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OPEN PEER REVIEW

The Outcomes of Using Scalpel and Electrosurgery Methods for Anterior Abdominal Wall Incision During Cesarean Section

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1 Original submission

3 comments · 21 Aug 2023 – 21 Aug 2023

Referee 1 Reviewer

MINOR REVISION 21 Aug 2023

Respectful greetings,

I would like to thank the respected authors of the above article. There were some issues in the article text, as noted in the attached file, and it would be best to correct them.

Thank you

Associate Editor

MINOR REVISION 21 Aug 2023

minor revision

Editor-in-Chief

MINOR REVISION 21 Aug 2023

Minor revision

2

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.

Table of **responses to reviewers'** comments for:

Manuscript ID: 139181

Title: Evaluation of the Consequences of Using Scalpel and Electrosurgery Methods for Anterior Abdominal Wall Incision During Cesarean Section

Journal: Annals of Military and Health Sciences Research

Thanks for reaching out to us regarding the mentioned manuscript. We believe that these comments have helped us enhance the quality of the manuscript. We have done our best to revise as well as improve the paper according to the comments. All changes are highlighted in the version. Please feel free to contact us if you need further information.

With the best regards

Fatemeh Pouladkhay
Faculty member of Operating Room, Department of Operating Room, School of Paramedical Sciences, Gonabad University of Medical Sciences, Gonabad, Iran.

Reviewer's Comments	Author Response	Address of change
Reviewer 1		
Table 1. Demographic characteristics of both groups Scalpel Electrosurgery There are some errors in the numbers in the table; please check again. SD should be reported for all data in the table.	We would like to thank the reviewer for taking the time and effort necessary to review the manuscript. Tables were rechecked and SD corrected.	Table 1
In a study by AbdElaal et al., the surgical incision time was shorter in the electrosurgery group than in the scalpel group contrary to our results. The mean incision time was 10.29 ± 67.74 in the electrosurgery group and 03.8 ± 10.131 in the scalpel group (11). In the Discussion, the case mentioned above relates to AbdElaal, but a different article has been given as the reference; also, please recheck the numbers given. Usually, we do not place a zero before a whole number.	The desired reference was corrected and the numbers were rechecked and written correctly.	In a study by AbdElaal et al., the surgical incision time was shorter in the electrosurgery group than in the scalpel group contrary to our results. The mean incision time was 74.67±10.29 in the electrosurgery group and 131.1±8.0 in the scalpel group (12).
In addition, in another study, the incision time in the electrosurgery group was	The reference was added at the end of the text.	In the study of Caliendo et al, the incision time in the electrosurgery

significantly shorter than the scalpel group (P=0.001). This difference in results may be due to differences in the skill and speed of surgery of the surgical team in the use of electrosurgery in the two studies. The text above mentions "another study", but the relevant reference is not specified at the end of the paragraph.		group was significantly shorter than the scalpel group(11).
Notably, the hemodynamic status of subjects has not been reported in similar studies despite the fact that a sustainable hemodynamic status in patients is an important point during and after the surgery and attempts must be made by the surgical team to maintain it at a stable level. The text above refers to "similar studies", but no article has been cited.	The references were added at the end of the text.	Notably, the hemodynamic status of subjects has not been reported in similar studies despite the fact that a sustainable hemodynamic status in patients is an important point during and after the surgery and attempts must be made by the surgical team to maintain it at a stable level (11,12,14).
In addition, the Apgar variable of the newborns in this study did not show a significant difference in the two groups, and the study by Bostanci et al had published results consistent with our study. No reference is given in the paragraph above.	The reference was added at the end of the text.	In addition, the Apgar variable of the newborns in this study did not show a significant difference in the two groups, and the study by Bostanci et al. had published results consistent with our study (14).
In none of the studies conducted by other researchers (10,11,14,15). There was also no significant difference. The two sentences above, which are next to each other in one paragraph, are unclear and should be rewritten and corrected.	The desired sentences were rewritten and corrected.	No significant difference was observed in any of the studies conducted by other researchers (10,11,14,15). This finding proves that the use of electrosurgery to create a surgical incision has no effect on wound healing and its related cases. However, the complications of the wound can vary according to the way of care

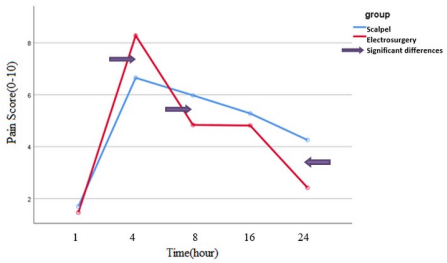
		and compliance with health tips.
In the Discussion section there are many similar problems, such as sentences that appear to be Google Translate output; it needs to be rewritten so that there are fewer unclear sentences.	The errors in the text were corrected in terms of writing and grammar.	
The References section has many errors and should be formatted again according to the journal style.	References have been rechecked and placed in the correct style.	

Reviewer's Comments	Author Response	Address of change
Reviewer 2		
Why have you not used the names of the surgical methods themselves? Groups A and B are not mentioned anywhere in the text either.	We would like to thank the reviewer for taking the time and effort necessary to review the manuscript. We are grateful for your pointing out this issue in our paper and your great advice. The names of the groups in the abstract and text were modified.	This study is a clinical trial study, which was done in a double-blind manner and by block permutation randomization method. The participants were placed in two groups. In Scalpel group, incisions were made with a Scalpel and in electrosurgery group, incisions were made with an electrosurgical pencil.
In the text of the article, have you reported its time as significantly different between the two groups?	The results were corrected in the abstract.	There was no significant difference between the two groups in terms of intraoperative bleeding, newborn Apgar, postoperative pain, and wound complications. but the duration of surgery (P=0.012), incision time (P=0.049) and hemodynamic status of the patients showed a significant difference (p<0.05).

If this is the beginning of a sentence, the first letter should be capitalized.	Writing and grammar corrections were made throughout the study.	
Since you are reporting other researchers' work, there is no need to give the p value.	Additional p values were removed from all parts of the study that were identified by the respected reviewer.	
at 86 using the statistical equation and the random number table. This wording is not usually used in scientific articles to state the sample size; this style is used in theses.	The text intended by the respected reviewer was corrected.	A total of 86 patients were included in our study. At first, all patients were subjected to spinal anesthesia by an anesthesiologist and with the same drug method.
the researchers were informed in 92 case of injury to the surgical team or the patient during the surgical incision. How was this done?	The text intended by the respected reviewer was corrected.	in case of injury to the surgical team or the patient during the surgical incision, the researchers who supervised the use of scalpel and electrosurgery during the surgery noticed and recorded that in the checklist.
NRS Please give the full form of these letters in parentheses.	The text intended by the respected reviewer was corrected.	NRS (Numeric Rating Scale)
In the Methods section, please describe how the demographic characteristics were collected.	The text desired by the respected reviewer was added in the method section.	The demographic information including age, weight, height, BMI and gestational age will be extracted from the patient's file and recorded in the checklist designed by the researchers.

Do these numbers represent standard deviations? If so, state this either in the title or in the table itself, and use the ± sign with them.	Tables were rechecked and SD corrected.	
Based on the results of the analysis, data related to the incision time, a significant difference was 109 observed between the time of surgical incision in the two groups This sentence can be deleted by adding "statistically significant difference" to the next sentence.	The text intended by the respected reviewer was corrected.	Based on the results, the mean of surgical incision time was less in the scalpel group (97.58 s) than electrosurgery (113.07s) and it was significant (P-value = 0.012). Also the mean duration of surgery was statistically significant difference (P-value = 0.012) (Table 2).
statistically significant difference Use this phrase in the next sentence and delete this sentence.	The text intended by the respected reviewer was corrected.	Also the mean duration of surgery was statistically significant difference (P-value = 0.012) (Table 2).
Hemodynamic status of participants in three sections of systolic and diastolic pressure and heart 115 rate was assessed using t-test. The results showed that there was no significant difference between 116 the two groups of electrosurgery and scalpel in terms of preoperative systolic blood pressure, but 117 during surgery this difference was significant In general, simpler wording can be used to express statistical differences. In scientific articles, the type of statistical test is not usually mentioned in this way. What was the difference? Lower or higher?	The text intended by the respected reviewer was corrected.	The results of the analysis of the hemodynamic status in the three sections of systolic and diastolic pressure and heart rate showed that there was no significant difference between the two groups of electrosurgery and scalpel in terms of systolic blood pressure before surgery, but this difference was significant during surgery (P=0.000). So, in the electrosurgery group, the mean of systolic blood pressure during the surgery was lower than in the scalpel group. Changes in systolic blood

