SURGERY INSIGHTS

MIDITERRANEAN JOURNALS

Case Report

DOI: 10.55085/si.2022.593

Successful Treatment of a Major Leakage of an Esophagojejunal Anastomosis after Open Total Gastrectomy: A Case Report

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ABSTRACT

Esophagojejunal leakage is one of the most serious complications in total gastrectomy surgery for proximal gastric cancer anastomotic leakage after this procedure occurs despite improvements in surgical techniques. Although many cases of dehiscence due to the medical condition of the patient can be managed non-operatively, major leakage requires second or more surgery. It can seriously lead to death or major complications.

Case presentation

This report describes a 64-year-old man with a known case of proximal gastric adenocarcinoma, which underwent open total gastrectomy and esophagojejunal anastomosis. After the surgery, due to a major leak of anastomosis, which was diagnosed with oral gastrografin radiography pictures with patients fever and leukocytosis, the patient went to the operation room which at the second surgery esophagostomy and the jejunostomy feeding tube was inserted after six months esophagojejunotomy done and the patient tolerated the liquid and regular meals and was discharged.

Conclusion

Major leakage of an esophagojejunal anastomosis is a severe complication of total gastrectomy. Although if the patient s condition tolerates the morbidity of this complication, re-anastomosis after six months of leakage is possible. Therefore, aggressive and urgent reoperation and effective drainage are useful once it is diagnosed.

Keywords: Esophagojejunal Anastomosis, Total Gastrectomy, Anastomotic Leakage.

BACKGROUND

Despite improvements and advancements in surgical techniques and perioperative and postoperative management, esophagojejunal anastomotic leakage (EJAL) after total gastrectomy for gastric cancer still constitutes one of the most life-threatening complications, and the incidence of anastomotic leakage after total gastrectomy is 8.0–14.5% [1,2,3,4]. Treatment options in these cases vary from conservative treatment to surgery treatment representing a multi-management challenging event. Patient comorbidities, low nutritional state, and technical matters are usual reasons known as the risk factors of this event.

Major leakage often points out that the esophageal end and the elevated jejunal end were partially separated and according to the high mortality rate in these cases which In a retrospective multicenter study, esophagojejunal anastomosis leakage is the cause of death within 30 days of hospitalization for 30% of cases(5). Multidisciplinary with urgent efforts are needed for the management of this complication.

Received: 20 Nov 2021
Revised: 14 Feb 2022
Accepted: 15 Feb 2022
Published: 03 Apr 2022

Academic Editor: Andrea Balla

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Cite this article as: Movahedi A, Eghlimi H, Rabbani A. Successful Treatment of a Major Leakage of an Esophagojejunal Anastomosis after Open Total Gastrectomy: A Case Report. Surg Insights. 2022;1:626. [https://doi.org/10.55085/si.2022.593]

Authors' contributions
The participation of each author corresponds to the criteria of authorship and contributorship emphasized in the Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals of the International Committee of Medical Journal Editors. Indeed, all the authors have actively participated in the redaction, the revision of the manuscript, and provided approval for this final revised version.

Acknowledgments
None.

Funding
No funding was received from any organization to conduct the present study.

Conflict of interest
The authors declare that there is no conflict of interest regarding the publication of this article.

CASE PRESENTATION

A 64-year-old man was admitted to our department with complaints of nausea and vomiting, significant weight loss, and weakness. In medical work, an ulcerative mass was detected proximal to the fundus and near cardia with well-differentiated adenocarcinoma in the biopsy. Metastasis workup was negative and was a candidate for total gastrectomy and esophagojejunal anastomosis. The patient had a history of heart failure and metal mitral valve transplantation in the past ten years who had been treated with warfarin and had an INR of 2.5 to 3.5 throughout his warfarin use and had no hypertension or diabetes.

