

**Review Form 1.7**

Journal Name:	<b>Asian Journal of Research in Infectious Diseases</b>
Manuscript Number:	<b>Ms_AJRID_114134</b>
Title of the Manuscript:	<b>Epidemiological, Progressive and Therapeutic Aspects of Pulmonary Tuberculosis in Diabetic Patients in the Reference Nationale University Hospital Center in N'Djamena, Chad</b>
Type of the Article	<b>Original Research Article</b>

**Review Form 1.7**

**PART 1: Review Comments**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b><u>Compulsory</u></b> REVISION comments</p> <p>1. <b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</p> <p>2. <b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</p> <p>3. <b>Is the abstract of the article comprehensive?</b></p> <p>4. <b>Are subsections and structure of the manuscript appropriate?</b></p> <p>5. <b>Do you think the manuscript is scientifically correct?</b></p> <p>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></p> <p><b><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></b></p>	<p><b>Yes! The manuscript is important for scientific community as it holds the potential for contributing to knowledge of TB prevalence amongst the diabetics in Chad as well as clarifying the associated progressive and therapeutic characteristics.</b></p> <p><b>The title is suitable but requires a little modification. Below are my two suggestions:</b></p> <ol style="list-style-type: none"> <li>1. <b>“Epidemiological, Clinical Progression, and Therapeutic Characteristics of Pulmonary Tuberculosis among Diabetic Patients at the National University Hospital Center in N’Djamena, Chad.”</b></li> <li>2. <b>“Epidemiological and Clinical Insights into Pulmonary Tuberculosis among Diabetic Patients: A Descriptive Retrospective Study in N’Djamena, Chad.”</b></li> </ol> <p><b>The abstract needs to be improved. The “Methods” section should be updated with sample size data and means of data collection. The name of the hospital should be consistent with the name on the title and other parts of the manuscript. The first and second sentences in the “Results” section should be revised too:</b></p> <p><b>“During our study period, we collected 51 cases of pulmonary tuberculosis and diabetes out of 910 hospitalized patients with a prevalence of 5.6%. The sex ratio was 2.18.”</b></p> <p><b>The author needs to be explicit. For instance, is 5.6% the prevalence of TB amongst the diabetics or the prevalence of TB/diabetes co-infection amongst hospitalized patients. Also if 910 is the sample size, the author needs to clarify or indicate how this number was arrived at.</b></p> <p><b>Again, the statement: “Xpert was positive in 62.7% of cases” should be revised, while the conclusion should be updated in a way that it answers the key research question or hypothesis (if any), and establish the key finding of the research.</b></p> <p><b>The subsections and structure of the manuscript are largely appropriate. However, the introduction should be revised and updated in line with the expectation of the topic. It should be precise, concise and yet detailed. I recommend the inclusion of the following subsections: Setting and study population, sample size determination, Competing Interest and source of funding. The following changes are recommended:</b></p> <ol style="list-style-type: none"> <li>1. <b>Change ‘patients and methods’ to ‘materials and methods.’</b></li> <li>2. <b>Change ‘setting period and type of study’ to ‘study design.’</b></li> <li>3. <b>Change ‘data entry and analysis’ to ‘Data collection and analysis.’</b></li> <li>4. <b>The inclusion and exclusion criteria should come under the ‘...study population’ subsection.</b></li> </ol> <p><b>Yes! The manuscript is scientifically correct based on its context and scope.</b></p> <p><b>The references are majorly recent and sufficient, however, I noticed some gaps that should be covered.</b></p> <p><b>In the introduction, the following assertions should be referenced:</b></p>	

Review Form 1.7

	<ol style="list-style-type: none"><li>1. "Tuberculosis remains to be a major public health problem in developing countries particularly in Africa and notably in Chad."</li><li>2. "Diabetes is a chronic disease that occurs when the pancreas does not produce enough insulin or when the body is not able to effectively use the insulin it produces."</li><li>3. "In 2017, the number of people with diabetes worldwide was estimated to be 425 million and is expected to reach 629 million by 2045. Every year, 10 million new cases are recorded and up to 5 million people die from complications."</li></ol> <p>The reference for the following statement is not recent enough: "Africa has the lowest prevalence, which is 3.2% compared to the rest of the world which is above 8%, but has the highest rate of undiagnosed cases (above 50%) [2]."</p> <p>I suggested the author should use the 2019 data by the International Diabetes Federation (IDF) (<a href="https://diabetesatlas.org/idfawp/resource-files/2021/07/IDF_Atlas_10th_Edition_2021.pdf">https://diabetesatlas.org/idfawp/resource-files/2021/07/IDF_Atlas_10th_Edition_2021.pdf</a>)</p> <p>Below are excerpts from the discussion section that show incomplete referencing:</p> <ol style="list-style-type: none"><li>1. "However, 27.5% hadn't come for follow-up sessions and 19.6% deaths were recorded. This lethality is higher than that of the literature, in particular those of <b>Toure et al.</b>, in Senegal and <b>Maalej et al.</b>, in Tunisia which found 7.4% and 8%, respectively."</li><li>2. "Unilateral lesions on our radiographs were predominated by 39.1%, on the left. Which is similar to the result of <b>Toure et al.</b>, in Senegal who found 27% of lesions on the left lung as well."</li></ol> <p>The following statement in the discussion section should be referenced: "Additionally, Type 2 diabetes is the most common type of diabetes in sub-Saharan Africa."</p>	
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**Review Form 1.7**