		pressure before and during surgery were also significant (P=0.000) (Table 2).
The mean preoperative systolic blood pressure in the scalpel and electrosurgery groups was 120 129.33 and 133.74, respectively, and the mean intraoperative blood pressure in the scalpel and 121 electrosurgery groups was 121.28 and 101.67, respectively; which shows the reduction of this 122 variable in groups, during surgical incision. Changes in this variable were reported in the scalpel 123 group of 8.0465 mmHg and in the electrosurgery group of 32.098 mmHg. Please state the unit (mmHg).	In all studies, measurement units were modified and added.	The mean preoperative systolic blood pressure in the scalpel and electrosurgery groups was 129.33 and 133.74 mmHg, respectively, and the mean intraoperative blood pressure in the scalpel and electrosurgery groups was 121.28 and 101.67 mmHg, respectively; which shows the reduction of this variable in groups, during surgical incision. Changes in this variable were reported in the scalpel group of 8.0465 mmHg and in the electrosurgery group of 32.098 mmHg.
. In addition, we detected a significant difference between the 129 two groups regarding changes in the preoperative and intraoperative diastolic blood pressure 130 (P=0.004). Accordingly, the mean changes in the variable were lower in the electrosurgery group 131 (21.6512), compared to the scalpel group (0.0535). Do these numbers represent changes? In which variable? Systolic or diastolic pressure?	The text intended by the respected reviewer was corrected.	In addition, we detected a significant difference between the two groups regarding changes in the preoperative and intraoperative diastolic blood pressure (P=0.004). Accordingly, the mean changes in the diastolic blood pressure were lower in the electrosurgery group (21.6512 mmHg), compared to the scalpel group (0.0535 mmHg). The results also showed that the electrosurgery method caused a

		greater decline in diastolic blood pressure, compared to the scalpel group (Table2).
The two groups showed a significant difference in terms of time of disappearance of spinal 143 anesthesia and return of pain, so that in 58.1% of people in the scalpel group, the effect of spinal 144 anesthesia disappeared in less than 2 hours after surgery, but only 34.9% of the electrosurgery 145 group returned to normal before surgery at this time(P=0.019). Would it not be better to use the word "mothers"?	The text intended by the respected reviewer was corrected.	The two groups showed a significant difference in terms of time of disappearance of spinal anesthesia and return of pain, so that in 58.1% of pregnant women in the scalpel group, the effect of spinal anesthesia disappeared in less than 2 hours after surgery, but only 34.9% of the electrosurgery group returned to normal before surgery at this time (P=0.019).
Please add spacing.	The study was revised in terms of writing.	
Please indicate the statistically significant differences on the figure using markers.	The figure was modified according to the opinion of the respected reviewer.	
In addition, in another study, the incision time in the electrosurgery group was significantly shorter than the scalpel group. Why have you not given the author's name, as in the first case?	The text intended by the respected reviewer was corrected.	In addition, In the study of Caliendo et al, the incision time in the electrosurgery group was significantly shorter than the scalpel group
the need for more time to coagulate and prevent bleeding using from electrosurgery, the cutting time is longer. Do you mean more time for controlling bleeding in surgery without electricity?	The text intended by the respected reviewer was corrected.	Despite the prolongation of incision time in electrosurgery method, the duration of surgery in this group was shorter than in the scalpel group. It can

		be said that controlling the bleeding during surgical incision using electrosurgery prolongs the time required for the incision, but by keeping the operation site clean, it prevents prolongation of the duration of surgery. In this study, this problem is completely the opposite in the way of using Scalpel.
Lack of rapid control of bleeding prevents the cleanliness of the surgical field, which negatively affects the speed of surgery of the surgical team. It would be better to mention the type of surgery. Using the general word "surgery" causes misunderstanding of the results.	The text intended by the respected reviewer was corrected.	
Therefore, the possible risks considered with electrosurgery must be considered during surgeries. Such as what?	The text intended by the respected reviewer was corrected.	
we also considered the health of the surgical team, which was not investigated in other studies No report of this was seen in the Results section, and it is not discussed here either.	Information about patient injury and surgical team was added in the Results section.	Also, none of the participants and people in the surgical team were injured by electrosurgery or scalpel during the study.
However, this study measured the patient's postoperative pain only by measuring the number of analgesics received by patients When you use this demonstrative word, the reader understands it more as referring to your study, not to the study by the American group or anyone else.	The changes desired by the respected reviewer were made in all parts.	
In our study, in addition to measuring pain in 24 hours after surgery and measuring the amount of analgesic drug received by patients, the time of	Information about time of disappearance of spinal anesthesia was added in the Results section. Also, a table about this was	**Table 1. Comparison of the time of disappearance of spinal anesthesia in two groups**

