with high pathogenicity in the UTIs. What was the main reason for the selection of these bacteria?
13. Please add the results of multi-drug resistant bacteria in to the separate table.
14. Please convert one or two tables into the figures in a chart format.

15. Authors can use from the following important references in their manuscript:
Ranjbar R, Seif A, Safarpoor Dehkordi F. Prevalence of Antibiotic Resistance and Distribution of Virulence Factors in the Shiga Toxigenic Escherichia coli Recovered from Hospital Food. Jundishapur J Microbiol. 2019;12(5):e82659.
Ranjbar R, Safarpoor Dehkordi F, Sakhaei Shahreza MH, Rahimi E. Prevalence, identification of virulence factors, O-serogroups and antibiotic resistance properties of Shiga-toxin producing Escherichia coli strains isolated from raw milk and traditional dairy products. Antimicrobial Resistance and Infection Control. 2018;7:35.
Hemmatinezhad, B., Khamesipour, F., Mohammadi, M., Safarpoor Dehkordi, F., & Mashak, Z. (2015). Microbiological investigation of O-serogroups, virulence factors, and antimicrobial resistance properties of Shiga toxin-producing Escherichia coli isolated from ostrich, turkey, and quail meats. Journal of Food Safety, 35, 491-500.
Ranjbar R, Masoudimanesh M, Dehkordi FS, Jonaidi-Jafari N, Rahimi E. (2017). Shiga (Vero)-toxin-producing Escherichia coli isolated from the hospital foods; virulence factors, o-serogroups, and antimicrobial resistance properties. Antimicrob. Res. Infect. Control. 6:4.
Momtaz, H., Karimian, A., Madani, M., Dehkordi, F.S., Ranjbar, R., & Sarshar, M. Uropathogenic Escherichia coli in Iran: serogroup distributions, virulence factors, and antimicrobial resistance properties. Annals of Clinical Microbiology and Antimicrobials, 12, 8
Momtaz, H., Dehkordi, F.S., Hosseini, M.J., Sarshar, M., & Heidari, M. (2013). Serogroups, virulence genes and antibiotic resistance in Shiga toxin-producing Escherichia coli isolated from diarrheic and non-diarrheic pediatric patients in Iran. Gut Pathogens, 5, 39.
Dehkordi, F.S., Yazdani, F., Mozafari, J., & Valizadeh, Y. (2014). Virulence factors, serogroups and antimicrobial resistance properties of Escherichia coli strains in fermented dairy products. BMC Research Notes, 7, 217.
Dormanesh B, Dehkordi FS, Hosseini S, Momtaz H, Mirnejad R, Hoseini MJ, Yahaghi E, Tarhriz V, Khodaverdi Darian E. Virulence factors and o-serogroups profiles of uropathogenic Escherichia coli isolated from Iranian pediatric patients. Iran Red Cres Med J. 2014; 16:e14627.
After these changes, you should submit the article another time to the journal, and then I will assess the other aspects of your paper. It is essential for publication.
Cheers
FSD

Zohreh Mashak: Reviewer | **Revision** (**0**) 28 Sep 2020

Dear AE,
There are some comments which should be addressed by the author:
- There are many grammatical mistakes and needs to correct edition in text(for example the scientific name of microorganisms such as bacteria and yeast)
- Please describe the method of Isolation (Culture media and type of culture)for each Bacteria in this paper.
- Describe the method of antibiotic resistance and write all kind of antibiotic disk (with dosage) used.
- What is the reason for using the type of antibiotics in this study?
- Why don’t write the antibiotic resistance rate for all microorganisms in this study, separately?

- Mention the statistical analysis for each of the variable factors, separately.
- Determine the multidrug resistance of all microorganisms in one Table.
- Please write and describe in discussion, the importance of important pathogens entitled in this study.
Thanks.

