OPEN PEER REVIEW

Open Peer Review (OPR)

As a new feature for progressing towards transparency, we decided to open a new window for all of our editors as well as authors titled "**Open Peer Review**". We hope by this new facility, our reviewers will be more motivated and authors will be more satisfied with the review process. We believe that publishing our peer review reports could make a transparent and clear environment for all our efforts within a journal, but not all reviewers tend to publish their comments.

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

- More transparency, constructiveness and tactful comments of the peer review process: leads to an increase in the quality of reviews
- More motivations for all involved roles in the review process
- Authors' satisfactions from the review process: Increases honesty between authors and reviewers
- Education of both authors and new students
- Prevents reviewers from following their individual agendas and leading to the detection of reviewers' conflicts of interests

You can find out more at:
https://sites.kowsarpub.com/kowsar/knowledgebase/category/tree.html#opr.html

Jundishapur Journal of Microbiology
Article DOI: 10.5812/jjm.112547
Published in: Jundishapur Journal of Microbiology: 14(2); e112547

Peer Review Report for "Detection of Phylogenetic Groups and Drug Resistance Genes of *Escherichia coli* Causing Urinary Tract Infection in Southwest Iran"

Author(s): Mostafa Boroumand , Mohsen Naghmachi, Mohammad Amin Ghatee

Review Timeline:

Submit Date: 30 Jan 2021
Revised Date: 20 Apr 2021
Accepted Date: 20 Apr 2021

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)

12 Mar 2021

Dear AE,
This study has focused on phylogenetic groups and Antibiotic Resistance gens of Uropathogenic Escherichia coli strains isolated from patients with urinary tract infections; English writing is poor and needs to be corrected. There are some more comments on this manuscript for the authors:
- Introduction section has to be revised totally and rationale of the study should be added. It is not contributing to understand the clinical significance of the study.
- Name of the genes and bacteria should be written in italic throughout the article. In results and tables slu is written instead of sul gene by error.
- Inclusion & exclusion criteria for sampling should be completely explained.
- Controls for the detection of antibiotic resistance genes should have been described.
- There are some data about ESBL genes (blaSHV and blaTEM) in Table 2 without any mentioning or explanation about these genes in any other part of the article.
- In results, the number of isolates are needed to be written along with stated percentages.
- Stock of bacteria can usually be stored stably at -80°C.
- The discussion and conclusion is better to be written by addressing clinical significance to

understand the relation between characters of the isolated bacteria and the UTI occurrence.
Thanks.

REFEREE: Reviewer | **Revision** (0) 12 Mar 2021

Dear AE,
Comments for the authors:
- Line 12: isolated to obtained
- Line 18: “followed by Unknown (20.2%)” transfer to the end of sentence.
- Line 31: among them.
- Line 48: common isolates of Escherichia coli. Did you mean commensal?
- Line 52: please revise the sentence.
- Line 61: uropathogenic E. coli.
- Line 61: remove unfortunately
- Line 72: Isolation of isolates was confirmed, do you mean the confirmation that they were E.coli? How did you understand they belonged to the E. coli?
- Which standard microbiological and biochemical methods confirmed that they are members of E. coli.
- Lines 78 please revise the sentence.
- Line 80 and 81: indicate the concentration of antibiotics.
- Line 78 and 88: revise and present data or add reference for the primer sequences.
- Line 97: please revise the sentence.
- Line 118-120: please revise the sentence
- Line 133-135: please revise the sentence
Thanks.

REFEREE: Reviewer | **Revision** (0) 12 Mar 2021

Dear AE,
In this manuscript, the authors investigated the prevalence of phylogenetic groups and antibiotic resistance genes in uropathogenic E. coli isolated from different Yasuj medical centers. Although the type of investigation are beneficial there are major points that have to be clarified by the authors which are as follow:
Title:
1- “…Escherichia coli causing urinary tract infection in Yasuj, Iran” does not seem to be appropriate, it should be mentioned in other way like Escherichia coli strains isolated from patients with urinary tract infection in…
Please use some templates from published papers invalid journals.
Abstract:
2- English of whole paper needs substantial editing and polishing.
3- The type of PCR method should be mentioned.
4- The relation between phylogenetic group and antibiotic resistant genes are not clearly explained
5- Some Keywords are not necessary and can be omitted such as Iran.
Background:
6- Scientific name of bacteria should be written in Italics.
7- The outcomes of similar investigations have not been explained sufficiently what is the

