

PEER-REVIEW REPORT

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Title: Identification of independent risk factors for intraoperative gastroesophageal reflux in adult patients undergoing general anesthesia

Reviewer's code: 05685664

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Xiao Zhao, Shitong Li, Lianhua Chen, Kun Liu, Ming Lian, Huijuan Wang, Yijiao Fang have submitted an interesting paper titled "Identification of independent risk factors for intraoperative gastroesophageal reflux in adult patients undergoing general anesthesia". In this study, the authors studied the risk factors of GER in general anesthesia. In my personal opinion, there are some grammar concordance errors in the text. Thus, this reviewer suggests that the manuscript be reviewed carefully. Abstract: "GER produces significantly harmful impacts on health-related quality, higher risk of esophageal adenocarcinoma, and great costs for participants." Great costs? Participants of what? For better understanding, I suggest replacing this word. Results "The current study included 601 adult patients, involved 82 patients who reported GER". I believe there was a translation error because patients cannot report reflux once they were intubated and sedated. In fact, GER was diagnosed by pHmetry. I did not find the keyword "Intraoperative gastroesophageal reflux" in the MeSH Pubmed tool, the existing term is Gastroesophageal Reflux. If necessary, I suggest that authors choose more keywords. Introduction: Citations are not done properly with the Journal's formatting. Also, the numbering is duplicated throughout the manuscript ("Gastroesophageal reflux (GER) afflicts up to 20% of the adult population and is defined as troublesome and frequent symptoms of heartburn or regurgitation [1-3] [1-3]."). Risk-related terms such as risk factor, modifiable risk factor, demographic risk factor, risk indicator, determinant, and risk marker are often not well defined in the literature. Thus, authors must be careful with the choice of variables and study outcome. Introduction "GER produces significantly harmful impacts on health-related quality, higher risk of esophageal adenocarcinoma, and high costs for patients". Rewrite the term "high costs for patients" to make the text more understandable. Results "The characteristics of the enrolled

patients are presented in Table 1. Of the 601 enrolled adult patients, 82 reported having GER, while 519 did not.” In this part, the same error as in the abstract occurs. “The results of logistic regression with multivariate adjustment for potential confounders indicated that female sex (OR: 2.702; 95% CI: 1.144-6.378; P=0.023), older age (OR: 1.031; 95% CI: 1.008-1.056; P=0.009), pharyngitis (OR: 31.388; 95% CI: 15.709-62.715; P<0.001), and history of GER (OR: 11.925; 95% CI: 4.184-33.989; P<0.001) were associated with an increased risk of GER, whereas the use of propofol (OR: 0.942; 95% CI: 0.892-0.994; P=0.031) was associated with a reduced risk of GER (Table 2). Moreover, type of surgery (OR: 0.982; 95% CI: 0.464-2.077; P=0.963), operative time (OR: 1.003; 95% CI: 0.996-1.010; P=0.342), body mass index (OR: 0.952; 95% CI: 0.832-1.089; P=0.472), intraoperative blood loss (OR: 1.000; 95% CI: 0.998-1.002; P=0.776), smoking status (OR: 2.230; 95% CI: 0.880-5.650; P=0.091), alcohol intake (OR: 1.826; 95% CI: 0.603-5.524; P=0.287), other digestive tract diseases (OR: 1.028; 95% CI: 0.336-3.145; P=0.961), hypertension (OR: 0.516; 95% CI: 0.219-1.215; P=0.130), diabetes mellitus (OR: 0.426; 95% CI: 0.150-1.210; P=0.109), history of asthma (OR: 1.368; 95% CI: 0.427-4.383; P=0.598), psychiatric history (OR: 1.596; 95% CI: 0.315-8.072; P=0.572), history of respiratory infection (within 2 months) (OR: 0.571; 95% CI: 0.059-5.492; P=0.628), history of surgery (OR: 3.258; 95% CI: 0.840-12.642; P=0.088), lidocaine (OR: 1.017; 95% CI: 0.802-1.289; P=0.892), the use of palliative strategies (dexmedetomidine versus midazolam) (OR: 1.005; 95% CI: 0.445-2.272; P=0.990), arden (OR: 0.831; 95% CI: 0.523-1.318; P=0.431), rocuronium bromide (OR: 0.995; 95% CI: 0.902-1.098; P=0.926), sufentanil (OR: 1.016; 95% CI: 0.967-1.067; P=0.536), SAI (OR: 1.011; 95% CI: 0.976-1.044; P=0.647), TAI (OR: 1.004; 95% CI: 0.962-1.051; P=0.712), and SDS (OR: 0.982; 95% CI: 0.948-1.035; P=0.562) were not associated with the risk of GER (Table 2).” This paragraph is very repetitive, and the data is already in the table. I suggest making the reading more interesting by highlighting the main results. All tables must be self-explanatory. Some data in parentheses are percentages and others,



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I assume they are interquartile ranges, I suggest you specify the data better. Table 1 This reviewer noted the inconsistency of some data in Table 1. For the variable "history of GER", both Non-GER and GER groups had most patients in the "never" subgroup, and even so there was a statistically significant difference (<0.001). The same is true for the variables "other digestive tract diseases" and "history of asthma". Table 1 indicates that all patients have used propofol in both groups. In Table 2, it was identified that propofol was a protective factor for GER (0.942). How is this possible? This reviewer thinks that there are plenty of rooms to improve this manuscript.