Zohreh Mashak: Associate Editor | **Revision** (0) 28 Sep 2020

Dear EIC,
The manuscript is studied, and there are some comments which should be addressed by the author. According to the comments, the document needs major revision.
Kind regards

REFEREE: EIC | **Revision** (0) 2 Oct 2020

Dear Authors,
Thank you for submitting your manuscript to JJM. I have completed the review of your manuscript and a summary is appended below (Pleases find attached files). The reviewers recommend the reconsideration of your paper following major revision. I invite you to resubmit your manuscript after addressing all reviewer comments. Please answer point by point to reviewer's comments on a separate sheet under WORD format and write your modifications in the revised version (WORD format) in colored or highlighted letters. Your answers to reviewers' queries are not only for the Editorial Board but for the readers and should be included, when appropriate, in the manuscript for improvement and a better understanding.
When resubmitting your manuscript, please carefully consider all issues mentioned in the reviewers' comments, outline every change made a point by point, and provide suitable rebuttals for any comments not addressed. In addition, JJM INSTRUCTION attached to the mail, Pleases find it.
Note:
Please add ORCID number into you and your collages account, then automatically appear in your published papers in JJM both in HTML and pdf. Pleases follow the below link for the process. http://single.demo.pub/en/knowledgebase/category/tree.html#orcid.html
Thanks.

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Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Reviewer 1:

1. *The title is very long and insufficient: corrected (***Epidemiology and Antimicrobial Susceptibility Pattern of *Uropathogens* in Patients with the Community and Hospital-Acquired Urinary Tract Infections at A Tertiary Hospital in Somalia).**
2. *The method of bacteria identification and its specificity did not mention*: By the standard Kirby-Bauer disk diffusion method, using commercial disks, antimicrobial sensitivity and resistance were selected based on the Clinical and Laboratory Standards Institute (CLSI) system (8,9). Faithful UTI *microbes* was defined as a single *pathogen* with adequate colony formation unit (CFU) (i.e. >100,000 CFU/Ml in voiding urine; >10,000 CFU/mL in catheterized urine; and >1000 CFU/mL in suprapubic puncture) in one urine culture (10).The identification of the *microorganisms* had done using eosin methylene blue agar (EMB) and blood agar. Mueller-Hinton agar had been used to perform antimicrobial sensitivity and resistance. *Enterococcus* antimicrobial sensitivity and resistance had performed using blood agar.
3. *The type of statistical methods used did not mention and it is not clear how the comparisons did:* The univariate descriptive study design was used to analyze the analytic parameters using IBM SPSS Statistics 23 version and results expressed in percentages. To detect the significant association between the variables, Chi square test and cross-tabulations were used.
4. *The scientific name of the bacteria misspelled: corrected.*

Reviewer 2:

1. *Several grammatical and typographical mistakes in the text: corrected.*
2. *Ethical consideration is essential for this study:* This study was approved by the Clinical Research Ethics Committee of the Mogadishu Somali Turkish Training and Research Hospital (Approval number: MSTH/4127), and written informed consent was taken from all of the participants.
3. *Please add the method of sampling:* A clean catch midstream urine samples were collected from the patients with suspected UTI in well preserved containers and transported promptly in the microbiology and laboratory unit.
4. *Please add the method of determination of the sample size:* The study was enrolled and selected for all 361 patients whose urine cultures showed growth.
5. *Please add the method used for isolation and identification of bacteria:* By the standard Kirby-Bauer disk diffusion method, using commercial disks, antimicrobial sensitivity and resistance were selected based on the Clinical and Laboratory Standards Institute (CLSI) system (8,9). Faithful UTI *microbes* was defined as a single *pathogen* with adequate colony formation unit (CFU) (i.e. >100,000 CFU/Ml in voiding urine; >10,000 CFU/mL in catheterized urine; and >1000 CFU/mL in suprapubic puncture) in one urine culture (10).The identification of the *microorganisms* had done using eosin methylene blue agar (EMB) and blood agar.
6. *Please add the method of statistical analysis of data:* The univariate descriptive study design was used to analyze the analytic parameters using IBM SPSS Statistics 23 version and results expressed in percentages. To detect the significant association between the variables, Chi square test and cross-tabulations were used.
7. *Please add the valid references for antibiotic susceptibility test: The antibiotic susceptibility of uropathogens was studied against Piperacillin/tazobactam 100/10mcg, meropenem 10mcg, ertapenem 10mcg, colistin 10mcg, amikacin 30mcg, tigecycline 15ug, cefepime 30ug, cefazolin 30ug, ceftazidime 30ug, piperacillin 100ug, linezolid 30mcg, clindamycin 2mcg, penicillin G 1U, trimethoprim/sulfamethoxazole 1.25/23.75 mcg, vancomycin 30mcg, daptomycin 30mcg, tetracycline 30 mcg, erythromycin 15mcg, cefoxitin 30 mcg, ciprofloxacin 5mcg, nitrofurantoin 300mcg, teicoplanin 30ug.*

