Reviewer’s report

Title: Predictors of lower extremity amputation in patients with diabetic foot ulcer: findings from MEDFUN, a multi-center observational study

Version: 0 Date: 12 Feb 2019

Reviewer: Alfred Gatt

Reviewer's report:

There has clearly been a large amount of work in the conduction of this study and for the preparation of this report. However several amendments need to be taken care of.

Abstract:

- In the Results section, "...Proteinuria (P 0,021)...." should be corrected to 'Proteinuria (P 0.021)'.
- In the Results section (as also in Line 256-257 in the Discussion Section), since participants recruited were hospitalised, risk factors such as glycaemic control may not be reflective of the whole diabetic population as glucose levels may be less likely to be controlled when not under constant medical attention. This may be affecting its significance with regards to risk factors of LEA.
- In the Conclusion section, ulcer grading was done through Wagner classification system (as also in Line 100-101 in the Methods section). A more recent grading system might have been used; for example the Eurodiale study have used the PEDIS system.

Background:

This section should be revised since it provides no focus on the several risk factors of LEA which is the main focus of the study. A critical review of the literature is of paramount importance to improve the quality of the paper

- Various grammatical amendments are required;

Line 55: ulceration instead of "ulcer". This also applies to the rest of the report when "diabetic foot ulcer" or "duration of ulcer" is written.

Line 57: Rewording required "Recent update suggests...."

Line 59: hospital admissions instead of "...hospital admission."
- Line 60-61: Rewording and citation required. "But perhaps the most...is lower extremity amputation (LEA)."

- Line 69-70: "...comparable to breast and prostate malignancies in males and females respectively." should be switched since breast malignancies are referring to females and prostate malignancies are referring to males.

-Line 74: More appropriate scientific language should be considered, "Efforts to prevent this ugly scenario..."

-Line 76: Rewording required since Nigeria is a country and not a "locality".

Methods:

This section could have been better structured into different sections including, study design, inclusion/exclusion criteria etc.

- Line 84: The inclusion/exclusion criteria when recruiting participants is very poorly described, where no exclusion criteria was mentioned (such as active ulceration of less than a month). Are there any confounding variables which might affect results in this study?

- Line 88-90 and Line 126-128 the authors need to clarify whether this paper is presently being considered for publication elsewhere. If yes, this would invalidate this paper for publication.

- Line 92-96This is not the correct method of determining whether a patient is living with type I or type II DM. "Distinction between type 1 and type 2 DM was made clinically based on combined parameters of age and method of diabetes control." This, thus, raises serious questions regarding the validity of this paper

- Line 106: What type of foot deformities were reported? Were any arthritic changes or biomechanical abnormalities of the lower limb taken into consideration?

- Line 106-108: How was the scoring system of the monofilament test and tuning fork test? How was peripheral neuropathy determined?

- Line 108-111: Was peripheral arterial disease diagnosed based only on pulse palpation OR Doppler ultrasonography? A better description of the tests performed and what was included or excluded with regards to PAD and neuropathy need to be clarified further.

- Line 112-117: Were tests of the various possible risk factors of LEA performed only on recruitment of participants? How were the recruited participants followed up with regards to the variables being tested for in this study?

- Line 123-124: Citation required. "We defined...otherwise it was minor."
- Line 132-133: Aim of this study is not clear. Are ulcer healing, mortality and duration of hospitalisation also being analysed as stated in the Background section of the Abstract "The study end-points were...mortality."

Discussion:

- Line 213-215: Explain which adjustments were made for "other confounding variables".

- Line 256-257: Might participants being hospitalised affected the significant association between HbA1c and LEA? Also, since HbA1c testing was performed only on recruiting of participants and not before LEA was required? This also applies to the other laboratory results, such as ESR levels, where no significance was found.

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An article whose findings are important to those with closely related research interests

Quality of written English
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Not suitable for publication unless extensively edited

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