disappearance of spinal anesthesia was also measured, which was not measured in this study. Why have you not discussed its results here?	added in the results section.	In our study, in addition to measuring pain in 24 hours after surgery and measuring the amount of analgesic drug received by patients, the time of disappearance of spinal anesthesia was also measured, which was not considered in the mentioned study. It can be said that the use of electricity to create a cut may reduce the sensitivity and transmission of nerve messages by affecting the pain receptors in the skin of the area. Therefore, the need for painkillers also decreases.
In our study, in addition to measuring pain in 24 hours after surgery and measuring the amount of analgesic drug received by patients, the time of disappearance of spinal anesthesia was also measured, which was not measured in this study. What assumptions or hypotheses do you have for the reduced amount of analgesics? In other words, in your opinion, why should analgesic consumption have decreased in surgery with electricity? Is one of the reasons not the reduction in the amount of tissue damage?	The text intended by the respected reviewer was corrected.	It can be said that the use of electricity to create a cut may reduce the sensitivity and transmission of nerve messages by affecting the pain receptors in the skin of the area. Therefore, the need for painkillers also decreases.
In none of the studies conducted by other researchers (10,11,14,15).There was also no significant difference Please edit the sentences for English language. These two sentences are in fact one sentence.	The text intended by the respected reviewer was corrected.	This finding proves that the use of electrosurgery to create a surgical incision has no effect on wound healing and its related cases.
This finding proves that the use of electrosurgery to make a surgical incision does not cause any wound-	The text intended by the respected reviewer was corrected.	However, the complications of the wound can vary according to the way of

related complications. Given that none of the patients had wound problems, would it not be better to attribute the result to the proper treatment and care of the wound?		care and compliance with health tips.

Reviewer's Comments	Author Response	Address of change
Reviewer 3		
The reasons for doing this study were different from the cases of this study. For example, it was mentioned that Electrosurgery could be useful for the personnel and surgical team, and so on, but the design of study was about the patients. So, it is suggested to change and revise the necessary and reasons of doing this study.	We would like to thank the reviewer for taking the time and effort necessary to review the manuscript. The text intended by the respected reviewer was corrected.	In addition, the use of electrosurgery in operating rooms has made it possible for surgeons to control bleeding during surgery and to prevent unwanted scalpel complications. Also, studies have shown its effect on reducing duration of surgery and reducing postoperative patient pain (10,11)
Changing of how to write it according to the format of journal is suggested and try to separate the different steps as much as possible	The changes desired by the respected reviewer were made.	
The kind of using Electrosurgery wasn't mentioned	The type and method of using electrosurgery was added in the methods.	: in group electrosurgery 43 patients had electrosurgical skin incision which the superficial skin layer was opened with a scalpel and other layers were cut using monopolar electrosurgery cutting mode, with 120 watts of sinusoidal power. While the 43 patients in group scalpel an incision was made from skin to the uterus using scalpel blade No. 22.
The data about the quality of wound wasn't mentioned in the table 2 and the	Since the examination of the patient's wound condition was	In both groups, there were no

comparison between it and another technique wasn't mentioned either	qualitative and no complications were observed in any of the patients during the study, the results were mentioned in one sentence. Only the length of the surgical wound can be reported, which is added in Table 2.	complications related to the surgical wound, and all subjects were completely normal in terms of skin color, wound secretions, infection, or increased temperature of the wound 24 hours after the operation.
The disadvantages of the Electrosurgery technique in different aspects (for example the cost and risk of it, specially in related to the neonate) were not mentioned. - In regards to the long history of Electrosurgery technique why have not it used in anywhere or replaced scalped? It is suggested to mention all above aspects in the discussion and analyze them. 3- The novelty of this study wasn't mentioned.	The explanation desired by the respected reviewer was added in the Conclusion section.	Even though many gynecologists and obstetricians currently prevent its use for caesarean section due to the fear of causing burns following the use of electrosurgery and bitter experiences in this regard, the results of this study showed that the use of electrosurgery Correctly and in compliance with safety precautions, it is not only not a problem to make an incision in the anterior wall of the abdomen during cesarean section, but it also shortens the duration of surgery, which in turn reduces postoperative complications. It also has a positive effect on reducing the patient's pain after surgery. On the other hand, in terms of hospital costs, there is no difference with the scalpel technique and it does not impose additional costs on the patient. However, due to the significant

		reduction in blood pressure when using the electrosurgery device, it is recommended that the hemodynamic status of patients during surgery be monitored by the surgical team so that effective measures can be taken if the patient's blood pressure decreases.
Using new references is suggested.	The researchers tried to use the most up-to-date relevant articles.	

[Translated from Persian by the Brieflands editorial office.]

2 Revision 1

1 comment · 29 Aug 2023

Editor-in-Chief

ACCEPT 29 Aug 2023

Accept