8. *Please add the method of antibiotic susceptibility test, completely:* Mueller-Hinton agar had been used to perform antimicrobial sensitivity and resistance. *Enterococcus* antimicrobial sensitivity and resistance had performed using blood agar.
9. *Please add the reasons for selection of these antibiotic agents:* Antibiogram of 35 distinct antibiotics in varying categories was performed during the study period in the microbiology and laboratory unit of the hospital.
10. *Please add the results of statistical analysis into all attached tables: corrected.*
11. *We need considerable compare between all data and groups presented in this work: corrected.*
12. *As far as I know, there were so many frequent bacteria other than those bring in this paper with high pathogenicity in the UTIs. What was the main reason for selection of these bacteria?* During the study period, two-aleph *uropathogens* were shown growth in the culture, eleven bacterial uropathogen and candida. So that there is no specific reason that we selected specific microbes.
13. *Please add the results of multi-drug resistant bacteria in to separate table: added.*
14. *Please convert one or two tables into the figures in a chart format: corrected.*
15. *Authors can use from the following important references in their manuscript: added.*

Reviewer 3:

1. *Grammatical mistakes: corrected.*
2. *Please describe the method Isolation (Culture media and type of culture)for each Bacteria in this paper:* By the standard Kirby-Bauer disk diffusion method, using commercial disks, antimicrobial sensitivity and resistance were selected based on Clinical and Laboratory Standards Institute (CLSI) system (8,9). Faithful UTI *microbes* was defined as a single *pathogen* with adequate colony formation unit (CFU) (i.e. >100,000 CFU/Ml in voiding urine; >10,000 CFU/mL in catheterized urine; and >1000 CFU/mL in suprapubic puncture) in one urine culture (10).The identification of the *microorganisms* had done using eosin methylene blue agar (EMB) and blood agar.
3. *Describe the method of antibiotic resistance and write all kind antibiotic disk (with dosage) used:* Mueller-Hinton agar had been used to perform antimicrobial sensitivity and resistance. *Enterococcus* antimicrobial sensitivity and resistance had performed using blood agar. The antibiotic susceptibility of uropathogens was studied against Piperacillin/tazobactam 100/10mcg, meropenem 10mcg, ertapenem 10mcg, colistin 10mcg, amikacin 30mcg, tigecycline 15ug, cefepime 30ug, cefazolin 30ug, ceftazidime 30ug, piperacillin 100ug, linezolid 30mcg, clindamycin 2mcg, penicillin G 1U, trimethoprim/sulfamethoxazole 1.25/23.75 mcg, vancomycin 30mcg, daptomycin 30mcg, tetracycline 30 mcg, erythromycin 15mcg, cefoxitin 30 mcg, ciprofloxacin 5mcg, nitrofurantoin 300mcg, teicoplanin 30ug.
4. *What is the reason of using the type of antibiotics in this study?* Antibiogram of 35 distinct antibiotics in varying categories was performed during the study period in the microbiology and laboratory unit of the hospital.
5. *Why don't write antibiotic resistance rate for all microorganisms in this study, separately? These microorganisms were the most common pathogens and the authors selected for that reason.*
6. *Mention the statistical analysis for each of variable factors, separately:* The univariate descriptive study design was used to analyze the analytic parameters using IBM SPSS Statistics 23 version and results expressed in percentages. To detect the significant association between the variables, Chi square test and cross-tabulations were used.

7. *Determine the multidrug resistance of all microorganisms in one Table: added.*
8. *Please write and describe in discussion, the importance of important pathogens entitled in this study:* Pattern and distribution of *uropathogens* differ in countries but a continuous assessment for the changing trends of antimicrobial sensitivity and resistance toward *uropathogens* is indispensable.