<p><b>Minor</b> REVISION comments</p> <p>1. <b>Is language/English quality of the article suitable for scholarly communications?</b></p>	<p>The language/English quality of the article is substantially suitable for scholarly communications. However, I recommend total proofreading of the article to address some typographical errors, punctuation issues and ambiguity of some sentences.</p>	
<p><b>Optional/General</b> comments</p>	<p style="text-align: center;"><b>COMMENTS ON INTRODUCTION</b></p> <p>1. Generally, the introduction is weak and needs to be improved upon. It should cover the following in bits : background, rationale for the study, the specific objectives of the study, a bit of relevant literature review (especially on clinical progression and therapeutic features of TB in a diabetic patient) and the study implications. Touching these areas will make the introduction more robust and comprehensive.</p> <p>2. “Approximately, 10% of subjects infected with Koch's Bacillus develop tuberculosis disease while the vast majority, 90% present with primary tuberculosis (PTB) infection.”</p> <p>PTB is the standard acronym for ‘Pulmonary Tuberculosis’ NOT for ‘primary tuberculosis.’ So, I suggest the author should remove the acronym from the 2<sup>nd</sup> statement above.</p> <p style="text-align: center;"><b>COMMENTS ON RESULTS SECTION</b></p> <p>3. This journal allows the presentation of data table in the ‘result’ section. I suggest the author should move the tables in the annex to the appropriate positions in the results section. Also, it will be nice to introduce a table of the trend of TB prevalence amongst diabetic patients for the 3 years under review, to show the progression.”</p> <p>4. Please if possible, the author should kindly state the statistical significance level of TB prevalence amongst the diabetics by sex, by age, by co-morbidity, by type of diabetes, by years on diabetes treatment and by previous history of TB infection. This information will add to the riches of this research.</p> <p>5. “The search for Koch's Bacillus by GeneXpert PCR technique was <b>positive</b> in 62.7% (n=32) including 71.8% sensitive to Rifampicin and 28.10% (n=9) resistant.”</p> <p>The author has not clearly indicated the population that recorded the above Xpert results. If it is the same sample size used in this research, then it might be conflicting with the initially reported 5.6% MTB detection rate. Again, TB cases from GeneXpert test should be reported as ‘MTB Detected’ instead of the word ‘Positive.’ We use ‘positive’ for AFB or other bacteriological test results. Below are the four possible test results from a GeneXpert assay:</p> <ul style="list-style-type: none"> <li>• MTB Detected, Rifampicin Susceptible (RR-TB Not Detected),</li> <li>• MTB Detected, Rifampicin Resistance Detected (RR-TB Detected),</li> <li>• MTB Detected, Rifampicin Resistance Indeterminate, or</li> <li>• MTB Not Detected.</li> </ul> <p>6. “There were 16 patients that had diabetes-related complications, which were diabetic foot in 13.7% (n=7), followed by 3.9% in neuropathy and retinopathy each.”</p> <p>The author has not shown if there is any statistical significance in the prevalence of TB in patients with diabetes-related complications and those without any complications? This is an important information</p> <p>7. “The evolution was favorable in 52.9% (n=27) of cases.”</p> <p>The author needs to review the statement above, to ensure it is unambiguous and coherent with preceding statements. I recommend rephrasing it.</p>	

**Review Form 1.7**

	<p style="text-align: center;"><b>COMMENTS ON DISCUSSION SECTION</b></p> <p>8. "Our study included 910 patients hospitalized in the pneumo-phthisiology department and 51 patients of whom had tuberculosis due to diabetes (5.6%)."</p> <p>The author has not sufficiently proven that the TB cases were attributable to diabetes (it is possible they could have still had TB without being diabetic). Please, the author needs to indicate the statistical significance level of the association, to support this assertion.</p> <p>9. Most of the citations in this section are comparing data from other countries (some of which did not use the same research methodology, and with divergent local contexts and influencing factors). The author needs to reference or compare this result with those of the studies previously done in Chad. I presume that the results of this research are for the study setting alone and do not translate to Chad's national data, unless the author believes otherwise.</p> <p style="text-align: center;"><b>COMMENTS ON THE REFERENCE LIST</b></p> <p>10. Names of the journals are not written in a consistent fashion. Some are abbreviated while some are not. The author should review and show consistency in the format.</p> <p style="text-align: center;"><b>COMMENT ON THE ANNEX</b></p> <p>11. "Table I: Distribution of patients according to other comorbidities"</p> <p>Since a patient can have more than one co-morbidity, the total number should be either equal to 51 or higher than 51. The total on this table is 38, the author needs to indicate the status of the remaining 13 persons. I guess they do not have any comorbidities. Kindly update the table as applicable...</p>	
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**PART 2:**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

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