Author's response to reviews

Title: The efficacy of risk scores for predicting abdominal wound dehiscence: a case-controlled validation study.

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Version: 2
Date: 8 December 2013

Author's response to reviews: see over
We would like to submit a revised version of the attached manuscript. First of all, we would like to thank you all the reviewers for their comments. We analyzed very carefully each point and we hope that we were able to completely and satisfactorily answer each of the questions. All of the reviewers’ comments were addressed and we made appropriate changes in the text (see below). 

Sincerely,

Jakub Kenig

Referee 1 
Reviewer’s report: no comments on this issue

Referee 2 
Major compulsory revisions

Abstract 
Explain abbreviation VAMC in abstract: corrected
Change Netherlands risk score into Rotterdam risk score or Dutch risk score (throughout entire manuscript): corrected

"Conclusions: Both the VAMC and Netherlands scores can be used for the prediction of abdominal wound dehiscence. However, the VAMC prognostic score had better calibration and discriminative power when applied to the population in this study" => add that the predictive value of the Dutch/Rotterdam score and its AUC were very likely negatively impacted by your method of selection of control patients: corrected

Methods 
State more clearly that this is a retrospective study: it is stated in the first line as the first word in methodology and in limitations of the study.

Patients with missing data associated with risk factors of interest were excluded from the study. For the rest of the patients included in the final analysis, data were missing for 3% of the patients in the dehiscence group and 2% in the control group. => describe in more detail how data extraction was performed. Were all medical charts reviewed? Were all variables from both risk scores assessed or not? How is it possible that data were missing in 2% of control patients? Why were these not replaced with other control patients to gain 100% data? Did the percentage of missing data differ between both scores? How were variables such as ‘postoperative coughing’, ‘return to OR’, and ‘operation by resident in 4th year’ dealt with? All medical, both electronical and paper charts of study and control were reviewed. Of course all variables from both risk scores were present in the charts and assessed. The missing data concerned smoking, alcohol use, biochemical factors such as protein or crp etc. The data from control group is also missing due to our way of patients’ selection: “time interval from 1 day to 1 month”. Finding such a control person is very difficult and we included patient only if the absence was related to the factors not connected with the scores (for example lack of information regarding smoking or crp level). Postoperative coughing was assessed based on the daily postop. nurses assessment charts, return to OR and operations by resident in the 4th year are described in detail in our electronic database.

Results 
Add table with all variables from both risk scores and the distribution of these variables for
both groups (cases and controls) added
Discussion
The Rotterdam/Dutch risk score was also evaluated in another study by Gomez et al. I found no reference to this study in the paper. Add and discuss this reference. ref. Validation of abdominal wound dehiscence’s risk model added
Conclusion
“However, the VAMC prognostic score had better calibration and discriminative power when applied to the population evaluated in this study” => Add the earlier discussed fact “This is due the fact that the Netherlands score consists of many variables that our control group was matched for (age, gender, emergency surgery, type of surgery)”, thereby clarifying that the predictive value of the score and its AUC were very likely negatively impacted by your method of selection of control patients. In other words, your method of selection hinders a fair comparison: corrected
Minor essential revisions
“…calculated using standard formulas for each trauma score”. => remove trauma corrected
The use of matching cases and controls could have affected the sensitivity and specificity of tests. => specificity instead of specificity corrected

Referee 3
No comments

Referee 4
Multiple spelling/grammar mistake, There are missing words and sentences in all test. Not useful research, Good example of decent stats in useless data, Abstract barely readable, Methodology not clear etc.
We will not discuss it. See the comments of above referees
How were pts identified? Did you check 2000 pts files? Through the electronic database (looking for complications + dehiscence). Yes.
The scoring system should be well explained in intro or method the details of both scoring systems are explained in the published papers (citations are included)
Did infection caused or was caused by dehiscence? Same for icu stay infection was the main cause of the dehiscence, icu stay
Why about 20% of pts had retention sutures? Decision of the operating surgeon (no fixed rules), subjective