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With the current COVID pandemic: should we use single-use flexible bronchoscopes instead of conventional bronchoscopes?

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We would like to describe the numerous advantages of single-use bronchoscopes over conventional bronchoscopes especially during the COVID pandemic. Recently, Zaidi et al. did a comparative study between single-use and conventional bronchoscopes for bronchoalveolar lavage (BAL) [1]. They concluded that with single-use bronchoscopes, they achieved a larger BAL volume yield than conventional bronchoscopes, with comparable cell yield and viability [1]. Better volume yields may potentially reduce post-procedure side effects such as pleuritic chest pain and cough. With single-use devices, the risk of cross infection is eliminated, providing reassurance to researchers and participants [2]. This single-use flexible bronchoscope can be reusable for the same patient and should be stored in his isolate room [2]. Reduced maintenance requirements can be cost effective [3]. In addition, single-use flexible bronchoscopes have been evaluated in the critical care setting with favorable results for BAL, percutaneous tracheostomy, intubation, and suction [4]. Regarding the important question of cost, a recent study suggests benefits from the use of single-use flexible bronchoscopes in terms of cost effectiveness, cross-contamination, and resource utilization [3]. Single-use flexible bronchoscopes could be very useful in the setting of the current coronavirus pandemic. We have already started using them.

Abbreviations

BAL: Bronchoalveolar lavage; ICU: Intensive care unit

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Authors' contributions

PMH, SR, and DDB designed the paper. All authors participated in drafting and reviewing. All authors read and approved the final version of the manuscript.

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References

1. Zaidi SR, Collins AM, Mitsi E, Reiné J, Davies K, Wright AD, et al. Single use and conventional bronchoscopes for Broncho alveolar lavage (BAL) in research: a comparative study (NCT 02515591). BMC Pulm Med. 2017;17(1):83. https://doi.org/10.1186/s12890-017-0421-7.
2. Kovaleva J, Peters FTM, van der Mei HC, Degener JE. Transmission of infection by flexible gastrointestinal endoscopy and bronchoscopy. Clin Microbiol Rev. 2013;26:231–54.
3. Mouritsen JM, Ehlers L, Kovaleva J, Ahmad I, El-Boghdadly K. A systematic review and cost effectiveness analysis of reusable vs. single-use flexible bronchoscopes. Anaesthesia. 2020;75(4):529–40. https://doi.org/10.1111/anae.14891 Epub 2019 Nov 8.
4. Mankikian J, Ehrmann S, Guilleminault L, Le Fol T, Barc C, Ferrandiere M, et al. An evaluation of a new single-use flexible bronchoscope with a large suction channel: reliability of bronchoalveolar lavage in ventilated piglets and initial clinical experience. Anaesthesia. 2014;69(7):701–6.

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