really use of such research works? What the results of local (yasoj or other places in the world) investigations of such phylogenetic groups or virulence genes could help in improvement of UTI treatment?
Objectives:
8- The sentences have to be revised and written in more suitable manner.
Materials and Methods:
9- “Isolation of isolates was confirmed by standard microbiological and biochemical methods.” Isolation or identification?
10- “All isolated Escherichia coli strains were enriched in trypticase soy broth with glycerol and stored at minus 20 ° C.” …enriched in….. with glycerol??
11- Methods are not described appropriately and require major revision
Results:
12- “In this study, based on statistical analysis and Fisher’s exact test, no significant relationship was observed between sex, age, and phylogenetic groups.” Where are the results? What is the proof for that claim?
Discussion and conclusion:
13- “Based on this, it can be concluded that in recent years, isolates of uropathogenic E.coli have emerged that, in addition to having different viruses, have become resistant to different types of antibiotics”. What does “in addition to having different viruses” mean?
14- Although results are much discussed but can be more appropriately organized in which readers can follow it more easily. For example divide your discussion in several parts or at least separate them in defined paragraphs.
15- Conclusions have to be written in separate section.
Thanks.

REFEREE: Associate Editor | **Revision (0)** 12 Mar 2021

Dear EIC,
I deeply apologize the authors and Chief-editor for such a long process of reviewing the article. I was just waiting to receive adequate answers from the reviewers to finalize the decision. According to the reviewer’s opinions, manuscript can be considered for publication after major revisions. I firmly confirm and emphasizing on the English editing and polishing the manuscript.
Thanks.

REFEREE: EIC | **Revision (0)** 13 Mar 2021

Dear Author,
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. https://sites.kowsarpub.com/jjm/knowledgebase/category/tree.html#orcid.html

Thanks.

OPEN PEER REVIEW

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.

Hello and happy New Year

Article refereeing answer with ID112547

The answer to the comments is highlighted in the main text of the article.

Reviewe1:

Line 12: was revised.

Line 1:8 followed by Unknown (20.2%) moved to the end of the sentence.

Line 31: was revised.

Line 48: word commensal corrected.

Line 52 was revised.

Line 61 of the word uropathogenic Escherichia coli revised.

Line 72: Method for identity of Escherichia coli isolates was added.

Line 78: was revised.

Line 80 and 81: was revised.

Line 78 and 88: was revised.

Line 97: was revised.

Line 118-120: was revised.

Line 133-135: was revised.

Reviewe: 2

Introduction edited.

The names of the genes and bacteria became italic.

The word sul was modified in the text and table.

Inclusion and exclusion criteria were added.

The population of the study included outpatients with UTI referring to medical labs for urine culture; the growth of E. coli was considered as a positive result. Exclusion criteria were having an indwelling urinary catheter, being pregnant, having genitourinary abnormalities, and antibiotic therapy within the last two weeks. Control for antibiotic resistance genes was described.

Control of antibiotic resistance genes was described.

In this test, antibiotic resistant samples were amplified and band formation of tetA, tetB, slu1, slu2, CITM, DfrA and qnr genes against molecular markers confirmed the presence of these genes in resistant samples as a positive control from the vial. While, PCR without DNA samples in which the same volume of distilled water was added instead of DNA was used as a negative control.

Escherichia coli isolates were cultured after identification in vials containing trypticase Soy broth (TSB) of Merck, Germany, and after incubation (18 to 24 hours) and bacterial growth, adding one to two 20% sterile glycerol drops were stored at -20 ° C. Isolation passage was done.

The discussion and conclusions were somewhat edited.

Reviewe: 3

Suggested title: Study on phylogenetic groups and antibiotic resistance genes associated with Escherichia coli isolated from a patient with urinary tract infection in southwestern Iran

The type of PCR method was mentioned.

In this study, multiplex polymerase chain reaction method was used.

The relationship between phylogenetic groups and antibiotic resistance genes was described.

The word Iran was removed from the keywords.

The names of the genes and bacteria became italic.

7- It appears that the analysis of Escherichia coli strains isolated from urinary tract infections and even other extraintestinal infections, especially from different geographical areas of the country can be used to obtain epidemiological information on phylogenetic distribution and distribution of pathogenic strains as well as resistant strains. It is useful for medication for the proper use of antibiotics and the control of nosocomial infections. Today, the use of molecular typing in hospitals prevents the spread of many nosocomial infections and in this regard helps the economy and health of different communities.

The objective of the present study was corrected.

Method for identity of Escherichia coli isolates was added.

12:

sex	**Phylogenetic groupe**							**P-value**
	B2(47)	**C(17)**	**D(12)**	**A(4)**	**E(10)**	**Clade I(13)**	**Unknowen (26)**	
Male	11(23.4%)	5(29.4%)	2(16.7%)	0(0%)	3(30.0%)	2(15.4%)	7(26.9%)	0.83
Female	36(76.6%)	12(70.6%)	10(83.3%)	4(3.1%)	7(70.0%)	11(84.6%)	19(73.1%)	

Distribution of the phylogenetic groups based on gender.

Discussion and Conclusion:

13:

Based on this, it can be concluded that in recent years, isolates of uropathogenic *E.coli* have emerged that, in addition to having multiple virulence genes, have become resistant to different types of antibiotics. This study was the first report on the prevalence of phylogenetic groups and their relationship with antibiotic resistance patterns and antibiotic resistance genes among *E.coli* strains causing UTI in Yasuj (southwestern Iran).

Conclusions were written in a separate section.

OPEN PEER REVIEW

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)** 10 Apr 2021

Dear Author,

Please carefully consider all issues mentioned in the reviewers' comments,

- Put continuous lines number at the left page
- Outline every change made a point by point and address page and line numbers,
- Provide suitable rebuttals for any comments not addressed.

Thanks.

OPEN PEER REVIEW

Revision (2)

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.

Hello and happy New Year

Article refereeing answer with ID112547

The answer to the comments is highlighted in the main text of the article.

Review 1:

Line13: In this descriptive cross-sectional study, 129 *E. coli* isolated to obtained from the culture of patients with UTI were evaluated for phylogenetic groups using the new method of Clermont et al.

Line 18: In this study, the distribution of phylogenetic groups among *E. coli* isolates was phylogenetic group B2 (36.4%) as the most common phylogenetic group, C (13.2%), clade I (10.1%), D (9.3%), A (3.1%) were the most abundant phylogroups and groups B1 and F were not observed in any isolate, followed by Unknown (20.2%).

Line 51: Many bacteria can cause urinary tract infections; among them *E.coli* is the most common cause which can cause infections at different ages.

Line 65: Outpatient pathogenic strains are mainly in group B 2 and to a lesser extent in group D, while commensal strains belong to groups 1 B and A.

Line 68: Some microorganisms are inherently resistant, and others are resistant to other organisms through the mechanisms of resistance gene release.

Line 87 of the word uropathogenic Escherichia **coli revised.**

Line 61 was deleted due to the editing of the article introduction.

Line 97 Method for identity of Escherichia coli isolates was added. After collection, urine samples were cultured on MacConkey and Eosin Methylene Blue Agar(EMB) and incubated at 37 °C for 24 hours.Then bacteria were identified using routine biochemical tests such as methyl red (MR),Voges-Proskauer (VP),triple sugar iron agar(TSI), indole production, Simmons' Citrate Agar (Merck Germany).

Line 108 was revised. Susceptibility of *E. coli* isolates to the antibiotics cefotaxime (30 µg), ampicillin (10 µg), cotrimoxazole (25 µg),ceftriaxone (30 µg), nalidixic acid (30 µg), aztreonam (30 µg), ciprofloxacin (30 µg), tetracycline (30 µg), ceftizoxime (30 µg) (BD-BBL

Company,American) and using Kirby-Bauer disk diffusion method and in accordance with CLSI and clinical standards.