Associate Editor's Comments:

1. *Grammatical mistakes: corrected.*
16. *Please describe the method of sampling; sample size; Isolation and identification (Culture media and type of culture) for each Bacteria in this paper:* A clean catch midstream urine samples were collected from the patients with suspected UTI in well preserved containers and transported promptly in the microbiology and laboratory unit. The study was enrolled and selected for all 361 patients whose urine cultures showed growth. By the standard Kirby-Bauer disk diffusion method, using commercial disks, antimicrobial sensitivity and resistance were selected based on the Clinical and Laboratory Standards Institute (CLSI) system (8,9). Faithful UTI *microbes* was defined as a single *pathogen* with adequate colony formation unit (CFU) (i.e. >100,000 CFU/Ml in voiding urine; >10,000 CFU/mL in catheterized urine; and >1000 CFU/mL in suprapubic puncture) in one urine culture (10).The identification of the *microorganisms* had done using eosin methylene blue agar (EMB) and blood agar.
2. *Describe the method of antibiotic resistance and write all kind antibiotic disk (with dosage) used, completely:* Mueller-Hinton agar had been used to perform antimicrobial sensitivity and resistance. *Enterococcus* antimicrobial sensitivity and resistance had performed using blood agar. The antibiotic susceptibility of uropathogens was studied against Piperacillin/tazobactam 100/10mcg, meropenem 10mcg, ertapenem 10mcg, colistin 10mcg, amikacin 30mcg, tigecycline 15ug, cefepime 30ug, cefazolin 30ug, ceftazidime 30ug, piperacillin 100ug, linezolid 30mcg, clindamycin 2mcg, penicillin G 1U, trimethoprim/sulfamethoxazole 1.25/23.75 mcg, vancomycin 30mcg, daptomycin 30mcg, tetracycline 30 mcg, erythromycin 15mcg, cefoxitin 30 mcg, ciprofloxacin 5mcg, nitrofurantoin 300mcg, teicoplanin 30ug.

3. *What is the reason of using the type of antibiotics in this study?* Antibiogram of 35 distinct antibiotics in varying categories was performed during the study period in the microbiology and laboratory unit of the hospital.
4. *Mention the statistical analysis for each of variable factor (alone and comparison with each other), separately .(into all attached tables):* The univariate descriptive study design was used to analyze the analytic parameters using IBM SPSS Statistics 23 version and results expressed in percentages. To detect the significant association between the variables, Chi square test and cross-tabulations were used.
5. *Add the valid references for antibiotic susceptibility test: The antibiotic susceptibility of uropathogens was studied against Piperacillin/tazobactam 100/10mcg, meropenem 10mcg, ertapenem 10mcg, colistin 10mcg, amikacin 30mcg, tigecycline 15ug, cefepime 30ug, cefazolin 30ug, ceftazidime 30ug, piperacillin 100ug, linezolid 30mcg, clindamycin 2mcg, penicillin G 1U, trimethoprim/sulfamethoxazole 1.25/23.75 mcg, vancomycin 30mcg, daptomycin 30mcg, tetracycline 30 mcg, erythromycin 15mcg, cefoxitin 30 mcg, ciprofloxacin 5mcg, nitrofurantoin 300mcg, teicoplanin 30ug..*
6. *Determine the multidrug resistance (MDR) of all microorganisms in a separate Table: added.*
7. *Convert one or two tables into the figures in a chart format: corrected.*
8. *Please write and describe in discussion, the importance of important pathogens entitled in this study:* Pattern and distribution of *uropathogens* differ in countries but continuous assessment for the changing trends of antimicrobial sensitivity and resistance toward *uropathogens* is indispensable.

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Revision (1)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: EIC | **Revision (1)** 6 Nov 2020

Dear Authors,
According to the associated editor report, your manuscript is accepted for publishing in JJM and send to the publisher for the next process.
Note:
Please add ORCID number into you and your collages account, then automatically appear in your published papers in JJM both in HTML and pdf.
Thanks.