Reviewer’s report

Title: Survival and Associated Risk Factors in Patients with Diabetes and Amputations Caused by Infectious Foot Gangrene

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Reviewer: Carla McArdle

Reviewer's report:

Dear Authors

Thank you for your manuscript which is an informative retrospective study, providing an interesting read in relation to survival rates in patients with diabetes and amputations caused by infectious foot gangrene.

Within the write up of your findings I feel you make some bold claims which cannot be backed up from your data due to lack of statistical significance and the need for more in depth data especially in relation to ABI remarks made. You have mentioned that patients with a normal ABI should have limb preservation, however research has identified that there are inaccuracies with ABI readings. As well as this perhaps the fact that the patient has gangrene with a normal ABI would indicate that further vascular examinations are needed before this course of action is taken.

Page 4, Line 13 - Personally I would try to avoid the term 'diabetic patients' and use the more politically correct term 'patients with diabetes', I would be inclined to amend this throughout.

Page 4, Line 17 - Change to peripheral arterial disease

Page 4, line 17 - you have said that gangrene is due to PAD and subsequently explain on the next sentence that it is due to CLI, some clarity needed on this.

Have you some justification as to why survival time was calculated until 31 Dec 2012. You mention some rationale for this in your results section however you just need to articulate this in the methods section. Remember that if you are looking at a ten year observation period for each patient this will only apply for those you have included from 2002. More explanation needed on this. You also mention a 5 year survival rate, can this apply to those who received diagnosis of gangrene in 2009.

On page 9 line 1-7 - you begin to discuss why patients with minor LEAs and major LEAs have differing hospital stays, it is best to leave this to the discussion section and back this up with
supporting references. The reason you have included for this is also a very large assumption and needs some elaboration. Grammar also needs revised in this section.

Can I suggest that the first paragraph of your discussion section is reworded, this is hard to follow. I would also be interested to know if there has been any more recent research carried out that may support your findings. The last study that you have included regarding survival rates is 2012.

Page 10, line 1- what do you mean by high level LEA, if you are talking about major amputations just use this terminology and don't change this throughout as readers may get confused.

An interesting discussion backed up with supporting research.

Page 10, line 49, you explain why preservation is challenging, have you any references to back up this assumption. What do you mean by the clinical course?

Elaboration needed on page 10, line 55-56 in relation to hesitation in performing majors LEA, any references to back this up.

Limitations noted and further studies identified.

In your concluding paragraph I would be inclined to conclude on what your study has identified in relation to survival rates and not mention about ABI as this statement is not accurate.

Kind regards

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