The patient discontinued warfarin therapy due to coagulation disorders before surgery and started heparin, and the patient's INR returned to normal. Heparin therapy was resumed 24 hours after surgery. According to the cardiologist, warfarin therapy was started, and the patient had an increase in INR, which reached 4 to 5, and he began to bleed from the surgical site. The reason for the second operation was bleeding from the drain and the patient's tachycardia and hypotension.

After Admission, Bridge therapy with heparin was done, and the patient went on total gastrectomy and esophagojejunal anastomosis surgery. During the surgery, because of iatrogenic splenic injury and history of anticoagulative therapy, splenectomy was done for the patient. On the third day of surgery, pancreatic enzymes were raised, and with pancreatitis diagnosis, the treatment continued. After a normal gastrografin swallow test on the forth's day, water and liquid meals started. Due to pancreatitis and anticoagulation regime on the fifth's day with sudden hemorrhage from abdominal drains and unstable vital signs, the patient went emergency to the operating room. After exploration, a bleeding source from tied arterioles was identified and controlled. After complete homeostasis, the patient came back to ICU.

On the seventh day after surgery, fever and leukocytosis with suspicious esophageal matters and turbid liquid from drains presented. And With esophagojejunal leakage, suspicious gastrografin swallow radiography was done (Figure 1).

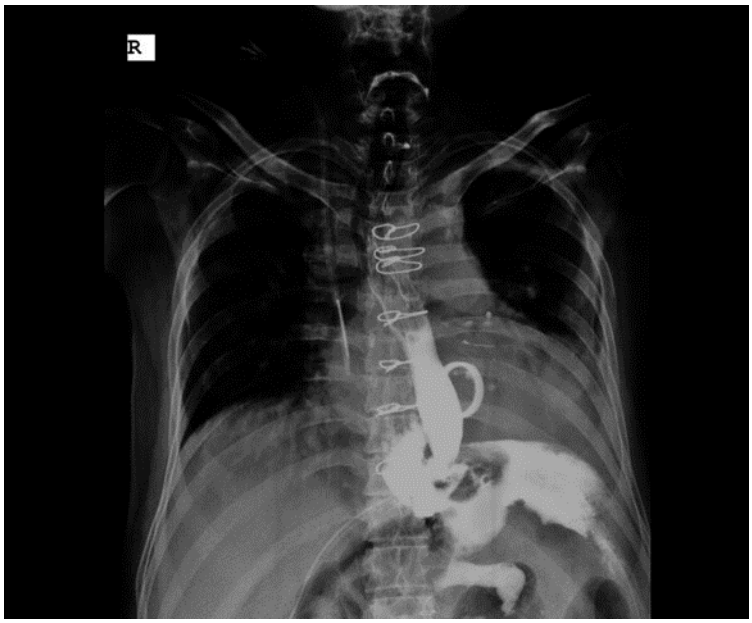

Figure 1: Gastrografin swallow radiography - right.

The patient went to the operation room, and after exploration, major leakage of esophagojejunal anastomosis with intraabdominal free liquid was seen. Also, pancreatitis with severe inflammation was noted. Because of inflammation and pancreatitis, a petzer drainage was inserted as esophagostomy, and the jejunostomy feeding tube was created. According to contrast leakage and patient's condition, we considered laparotomy and drainage necessary and performed emergency surgery on the same day.

The patient was admitted to the intensive care unit. After two weeks, interloop abbesses and abdominal fascia dehiscence, fascia repair, and abdominal cavity irrigation were done in the operation room. After admission to the surgical ward, he was a candidate for chemotherapy, but because of drains color and general condition, it did not start. After five months from the first surgery, reoperation was done, and successfully esophagojejunal anastomosis surgery was done for the patient and as our routines, on the third-day gastrografin swallow radiography showed no major leak (picture 2), and water and liquid meals started for him.

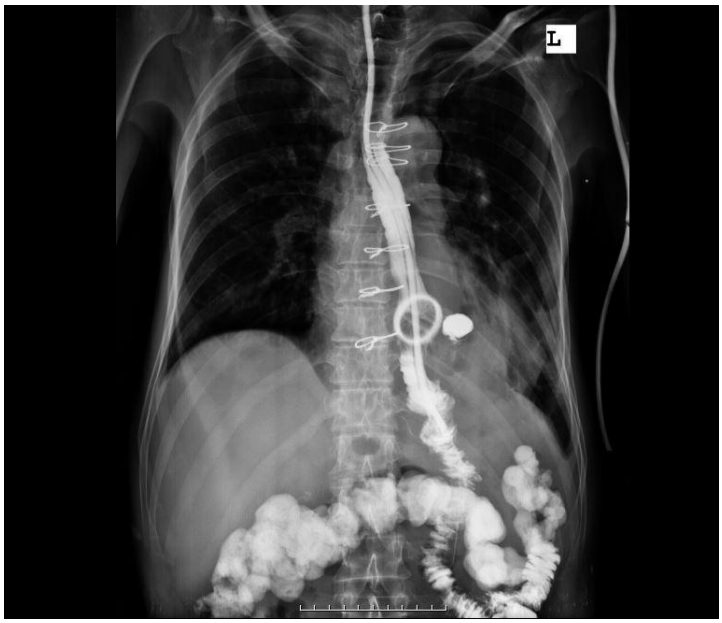

Figure 2: Gastrografin swallow radiography - lift.

The clinical stage of gastric cancer was on stage T3N1. The patient had GIB and a stomach ulcer. He underwent surgery for a melena episode and was not referred to neoadjuvant and underwent total celiac trunk gastrectomy. 31 lymph nodes were removed during total gastrectomy according to the pathology after surgery. Chemotherapy was not performed for the patient because he was very weak in physical condition and nutrition and did not have suitable clinical conditions for chemotherapy.

The reason for not performing endoscopy was that the patient had septic, had a high fever, had symptoms of peritonitis, and was not stable. For this reason, endoscopy was not possible for the patient.

The patient was discharged from the surgical ward in good condition after two weeks from the last surgery.

DISCUSSION

Esophagojejunal Anastomotic Leakage (EJAL) after total gastrectomy for gastric cancer is one of the most serious and life-threatening complications.

The incidence of anastomotic leakage after total gastrectomy is 8.0–14.5% [1,2,3,4], but several studies have shown that anastomotic leakage is observed significantly more often in laparoscopic surgery than in open total gastrectomy or laparoscopic distal gastrectomy(6,7,8,) Symptoms of anastomotic leakage include abdominal pain and peritoneal irritation and backache and continuous remittent fever over 38 °C, and leukocytosis and an elevated C-reactive protein level(10, 11)

Different treatments are grouped into three main categories: conservative, endoscopic, and surgical approaches (12). The overall mortality rate is 26.32%, and the surgical approach showed a higher rate (13). According to the reported data, complete resolution of this leakage can be achieved in an interval ranging from 7 to 28 days in the group treated conservatively (14). The conservative approach should always be considered as the first treatment. Reoperation may be necessary in case of big dehiscence or other treatments fail (15). The high mortality rate related to this procedure is due to the comorbidities of patients undergoing relaparotomy(16). The endoscopic approach with endoclips seems promising but needs studies furthermore (17).

Despite developing a complete anastomotic separation and leakage, an extremely severe lethal complication, our patient was treated successfully. However, it is significant that treatment plans were based on the patient's general condition and nutritional status and the development of coagulopathy state, accompanied by an intraperitoneal abscess in this case. Consequently, re-anastomosis was not performed until five months later, but the result was acceptable.

CONCLUSION

In conclusion, we present a case of the major leak of an esophagojejunal anastomosis with simultaneously severe pancreatitis and coagulopathy disorders because of a history of metal

mitral valve transplantation, which we successfully treated by re-anastomosis after an emergency drainage surgery with a 6-month interval.

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