ISRCTN67352603 https://doi.org/10.1186/ISRCTN67352603

Late intestinal complications in minimally invasive total gastrectomy for gastric cancer

Submission date
28/02/2024

Recruitment status
No longer recruiting

Registration date
19/03/2024

Overall study status
Completed

Last Edited
09/09/2024

Condition category
Surgery

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[X] Results
[ ] Individual participant data

Plain English summary of protocol
Background and study aims
Although minimally invasive total gastrectomy for gastric cancer is commonly performed, reports regarding late complications are limited. Since 2009, the study team made several improvements each time severe late complications were experienced. This study aims to evaluate the clinical efficacy of these improved procedures in preventing late complications.

Who can participate?
Patients who underwent laparoscopic or robotic total gastrectomy for gastric cancer between January 2009 and December 2019

What does the study involve?
The patients will be divided into two groups: Period-I (2009–2013, before established standardization of procedure) and Period-II (2014–2019, after established standardization of procedure). The procedure has been standardized through four major steps, typified by the closure of the mesentery and diaphragm crus, and fixation and linearization around the anastomotic site of esophagojejunostomy. The incidence of late complications will be retrospectively compared between the two groups.

What are the possible benefits and risks of participating?
There were no direct benefits for participating, but possibility to contribute to future advances in medical science. There were no risks of participating, due to no interventions required.

Where is the study run from?
Fujita Health University

When is the study starting and how long is it expected to run for?
August 2020 to August 2023

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
Susumu Shibasaki, susumushi48@mist.ocn.ne.jp

Contact information

Type(s)
Public, Scientific, Principal investigator

Contact name
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Additional identifiers

Study information

Scientific Title
The risk factor of late intestinal complications in minimally invasive total gastrectomy for gastric cancer

Study objectives
The standardized procedures will prevent late intestinal complications by comparing two periods: before and after the establishment of standardization of the minimally invasive total gastrectomy procedure.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 29/08/2020, The Institutional Review Board of Fujita Health University (1-98, Dengakugakubo, Kutsukake, Toyoake, 470-1192, Japan; +81-562-93-2865; f-irb@fujita-hu.ac.jp), ref: HM23-318

Primary study design
Observational

Study design
Single-center retrospective cohort study

Study type(s)
Prevention, Treatment

Health condition(s) or problem(s) studied
Prevention of late intestinal complications in patients who underwent minimally invasive total gastrectomy for gastric cancer.

Interventions
The procedure comprises four major steps, typified by the closure of the mesentery and diaphragm crus, and fixation and linearization around the anastomotic site of esophagojejunostomy.

Intervention Type
Procedure/Surgery

Primary outcome(s)
The incidence of complications within 3 years after surgery measured using data collected from medical records at one time point

Key secondary outcome(s)
The following secondary outcome variables will be measured using data collected from medical records at one time point:
1. Clinicopathological characteristics

2. Short-term surgical outcomes:
2.1. Operative time
2.2. Surgeon console time
2.3. Estimated blood loss
2.4. Number of dissected lymph nodes
2.5. Rates of local and systemic complications
2.6. Mortality rate
2.7. Length of postoperative hospitalization
2.8. Severity of reflux esophagitis at preoperative year (POY) 1
2.9. Body weight loss rate at POY 1

3. Long-term survival outcomes:
3.1. 3-year overall survival (OS)
3.2. 3-year relapse-free survival (RFS)

Completion date
31/08/2023

Eligibility

Key inclusion criteria
1. Patients between January 2009 and December 2019.
2. Patients underwent total gastrectomy for gastric cancer at our division.

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
20 Years

Upper age limit
91 Years

Sex
All

Total final enrolment
302

Key exclusion criteria
1. Open gastrectomy
2. Clinical or pathological stage IV
3. Remnant gastric cancer
4. Palliative surgery
5. EGJ cancer
6. Observation period < 90 days
7. Use of circular stapler

Date of first enrolment
01/01/2021

Date of final enrolment
31/12/2022

Locations

Countries of recruitment
Japan

Study participating centre
Fujita Health University
Dengakugakubo, Kutsukake
Toyoake
Japan
470-1192

Sponsor information

Organisation
Fujita Health University

ROR
https://ror.org/046f6cx68

Funder(s)

Funder type
Other

Funder Name
Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analyzed during the current study will be available upon request from Susumu Shibasaki, susumu.shibasaki@fujita-hu.ac.jp. The data that support the findings of this study will be shared. All data were anonymized so consent from participants was not required or obtained.

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		04/06/2024	09/09/2024	Yes	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes