Author's response to reviews

Title: Benzocaine and lidocaine induced methemoglobinemia after bronchoscopy: a case report

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Author's response to reviews: see over
Dear Editors,

I would like to thank you for agreeing to publish our manuscript entitled “Benzocaine and lidocaine induced methemoglobinemia after bronchoscopy: a case report”

I appreciate the feedback. Please see below for point-by-point responses to the formatting changes requested.

Title - Please use sentence case in the title (capitalise only the first word, and proper nouns), both in the manuscript file and the submission system (i.e. remove all unnecessary capitals).

This has been changed to: Benzocaine and lidocaine induced methemoglobinemia after bronchoscopy: a case report

Title ¿ Please ensure this is identical in the manuscript and in the submission system.

This has been changed in the submission system also.

Title page - Please list the authors together on one line, then beneath this the affiliations, then the corresponding author and finally below this the email addresses.

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Abstract - Abstracts must be structured into Introduction, Case presentation, Conclusions. Please remember to also update the abstract details on the submission page.
Abstract

**Introduction:** Methemoglobinemia is a rare cause of hypoxemia, characterized by abnormal levels of oxidized hemoglobin that cannot bind to and transport oxygen.

**Case presentation:** A 62-year-old male underwent bronchoscopy and lidocaine oral solution and Hurricaine spray (20% benzocaine) were used. He developed central cyanosis and his oxygen saturation was 85% via pulse oximetry. An arterial blood gas revealed pH 7.45, P\textsubscript{CO2} 42, P\textsubscript{O2} 282, oxygen saturation 85%. The color of arterial blood was not noted. Co-oximetry performed revealed a methemoglobin level of 17.5% (normal 0.6-2.5%). The patient was continued on 15 L/minute nonrebreathing face mask and subsequent oxygen saturation improved to 92% within two hours. With hemodynamic stability and improved Sp\textsubscript{O2}, treatment with methylene blue was withheld.

**Conclusion:** Methemoglobinemia is a potentially lethal condition after exposure to routinely used drugs.

**Background - Please rename this section `Introduction`**

This has been renamed.

**Case -> Case presentation**

This has been renamed.

**Conclusions - Please insert a Conclusions section after the Discussion.**

**Conclusion**

Methemoglobinemia is a potentially severe complication of lidocaine and benzocaine, especially when used concomitantly. Among the acquired causes of methemoglobinemia, although caine-induced methemoglobinemia is rare, it may have a fatal outcome. Clinicians should, therefore, be familiar with this condition to ensure prompt diagnosis and effective treatment. Our patient responded promptly with supplemental oxygen and this case demonstrates that methylene blue is not always necessary in the treatment of methemoglobinemia.

**Authors' contributions - For the Authors' contributions we suggest the following kind of format (please use initials to refer to each author's contribution):** AB carried out the molecular genetic studies, participated in the sequence alignment and drafted the manuscript. JY carried out the immunoassays. MT participated in the sequence alignment. ES participated in the design of the study and performed the statistical analysis. FG conceived of the study, and participated in its design and coordination. All authors read and approved the final manuscript.
Authors' contribution
SK wrote and revised the manuscript. JLF and JDR reviewed and edited the paper. All authors approved the final manuscript.

Please place the statement regarding consent in a section entitled 'Consent' succeeding the 'Authors' contributions'.

Consent
Consent for submission of this manuscript for publication has been given by the patient's wife.

Tables  Please move the table to a position after the references.
This has been repositioned.

Please let me know if there are any other formatting changes you need.

Thank you very much for your time and kind attention. I look forward to hearing from you soon.

Sincerely,

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