Line 119 and 120 was revised. The Quadroplex-PCR method was performed using primers described by Clermont et al., to identify uropathogenetic *E. coli* phylogenetic groups.

Line 127 was revised. Amplification at 72 °C for 90 second, and final extension at 72 °C for 5 minutes (figure 2 and 3).

Line 146-149: was revised. In statistical analysis based on Fisher's exact test, no significant relationship was observed between gender and phylogenetic groups (Table 3). In our study, the prevalence of antibiotic resistance and antibiotic-resistant genes in isolates of phylogenetic group B2 was higher than other phylogenetic groups.

Line 165-167 was revised. Various studies have shown that patterns of antibiotic resistance and susceptibility, the amount of virulence genes, as well as genes encoding the antibiotic resistance of *E.coli* in different geographical areas are associated with specific genetic groups.

Reviewe 2:

Introduction edited.

The names of the genes and bacteria became italic.

The word sul was modified in the text and table.

Inclusion and exclusion criteria were added. The population of the study included outpatients with UTI referring to medical labs for urine culture; the growth of E. coli was considered as a positive result. Exclusion criteria were having an indwelling urinary catheter, being pregnant, having genitourinary abnormalities, and antibiotic therapy within the last two weeks.

Control of antibiotic resistance genes was described. In this test, antibiotic resistant samples were amplified and band formation of tetA, tetB, slu1, slu2, CITM, DfrA and qnr genes against molecular markers confirmed the presence of these genes in resistant samples as a positive control from the vial. While, PCR without DNA samples in which the same volume of distilled water was added instead of DNA was used as a negative control.

Because the ESBL gene data were not relevant to this study, they were deleted.

Escherichia coli isolates were cultured after identification in vials containing trypticase Soy broth (TSB) of Merck, Germany, and after incubation (18 to 24 hours) and bacterial growth, adding one to two 20% sterile glycerol drops were stored at -20 ° C. Isolation passage was done.

The discussion and conclusions were somewhat edited.

Reviewe 3:

Title:

Suggested title**: Study on phylogenetic groups and antibiotic resistance genes associated with :1 .Escherichia coli isolated from a patient with urinary tract infection in southwestern Iran**

3: The type of PCR method was mentioned. In this study, multiplex polymerase chain reaction method was used.

4: The relationship between phylogenetic groups and antibiotic resistance genes was described.

In this study, there was a significant relationship between antibiotics (p = 0.026), cefotaxime (p = 0.003) and nalidixic acid (p = 0.044) and *E. coli* phylogenetic groups. In this study, no significant relationship was observed between *E. coli* phylogenetic groups and antibiotic resistance genes.

.The word Iran was removed from the keywords :5

Background:

6: The names of the genes and bacteria became italic.

7: It appears that the analysis of Escherichia coli strains isolated from urinary tract infections and even other extra intestinal infections, especially from different geographical areas of the country can be used to obtain epidemiological information on phylogenetic distribution and distribution of pathogenic strains as well as resistant strains. It is useful for medication for the proper use of antibiotics and the control of nosocomial infections. Today, the use of molecular typing in hospitals prevents the spread of many nosocomial infections and in this regard helps the economy and health of different communities.

Objectives

8: The objective of the present study was corrected. The aim of this study was to determine the phylogenetic groups and genes of antibiotic resistance including *tetA, tet B, sul1, sul2, dfrA1, CITM* and *qnr* genes in *E.coli* species isolated from patients with urinary tract infections using multiplex pcr method in Yasuj(Southwest Iran).

Materials and Methods:

9, 10 and 11:

Method for identity of Escherichia coli isolates was added. After collection, urine samples were cultured on MacConkey and Eosin Methylene Blue Agar(EMB) and incubated at 37 °C for 24 hours.Then bacteria were identified using routine biochemical tests such as methyl red (MR),Voges-Proskauer (VP),triple sugar iron agar(TSI), indole production, Simmons' Citrate Agar (Merck Germany). Isolated *E. coli* strains were stored in trypticase soy broth (TSB), with sterile glycerol at −20 °C(1).

12:

sex	Phylogenetic groupe							P-value
	B2(47)	C(17)	D(12)	A(4)	E(10)	Clade I(13)	Unknowen (26)	
Male	11(23.4%)	5(29.4%)	2(16.7%)	0(0%)	3(30.0%)	2(15.4%)	7(26.9%)	0.83
Female	36(76.6%)	12(70.6%)	10(83.3%)	4(3.1%)	7(70.0%)	11(84.6%)	19(73.1%)	

Distribution of the phylogenetic groups based on gender.

Discussion and Conclusion:

13: Based on this, it can be concluded that in recent years, isolates of uropathogenic *E.coli* have emerged that, in addition to having multiple virulence genes, have become resistant to different types of antibiotics. This study was the first report on the prevalence of phylogenetic groups and their relationship with antibiotic resistance patterns and antibiotic resistance genes among *E.coli* strains causing UTI in Yasuj (southwestern Iran).

14: The discussion was separated into defined paragraphs.

15: Conclusions were written in a separate section.

OPEN PEER REVIEW

Revision (2)

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

OPEN PEER REVIEW

Revision (3)

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.

Article refereeing answer with ID112547

The answer to the comments is highlighted in the main text of the article.

Reviewer comments	Author responses	Page number	Line number
Reviewer 1			
isolated to obtained	Corrected in the original text.	1	Line 13
Followed by Unknown (20.2%)" transfer to the end of sentence.	Followed by Unknown (20.2%) moved to the end of the sentence.	1	Line 20
Line 52: among them	Corrected in the original text.	3	Line 52
Line 67: common isolates of Escherichia coli. Did you mean commensal	We mean the word commensal and it was corrected in the text.	3	Line 67
Line 70: please revise the sentence.	Line number 70 was corrected.	3	Line 70
Line 89: uropathogenic E. col	Line 89 of the word uropathogenic Escherichia coli revised.	4	Line 89
Line 99: Isolation of isolates was confirmed, do you mean the confirmation that they were E.coli? How did you understand they belonged to the E. coli?	After collection, urine samples were cultured on MacConkey and Eosin Methylene Blue Agar(EMB) and incubated at 37 °C for 24 hours.Then bacteria were identified using routine biochemical tests such as methyl red (MR),Voges-Proskauer (VP),triple sugar iron agar(TSI), indole production, Simmons' Citrate Agar (Merck Germany).	4	Line99-102
Lines 110 please revise the sentence.	Line 110 was revised.	5	Line 110-`113
Line 121 and 122: revise and present data or add reference for the primer sequences.	Was revised.	5	Line 121-122
Line 128-129 please revises the sentence.	Line 128 was revised.	5	Line 128-129
Line 148-151: please revise the sentence.	Was revised.	6	Line 148-151
Line 167-169: please revise the sentence.	Was revised.	7	Line 167-169

Reviewer comments	Author responses	Page number	Line number
Reviewer 2			Line
Introduction section has to be revised totally and rationale of the study should be added. It is not contributing to understand the clinical significance of the study.	The introductory part was modified according to the purpose of the study.	3	Line
Name of the genes and bacteria should be	The names of the genes and		Line

