Reviewer's report

Title: Measurement of endotracheal tube secretions volume by micro computed tomography (MicroCT) scan: an experimental and clinical study

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Reviewer: Alberto Zanella

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The manuscript entitled: ”Measurement of endotracheal tube secretions volume by micro computed tomography (MicroCT) scan: an experimental and clinical study” by Andrea Coppadoro et al. is the first attempt in literature to quantify the volume of secretions presents into the ETT by mean of a micro computed tomography (MicroCT).

This work seems to indicate a new tool to study the inner side of ETTs, and I foresee, among may possible applications, the use of MicroCt to assess the effectiveness of devices to clean the inner side of ETTs, and the role of passive/active humidification.

Minor comments:

In the Methods - Observational ex-vivo study-, you should specify the number of ETTs collected.

Figure 1, and E1: mLs of gel volume should be written with dots not commas.

Figure 2, and E2: in both figures the secretions seems to be positioned on one side of the ETT, it would interesting to clarify if the images are oriented in same dependent/non-dependent position as they were into the patients.

Figure E3: “biofilm” should be “secretions amount”

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests