

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Surgery*

Manuscript NO: 73067

Title: How to examine the anastomotic integrity intraoperatively in totally laparoscopic radical gastrectomy? methylene blue testing prevents technical defect-related anastomotic leaks

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02534290

Position: Editorial Board

Academic degree: MD, MSc, PhD

Professional title: Doctor, Professor, Surgeon, Surgical Oncologist

Reviewer's Country/Territory: Romania

Author's Country/Territory: China

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Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-11-18 04:37

Reviewer performed review: 2021-11-27 11:44

Review time: 9 Days and 7 Hours

Scientific quality	[<input checked="" type="radio"/>] Grade A: Excellent [<input type="radio"/>] Grade B: Very good [<input type="radio"/>] Grade C: Good [<input type="radio"/>] Grade D: Fair [<input type="radio"/>] Grade E: Do not publish
Language quality	[<input checked="" type="radio"/>] Grade A: Priority publishing [<input type="radio"/>] Grade B: Minor language polishing [<input type="radio"/>] Grade C: A great deal of language polishing [<input type="radio"/>] Grade D: Rejection
Conclusion	[<input checked="" type="radio"/>] Accept (High priority) [<input type="radio"/>] Accept (General priority) [<input type="radio"/>] Minor revision [<input type="radio"/>] Major revision [<input type="radio"/>] Rejection



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Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input type="checkbox"/> Anonymous <input checked="" type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The overall quality of the manuscript is good, and the article should be accepted for publishing with high priority.

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Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05408322

Position: Peer Reviewer

Academic degree: MD

Professional title: N/A

Reviewer's Country/Territory: Netherlands

Author's Country/Territory: China

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Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-11-24 11:47

Reviewer performed review: 2021-11-30 22:28

Review time: 6 Days and 10 Hours

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 type="checkbox"/> Grade B: Minor language polishing <input checked="" 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 checked="" type="checkbox"/>] Yes [<input 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

Manuscript ID: 73067 How to examine the anastomotic integrity intraoperatively in totally laparoscopic radical gastrectomy? methylene blue testing prevents technical defect-related anastomotic leaks Summary: This is a manuscript that aims to investigate whether intraoperative methylene blue administration is a suitable test to evaluate the anastomotic integrity of esophagojejunostomy or gastrojejunostomy after total laparoscopic radical gastrectomy, and to investigate what the effect of intraoperative methylene blue testing (IMBT) is on the incidence of postoperative anastomotic leakage (AL). In addition, they aim to identify risk factors for positive IMBT and for developing AL. To achieve this, a retrospective study is conducted between January 2017 and December 2019. A total of 513 patients underwent totally laparoscopic radical gastrectomy because of gastric cancer or adenocarcinoma of the gastroesophageal junction. From these patients, 211 received IMBT and 302 did not receive IMBT. Seven patients had a positive IMBT, which required additional sutures. None of these patients developed AL. Fifteen patients did develop AL, two in the IMBT group and 13 in the control group. Risk factors for a positive intraoperative IMBT after univariate analysis were surgeons who performed <50 totally laparoscopic radical gastrectomies, operation time >4 hours, neoadjuvant chemotherapy and BMI >25 kg/m². After multivariate analysis, BMI, operation time and insufficient surgical experience were identified as independent risk factors for positive intraoperative IMBT. Patients with preoperative BMI >25kg/m², who experienced preoperative complications, received neoadjuvant chemotherapy and who underwent a totally laparoscopic total gastrectomy had a higher

risk of developing AL. After multivariate analysis only preoperative complications, totally laparoscopic total gastrectomy and neoadjuvant chemotherapy were independent risk factors for AL. Although the goal and the importance of this study are clear, there are some concerns and questions which I will explain below.

General The verb tenses used in the manuscript should be thoroughly revised. For example, in the introduction the past tense is often used. In the method sections, the verb tenses used change throughout the paragraph.

Abstract

1. Aim: consider to add in what type of operations IMBT is investigated.
2. Methods: Please explain what the experimental group and control group are.
3. Results: important results such as total included patients, the amount of patients in IMBT group and control group are not described. Besides that, the order in which the results are showed is illogical. "There were no PAL when an intraoperative leak led to concomitant intraoperative repair. Moreover, 15 patients (2.9%) developed PALs, with a higher incidence in the control group than in the experiment group (4.3% vs. 0.9%, $P=0.026$)."

Please rewrite this sentences, unclrear.

Introduction

1. Please rewrite the sentence: "However during laparoscopic radical gastrectomy, there was no study to date that assesses anastomotic integrity after systematically searching the literature". I understand what you want to say, but it is a strange sentence.

Methods

Patients

1. Consider to rename the two groups. experimental and control maintain the appearance that an active "new" intervention has taken place. However, it is a retrospective study where apparently IMBT was already used in daily practice.
2. Please replace the last part of this paragraph "In our department .. Reflux esophagitis" to the next paragraph 'Surgical methods and postoperative management'.

Methylene Blue Testing Technique

1. I do not understand why some patients received IMBT and the others didn't. Was it the surgeons decision? If yes, was it because the surgeon did not trust the created anastomosis (less experienced surgeon)? Were there signs to doubt the anastomotic integrity (difficult/long operation)?



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Or was IMBT introduced at one point somewhere between 2017-2019 and the first 302 patients in the “control” group just did not receive IMBT because it was introduced after they were operated? (bias because of learning curve) 2. Please adjust the used verb tense. It changes throughout the whole paragraph. 3. What do you mean with “anal side of the anastomosis”? The distal part? Please change this description. Definition 1. What is the used definition of anemia? Hemoglobin level of < ..? 2. Please explain what the used definition of “malnutrition” is or where it was based on. Statistical analysis 1. Please check the word "analysis", sometimes the singular word and sometimes the plural word is used. Also change the corresponding verbs. Results Comparison of the incidence of PAL 1. Please describe the number of patients that developed AL in de group that received IMBT and the number of patients in de group that didn't receive IMBT. The risk factors analysis of PAL 1. Please add to the risk factor “totally laparoscopic gastrectomy” if it is about the total gastrectomy or the distal gastrectomy.