written in italic throughout the article.	bacteria became italic.		
In results and tables slu is written instead of sul gene by error.	The word sul was modified in the text and table.		Line
Inclusion & exclusion criteria for sampling should be completely explained.	The population of the study included outpatients with UTI referring to medical labs for urine culture; the growth of E. coli was considered as a positive result. Exclusion criteria were having an indwelling urinary catheter, being pregnant, having genitourinary abnormalities, and antibiotic therapy within the last two weeks.		Line
Controls for the detection of antibiotic resistance genes should have been described.	In this test, antibiotic resistant samples were amplified and band formation of tetA, tetB, slu1, slu2, CITM, DfrA and qnr genes against molecular markers confirmed the presence of these genes in resistant samples as a positive control from the vial. While, PCR without DNA samples in which the same volume of distilled water was added instead of DNA was used as a negative control.		Line
There are some data about ESBL genes (blaSHV and blaTEM) in Table 2 without any mentioning or explanation about these genes in any other part of the article.	Because the ESBL gene data were not relevant to this study, they were deleted.		Line
In results the number of isolates are needed to be written along with stated percentages.	In the results section, the number of isolates was written along with the percentages.		Line 137-139
Stock of bacteria can usually be stored stably at -80°C.	Due to the fact that the stock of bacteria can be stored for a longer period of time at a temperature of -70 ° C , so due to the lack of access to the freezer -70 ° C , the stock of bacteria can be stored in the freezer below -20 ° C. Under these conditions, to ensure that the stock of bacteria is alive at intervals of several months from frozen storage cultures, we prepared re-culture on a suitable medium.		Line
The discussion and conclusion is better to be written by addressing clinical significance to understand the relation between characters of the isolated bacteria and the UTI occurrence.	The discussion and conclusions were somewhat edited.	7-9	Line

Reviewer comments	Author responses	Page number	Line number
Reviewer 3			Line
1- "…Escherichia coli causing urinary tract infection in Yasuj, Iran" does not seem to be appropriate, it should be mentioned in other way like Escherichia coli strains isolated from patients with urinary tract infection in	**Suggested title:** Study on phylogenetic groups and antibiotic resistance genes associated with Escherichia coli isolated from a patient with urinary tract infection in southwestern Iran		Line
3- The type of PCR method should be mentioned.	In this study, multiplex polymerase chain reaction method was used.	1	Line 16
4- The relation between phylogenetic group and antibiotic resistant genes are not clearly explained	The relationship between phylogenetic groups and antibiotic resistance genes was described.	1	Line 23-26
5- Some Keywords are not necessary and can be omitted such as Iran.	The word Iran was removed from the keywords.	2	Line 33
6- Scientific name of bacteria should be written in Italics.	The names of the genes and bacteria became italic.		Line
7- The outcomes of similar investigations have not been explained sufficiently what is the really use of such research works? What the results of local (yasoj or other places in the world) investigations of such phylogenetic groups or virulence genes could help in improvement of UTI treatment?	It appears that the analysis of Escherichia coli strains isolated from urinary tract infections and even other extraintestinal infections, especially from different geographical areas of the country can be used to obtain epidemiological information on phylogenetic distribution and distribution of pathogenic strains as well as resistant strains. It is useful for medication for the proper use of antibiotics and the control of nosocomial infections. Today, the use of molecular typing in hospitals prevents the spread of many nosocomial infections and in this regard helps the economy and health of different communities.		Line

8- The sentences have to be revised and written in more suitable manner.	The objective of the present study was corrected.	4	Line 90-93
9- "Isolation of isolates was confirmed by standard microbiological and biochemical methods." Isolation or Identification?	Then bacteria were identified using routine biochemical tests such as methyl red (MR),Voges-Proskauer (VP),triple sugar iron agar(TSI),	4	Line 99-100
10- "All isolated Escherichia coli strains were enriched in trypticase soy broth with glycerol and stored at minus 20 ° C." …enriched in….. with glycerol??	Isolated *E. coli* strains were stored in trypticase soy broth (TSB), with sterile glycerol at −20 °C(1).		Line 101-102
11- Methods are not described appropriately and require major revision.	Method for identity of Escherichia coli isolates was added.		Line 98-102
12- "In this study, based on statistical analysis and Fisher's exact test, no significant relationship was observed between sex, age, and phylogenetic groups." Where are the results? What is the proof for that claim?	The results are listed in Table 3.	12	Line 288-290
13- "Based on this, it can be concluded that in recent years, isolates of uropathogenic E.coli have emerged that, in addition to having different viruses, have become resistant to different types of antibiotics". What does "in addition to having different viruses" mean?	Based on this, it can be concluded that in recent years, isolates of uropathogenic *E.coli* have emerged that, in addition to having multiple virulence genes, have become resistant to different types of antibiotics.	9	Line 242
14- Although results are much discussed but can be more appropriately organized in which readers can follow it more easily. For example divide your discussion in several parts or at least separate them in defined paragraphs.	The discussion was separated into defined paragraphs.	7-9	Line 166-238
15- Conclusions have to be written in separate section.	Conclusions were written in a separate section.	9	Line 240-255

OPEN PEER REVIEW

Revision (3)

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

REFEREE: EIC | **Revision** (3) 18 Apr 2021

Dear Author,

Please correct:

1. Inclusion & exclusion criteria for sampling should be completely explained.
2. Controls for the detection of antibiotic resistance genes should have been described.

Thanks.

OPEN PEER REVIEW

Revision (4)

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.

Article refereeing answer with ID112547

The answer to the comments is highlighted in the main text of the article.

Reviewer comments	Author responses	Page number	Line number
Reviewer 1			
isolated to obtained	Corrected in the original text.	1	Line 13
Followed by Unknown (20.2%)" transfer to the end of sentence.	Followed by Unknown (20.2%) moved to the end of the sentence.	1	Line 20
Line 52: among them	Corrected in the original text.	3	Line 52
Line 66: common isolates of Escherichia coli. Did you mean commensal	We mean the word commensal and it was corrected in the text.	3	Line 66
Line 70: please revise the sentence.	Line number 70 was corrected.	3	Line 69- 70
Line 88: uropathogenic E. col	Line 88 of the word uropathogenic Escherichia coli revised.	4	Line 88
Line 99: Isolation of isolates was confirmed, do you mean the confirmation that they were E.coli? How did you understand they belonged to the E. coli?	After collection, urine samples were cultured on MacConkey and Eosin Methylene Blue Agar(EMB) and incubated at 37 °C for 24 hours.Then bacteria were identified using routine biochemical tests such as methyl red (MR),Voges-Proskauer (VP),triple sugar iron agar(TSI), indole production, Simmons' Citrate Agar (Merck Germany).	4	Line101-106
Lines 110 please revise the sentence.	Line 110 was revised.	5	Line 113-117
Line 124 and 125: revise and present data or add reference for the primer sequences.	Was revised.	5	Line 124-125
Line 136please revises the sentence.	Line 136 was revised.	5	Line 136
Line 155-158: please revise the sentence.	Was revised.	6	Line 155-158
Line 174-176: please revise the sentence.	Was revised.	7	Line 174-176

Reviewer comments	Author responses	Page number	Line number
Reviewer 2			Line
Introduction section has to be revised totally and rationale of the study should be added. It is not contributing to understand the clinical significance of the study.	The introductory part was modified according to the purpose of the study.	3	Line
Name of the genes and bacteria should be written in italic throughout the article.	The names of the genes and bacteria became italic.		Line

In results and tables slu is written instead of sul gene by error.	The word sul was modified in the text and table.		Line
Inclusion & exclusion criteria for sampling should be completely explained.	The population of the study included outpatients with UTI referring to medical labs for urine culture; the growth of E. coli was considered as a positive result. Exclusion criteria were having an indwelling urinary catheter, being pregnant, having genitourinary abnormalities, and antibiotic therapy within the last two weeks.		Line 98-102
Controls for the detection of antibiotic resistance genes should have been described.	In this test, antibiotic resistant samples were amplified and band formation of tetA, tetB, slu1, slu2, CITM, DfrA and qnr genes against molecular markers confirmed the presence of these genes in resistant samples as a positive control from the vial. While, PCR without DNA samples in which the same volume of distilled water was added instead of DNA was used as a negative control.		Line 127-131
There are some data about ESBL genes (blaSHV and blaTEM) in Table 2 without any mentioning or explanation about these genes in any other part of the article.	Because the ESBL gene data were not relevant to this study, they were deleted.		Line
In results the number of isolates are needed to be written along with stated percentages.	In the results section, the number of isolates was written along with the percentages.		Line 145-147
Stock of bacteria can usually be stored stably at -80°C.	Due to the fact that the stock of bacteria can be stored for a longer period of time at a temperature of -70 ° C , so due to the lack of access to the freezer -70 ° C , the stock of bacteria can be stored in the freezer below -20 ° C. Under these conditions, to ensure that the stock of bacteria is alive at intervals of several months from frozen storage cultures, we prepared re-culture on a suitable medium.		Line
The discussion and conclusion is better to be written by addressing clinical significance to understand the relation between characters of the isolated bacteria and the UTI occurrence.	The discussion and conclusions were somewhat edited.	7-9	Line

Reviewer comments	Author responses	Page number	Line number
Reviewer 3			Line
1- "…Escherichia coli causing urinary tract infection in Yasuj, Iran" does not seem to be appropriate, it should be mentioned in other way like Escherichia coli strains isolated from patients with urinary tract infection in	**Suggested title:** Study on phylogenetic groups and antibiotic resistance genes associated with Escherichia coli isolated from a patient with urinary tract infection in southwestern Iran		Line
3- The type of PCR method should be mentioned.	In this study, multiplex polymerase chain reaction method was used.	1	Line 16
4- The relation between phylogenetic group and antibiotic resistant genes are not clearly explained	The relationship between phylogenetic groups and antibiotic resistance genes was described.	1	Line 23-26
5- Some Keywords are not necessary and can be omitted such as Iran.	The word Iran was removed from the keywords.	2	Line 33
6- Scientific name of bacteria should be written in Italics.	The names of the genes and bacteria became italic.		Line
7- The outcomes of similar investigations have not been explained sufficiently what is the really use of such research works? What the results of local (yasoj or other places in the world) investigations of such phylogenetic groups or virulence genes could help in improvement of UTI treatment?	It appears that the analysis of Escherichia coli strains isolated from urinary tract infections and even other extraintestinal infections, especially from different geographical areas of the country can be used to obtain epidemiological information on phylogenetic distribution and distribution of pathogenic strains as well as resistant strains. It is useful for medication for the proper use of antibiotics and the control of nosocomial infections. Today, the use of molecular typing in hospitals prevents the spread of many nosocomial infections and in this regard helps the economy and health of different communities.		Line
8- The sentences have to be revised and	The objective of the present	4	Line 90-93

written in more suitable manner.	study was corrected.		
9- "Isolation of isolates was confirmed by standard microbiological and biochemical methods." Isolation or Identification?	Then bacteria were identified using routine biochemical tests such as methyl red (MR),Voges-Proskauer (VP),triple sugar iron agar(TSI),	4	Line 103
10- "All isolated Escherichia coli strains were enriched in trypticase soy broth with glycerol and stored at minus 20 ° C." …enriched in….. with glycerol??	Isolated *E. coli* strains were stored in trypticase soy broth (TSB), with sterile glycerol at −20 °C(1).	4	Line 105-106
11- Methods are not described appropriately and require major revision.	Method for identity of Escherichia coli isolates was added.	4	Line 101-106
12- "In this study, based on statistical analysis and Fisher's exact test, no significant relationship was observed between sex, age, and phylogenetic groups." Where are the results? What is the proof for that claim?	The results are listed in Table 3.	12	Line 295-297
13- "Based on this, it can be concluded that in recent years, isolates of uropathogenic E.coli have emerged that, in addition to having different viruses, have become resistant to different types of antibiotics". What does "in addition to having different viruses" mean?	Based on this, it can be concluded that in recent years, isolates of uropathogenic *E.coli* have emerged that, in addition to having multiple virulence genes, have become resistant to different types of antibiotics.	9	Line 250
14- Although results are much discussed but can be more appropriately organized in which readers can follow it more easily. For example divide your discussion in several parts or at least separate them in defined paragraphs.	The discussion was separated into defined paragraphs.	7-9	Line 174-246
15- Conclusions have to be written in separate section.	Conclusions were written in a separate section.	9	Line 249-263

OPEN PEER REVIEW

Revision (4)

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

REFEREE: EIC | **Revision (4)** 20 Apr 2021

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 the ORCID number into you and your collages account, then automatically appear in your published papers in JJM both in HTML and pdf. For more details:
https://sites.kowsarpub.com/jjm/knowledgebase/category/tree.html#orcid.html
Thanks.