

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 46237

Title: A novel device for monitoring respiratory rate as an alternative to capnography during endoscopy – A thermodynamic sensor

Reviewer's code: 02822560

Reviewer's country: Japan

Science editor: Jia-Ping Yan

Date sent for review: 2019-02-24

Date reviewed: 2019-03-03

Review time: 12 Hours, 6 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input checked="" type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input checked="" type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Wadhwa V et al. revealed thermodynamic sensor is useful for measurement of respiration during endoscopy.



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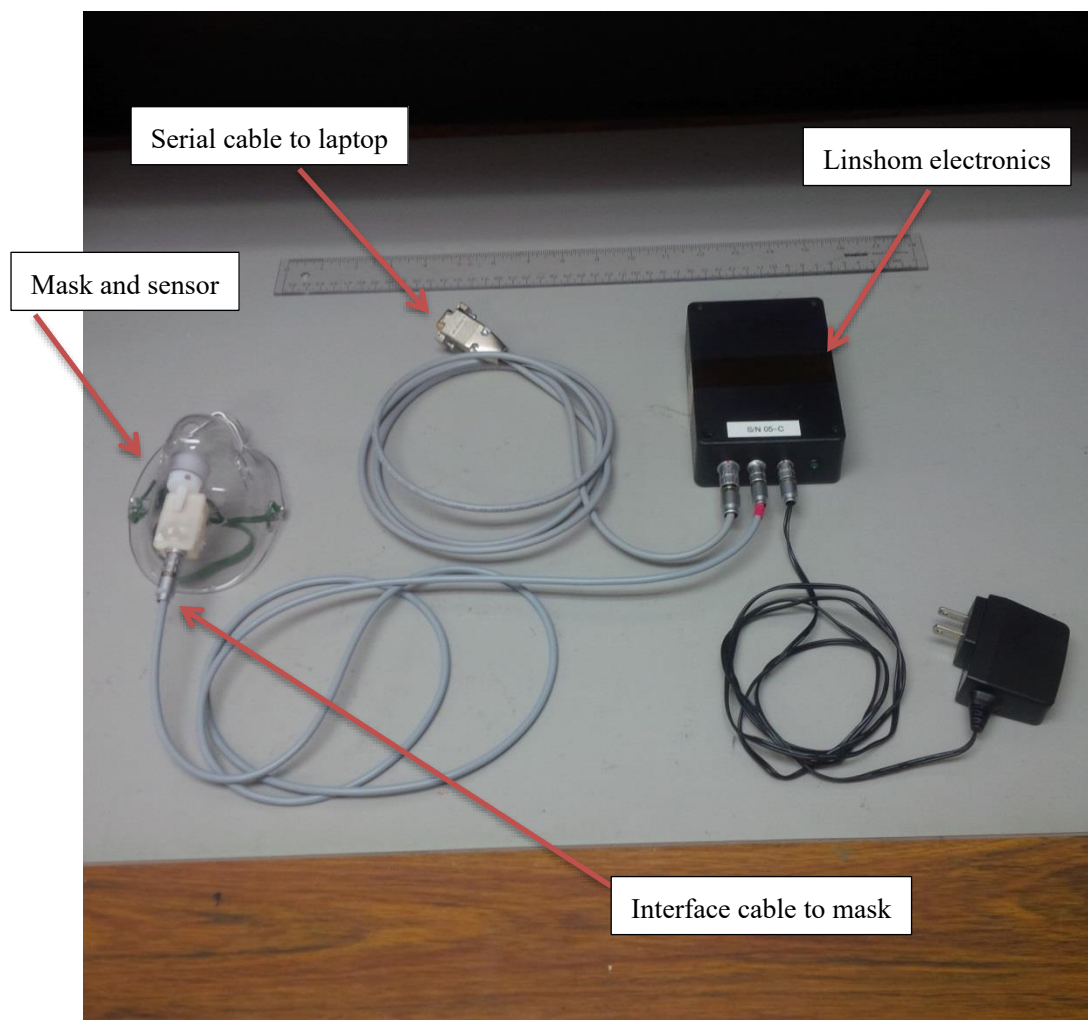
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Point 1. Although it has possibility to manage the respiratory condition as well as capnography, it is unclear why thermodynamic respiratory device is convenient compared with capnography which is generally used.

Answer 1: The Linshom Respiratory Monitoring Device (LRMD) is easily portable given the fact that it is less bulky than equipment needed for capnography; this is illustrated in Figure 1 (recently added) of the manuscript. In addition, the LRMD has the advantage that intra-procedure carbon dioxide gas insufflation, secretions, or moisture will not falsely influence its results. Furthermore, the LRMD has the added advantage of being able to accurately measure tidal volume.

Point 2. The overview of this device should be exhibited as a figure at background or method section which could help readers to understand the merit of this system.

Answer 2: An overview of the device is described in detail on page 6. In addition, Figures 1 (overall depiction of the LRMD) and Figures 2-4 (3 different views of the facemask) were added to the manuscript.





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Mask and sensor –side view



Mask and sensor – head on view



Mask and sensor – inside of mask view

Point 3. In addition, as the author mentioned at discussion part, the number of the cases and the frequency of apnea in each case was too small to evaluate the utility of this device for endoscopy.

Answer 3: Although the number of cases was small, there is over 190 minutes of data and approximately 3000 breaths. Over those 3000 in breaths in 190 minutes, the LRMD highly correlated with capnography in terms of respiratory rate and had similar rates of detecting apnea.

Point 4. Minor point is the definition of apnea and detailed medication used for sedation during endoscopy is not clear in method section.

Answer 4: Apnea was clinically defined as the cessation of breathing observed by the physician responsible for the sedation. Sedative medications used for conscious sedation during the endoscopic procedures included a combination of fentanyl and midazolam,



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meperidine and midazolam. Monitored anesthesia care was used in other cases. Both capnography and LRMD were both used at the same time, thus were both subject to the same medications at the same time.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 46237

Title: A novel device for monitoring respiratory rate as an alternative to capnography during endoscopy – A thermodynamic sensor

Reviewer's code: 03478442

Reviewer's country: Greece

Science editor: Jia-Ping Yan

Date sent for review: 2019-02-24

Date reviewed: 2019-03-03

Review time: 6 Hours, 7 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
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			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

This is an interesting manuscript describing an innovative method for monitoring respiratory rate, as an alternative to capnography during endoscopy.

Point 1: Besides the relatively small number of patients enrolled in the study, this is a



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well written article with a robust outcome.

Answer 1: Although the number of cases was small, there is over 190 minutes of data and approximately 3000 breaths. Over those 3000 in breaths in 190 minutes, the LRMD highly correlated with capnography in terms of respiratory rate and had similar rates of detecting apnea.

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