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EATING DISORDERS CAN LEAD TO ACUTE GASTRIC DILATATION, ISCHEMIC NECROSIS, AND RUPTURE - A CASE REPORT AND LITERATURE REVIEW

Abdulaziz Fahad Alrouqi[1], Amjad Ahmed Althaqafi[2], Abdullah Helal Alzeyadi[2], Rawan Abdulrahman Aloufi[2], Rofal Omar Alqurashi[3*], Khalid Humied Alnafei[3]

[1]Hepatobiliary surgery, Al Hada Armed Forces Hospital, Taif, SAU
[2]General Surgery, Al Hada Armed Forces Hospital, Taif, SAU
[3]College of Medicine, Umm Al-Qura University, Makkah, SAU

Corresponding author: *Rofal Omar Alqurashi;* ***Email****: r0fal.qarashi@gmail.com*

Abstract:

Introduction

Eating disorders are disturbances of eating impairing health or psychosocial functioning. These disorders can lead to potentially lethal complications like acute gastric dilatation, necrosis, and perforation. There are only 75 cases identified in the literature up to the beginning of 2022 and this is the 1st reported case in Saudi Arabia.

Case presentation

A 19-year-old Saudi female known case of anorexia nervosa. She presented to the Emergency room c /of abdominal pain for 12 hours after ingesting a heavy meal. The patient became unstable, an exploratory laparotomy was done. It revealed frank spillage of several liters of partially digested food. During the evaluation of the stomach, there was a large area of necrosis and perforation extending along the proximal greater curvature. damage control surgery was performed, which required a total gastrectomy, cervical esophagectomy, and feeding jejunostomy. The patient expired the next day with septic shock

Discussion and conclusion

Acute gastric dilation has potentially fatal consequences, so a low threshold of suspicion is required for any patient presenting with severe abdominal pain following an episode of binge eating. The treatment should probably be before the occurrence of any irreversible damage.

Introduction:

Eating disorders are disturbances of eating impairing health or psychosocial functioning. They include anorexia nervosa, binge eating disorder, bulimia nervosa, and other non-specified eating disorders [1]. Many Surgeons think eating disorders are psychological problems unrelated to life-threatening conditions. However, that is not the truth. These disorders can sometimes lead to potentially lethal complications like acute gastric dilatation. It was described for the first time by Duplay in 1833[2]. In 1966 Russell linked it to eating disorders [3]. Since then, 75 cases have been published in the literature, and complications were recorded for many of them such as gastric necrosis and perforation.

Here we present the first case reported in Saudi Arabia for a young lady well known to have anorexia

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nervosa, who presented to the emergency room with severe gastric dilation complicated with necrosis and perforation. Unfortunately, this story ended with losing the patient. Therefore, we would like to discuss this case in addition to a comprehensive literature review of similar published cases.
Our message for the surgeons is to be aware of the possibility of acute gastric dilatation if a young woman, who may be undernourished and anorexic, complains of abdominal pain after ingestion of a large meal. Treatment should probably be before the occurrence of any irreversible damage. If the gastric dilatation progresses, the stomach loses its contractility, resulting in venous occlusion, infarction, and gastric perforation. An extensive operation is required, and the patient undergoes an often complicated and prolonged hospital course.

Case presentation:

A 19-year-old female patient is well-known to have anorexia nervosa. She presented to the emergency room at King Abdulaziz Specialist Hospital, Taif, Saudi Arabia, complaining of persistent generalized abdominal pain for 12 hours after ingesting a heavy meal. The pain was Associated with Abdominal distention. There was no nausea, vomiting, or change in bowel habits. She denied any history of fever or night sweats. There was no history of previous surgery, chronic use of medications, or allergies. On arrival, the patient was conscious and alert, her BMI was 15 Vitally, her blood pressure was 110/70 mm Hg, her pulse rate was 96/min, her temperature was 36.5, and her oxygen sat at 95 in room air. The abdomen was distended with mild tenderness over the epigastric with no peritoneal signs. Her labs showed that the patient had leukocytosis and a high lactic acid level.

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Figure 1: Erect abdominal x ray

The chest and abdomen X-rays revealed the extended fundus towards the base of the left lung and a dilated stomach reaching the pelvis border electrocardiogram (ECG) was normal. Abdomen X-rays revealed the dilated stomach reaching the pelvis borders. She received IV omeprazole and IV fluid bolus, a nasogastric tube inserted, and drainage of 3 L of undigested food, with mild improvement of the patient's symptoms. The next day in the early morning, the patient was tachycardic in the 120s and hypotensive her blood pressure was 90/50. SpO2 on 5 L nasal canula was 86%. The physical exam now demonstrated peritonitis signs. The patient was shifted to the operating room (OR) for an exploratory laparotomy. It revealed frank spillage of several liters of partially digested food. During the evaluation of the stomach, there was a large area of necrosis and perforation extending along the proximal greater curvature. The patient was hemodynamically unstable, so damage control surgery was performed, which required a total gastrectomy, cervical esophagectomy, and feeding jejunostomy.

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Figure 2: Total gastrectomy specimen

The patient was shifted post-op to the intensive care unit (ICU) with a plan of delayed reconstruction. Unfortunately, the patient deteriorated postoperatively, became progressively hypotensive, and developed renal failure. The platelet count dropped to 12,000/mm: prothrombin and partial thromboplastin time were elevated to (15–5/12 and 45/36, respectively). Also, the white blood count was: 20,000/ml.

Discussion:

We performed a literature search across three online databases (PubMed, Embase, Medline) for articles published from 1966 up to 2022 on cases of Acute gastric dilation associated with eating disorders. After the exclusion of SMA syndrome and acute pancreatitis cases. We identified only a total of 75 patients.

We have found that the most common eating disorder was anorexia nervosa 55%. About 88 % of all the reported cases were Females, with a mean age of 24, with the youngest being 3 -years old and the oldest being 70 -years old. Most of the patients developed the symptoms after eating a heavy meal. The exact pathophysiology behind the condition and its complications are not well known. Many papers hypothesize that starvation is associated with atony and muscular atrophy of the stomach [4]. Scobie talked about the association of AN with neurogenic gastric paralysis. [5]

In the literature review, the most common symptoms are abdominal pain, vomiting, abdominal distention, shortness of breath, and others. However, some patients presented with unusual severe signs and symptoms, like lower limb ischemia [6,7,8,9,10,9,16] acute compartment syndrome [11], Acute renal failure [12], seizures [13], tension pneumothorax [14], sudden death [15]. Most of these symptoms

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result from the high intraabdominal pressure that compresses the vessel and leads to ischemia.
On examination, if the patient presented to the emergency room with stable vitals, no sign of peritonitis or complication. Moreover, Images only showed a dilated stomach, so the best management is conservation with gastric drainage through NGT and fluid, electrolyte, and nutritional support. Furthermore, this approach treated 31% of the patients successfully. However, sometimes this approach fails if the patient becomes or the beginning the patient was unstable and has peritoneal signs, which means some complications are going on. Therefore, urgent surgical intervention is needed for 69% of the patients.
All the complicated patients underwent exploratory laparotomy except one done by laparoscope [16]. Intraoperative findings were different. All of the patients had gastric dilation. However, few of them were found isolated and ended by only gastrotomy. However, 94% of operated cases reported gastric necrosis and perforation. The pathophysiology behind them is complicated. In a general role, the stomach is always protected from ischemia and necrosis by its rich blood supply. It is protected from perforation by its elastic wall and its two openings that work as venting pressure [17,18]. In cases of the atonic atrophied stomach wall, sudden ingestion of a large amount of food content leads to sudden dilation. This dilation leads to vagotomy or sympathetic stimulation of body relaxation. It increases tension at the pyloric sphincter and decreases gastric emptying [17], which leads to retention and further stimulation of gastric secretion [17]. If the Fundus is over-distended, this will decrease His angle and then form a one-way valve that can prevent regurgitation. Many patients recoded with losing the ability to vomit [18].
An overdistention leads to an increase in the intragastric pressure above its venous pressure. If more than 30 cmH2O ends with decreasing intramural venous outflow, gastric necrosis or even perforation can happen [19]. The most common perforated site is the lesser curvature. This w was expected because it is considered the weakest part of the stomach because of its smaller number of mucosal folds and the limited mobility of the gastro-hepatic ligament [17,19].

Surgical intervention is required when conservative management fails and if necrosis or perforation is suspected. The surgical treatment is decided case by case depending on many factors, including intraoperative findings, if there is necrosis depending on its extension, if there is perforation on its size and location, dealing with other findings, and patient stability. Options include gastric decompression, primary repair of perforation, or partial/total gastrectomy with the immediate or elective planned reconstruction. The mortality rate recorded is 18%, and most of the time, it was related to shock (hypovolemic, neurogenic, or septic), aspiration, or disseminated intravascular coagulopathy.

Conclusion:
Acute gastric dilation has potentially fatal consequences, so a low threshold of suspicion is required for any patient presenting with severe abdominal pain following an episode of binge eating. And the treatment should probably be before the occurrence of any irreversible damage.
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Ethical approval:

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The study was approved by the Research Ethics Committee at Al-King Abdulaziz speclist hospital and is available upon request from the
corresponding author

Literature review summary:

NO	Author	Year	Sex	Age in years	Hx of Eating Disorders	Presentation	Management	Site of perforation	Outcomes
1	Sarya Swed [20]	2022	F	40	AN	abdominal pain following an episode of binge-eating. Vitally unstable Peritoneal signs	Direct EL Stomach Dilated Rapture: 5 cm necrotic features in the fundus. DCS : partial gastrectomy post op: progressively hypotensive and developed renal failure, DIC Re-exploration: infarction of remnant stomach + bowel Gastrostomy septic shock expired	GC	Expired
2	David Weinstein [21]	2022	F	28	BED	abdominal pain following an episode of binge-eating. Vitally stable	NGT Decompression DAMA Return with peritoneal signs EL Stomach Dilated necrosis and perforation the proximal greater	GC	recovery

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							curvature to spleen DCS : total splenectomy and partial gastrectomy. 2nd time for closure		
3	You Jin Han [22]	2022	F	21	BED	abdominal pain following an episode of binge-eating. Vitally unstable Peritoneal signs Lower limb ischemia	EL Stomach Dilated Perforation and gastric ischemia: 15 cm small and large bowels were dilated no ischemia or perforation DCS : total gastrectomy post op: DIC and multi-organ failure expired	LC	Expired
4	Tyler Pitre [23]	2021	F	21	AN	abdominal pain following an episode of binge eating Vitally stable	NGT Decompression	non	recovery
5	Damian Wiedbrauck [24]	2021	F	23	AN	abdominal pain following an episode of binge	NGT Decompression	non	recovery

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						eating Vitally stable			
6	Yun-Hu Chen [6]	2021	F	33	AN	abdominal pain following an episode of binge eating Vitally stable Lower limb ischemia	NGT Decompression Failure promoted defecation	non	Recovery
7	Arpád Panyko [25]	2020	F	26	AN	abdominal pain following an episode of binge eating Vitally stable	NGT Decompression	non	recovery
8	Roa Esparza [26]	2020	F	43	AN	abdominal pain following an episode of binge eating Vitally stable	NGT Decompression	non	Recovery
9	Jonathan Hancher [13]	2020	F	21	EDNOS	abdominal pain following an episode of binge eating Vitally	EL after resuscitation Dilated stomach gastric perforation and ischemic segments of small	Non specific	Expired

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						unstable seizure – hypernatremia	bowel. gastric decompression, repair of the gastric perforation, and small bowel resection. Post op: unstable relook extensive bowel ischemia. Septic shock		
10	Achamrah N [27]	2020	F	37	BN	abdominal pain following an episode of binge eating Vitally stable acute renal failure	NGT Decompression Patent unstable EL Dilated stomach Necrosis no perforation Total gastrectomy and jejunostomy were performed.	non	recovery
11	Alexander [28]	2020	F	17	AN	abdominal pain following an episode of binge eating Vitally stable	NGT Decompression Patent unstable EL Dilated stomach gastric fundus and greater curve necrosis no perforation gastrotomy and partial gastrectomy	non	recovery
12	Vittorio Gatto [7]	2020	F	30	AN	abdominal pain following	NGT Decompression Patient unstable	LC	expired

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						an episode of binge eating Vitally stable Lower limb ischemia	Before shifting to or expired Autopsy: Dilated stomach + perforation		
13	Kailash DO [29]	2019	F	60	AN	abdominal pain following an episode of binge eating Vitally stable	NGT Decompression	non	Recovery
14	di Luca et al. [30]	2018	F	18	AN	abdominal pain following an episode of binge eating vitally unstable	Expired in ER Autopsy: overeating and gastric rupture (Fig. 2a]. The stomach was hyper-distended and perforated in three different areas [two lesions on the gastric fundus near the cardial notch and a third on the antrum near the lesser curva-ture]. overeating and gastric rupture (Fig. 2a). The stomach was hyper-distended and perforated in	Fundus Antrum	Expired

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15	Vasquez et al. [31]	2017	F	54	ND	abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach Perforation huge Necrosis LC Total gastrectomy and Roux-en-Y anastomosis	LC	recovery
16	Dincel and Goksu [32]	2016	F	24	ND	abdominal pain	EL Dilated stomach	antrum	expired

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						following an episode of binge eating vitally unstable Lower limb ischemia	Perforation was closed primary Post DIC + septic shock		
17	Dewangan et al [33]	2016	M	17	ND	abdominal pain following an episode of binge eating peritoneal signs	LEL Dilated stomach There was a necrotic patch surrounding perforation Primary repair of the defect Feeding jejunostomy	AW	recovery
18	Kim, S-C; [34]	2015	F	34	ND	abdominal pain following an episode of binge eating cardiac arrest cpr	NGT decompression Endoscopy decompression	non	recovery
19	Jorge Panach-Navarrete, [35]	2015	F	36	BN	abdominal pain following an episode of binge eating peritoneal signs	NGT decompression EL Dilated stomach necrosis of the posterior wall and gastric fundus, and patchy necrosis throughout the greater curvature total gastrectomy	non	recovery

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							and esophagojejunostomy		
20	Rosset [11]	2015	F	41	BN	abdominal pain following an episode of binge eating peritoneal signs abdominal compartment syndrome	NGT decompression After 10 days endoscopy Gastric mucosa necrosis After 6 weeks gastric perforation total gastrectomy with Roux-en-Y esophagojejunostomy	?	recovery
21	Kimura A [36]	2015	F	34	BN	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
22	Seung-Mok Youm [9]	2014	F	21	BN	abdominal pain following an episode of binge eating lower limb ischemia	EL Dilated stomach Gastrostomy for decompression Necrotic bowel and stomach no perforation cardiac arrest	non	expired
23	Jose Retamal [37]	2014	F	19	BN	abdominal pain following an episode of binge eating	NGT decompression	non	recovery

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24	Van Eetvelde [16]	2014	F	19	AN	painful white left leg vitally unstable peritoneal signs	NGT decompression Endoscopy gastric necrosis decompression restore of blood in lower limb Next day LSG	non	Recovery
25	Repesse [12]	2013	F	18	AN	abdominal pain following an episode of binge eating ,Acute renal impairment	NGT decompression	non	Recovery
26	Tatsuo et al [38]	2013	F	26	ND	abdominal pain following an episode of binge eating	NGT decompression failed pt deteriorated EL necrosis from the fundus to the body of stomach, Partial gastrectomy post op : multiple organ failure and intra-abdominal abscess caused gastric necrosis and gastric perforation.	PW	Recovery
27	Sahoo et al [39]	2013	M	36	ND	abdominal pain following	NGT decompression not improvement	LC	Recovery

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						an episode of binge eating	EL stomach dilated patchy necrosis at two areas, one on LC and the other on the fundus		
28	Heijneman [40]	2013	F	43	ND	abdominal pain following an episode of binge eating unstable	EL : stomach completely necrotic and had perforated a subtotal gastrectomy A total of 16 re-recurrent gastrointestinal leakage	distal oesophagus to the pylorus.	Recovery
29	Rãzvan Popescu [41]	2013	F	50	ND	abdominal pain following an episode of binge eating unstable	EL Dilated stomach Necrosis and perforation total gastrectomy with stapled Roux-en-Y anastomosis. The	Antrum	Recovery
30	Jung et al [42]	2012	F	23	EDNOS	abdominal pain following an episode of binge eating unstable	EL Dilated stomach Necrosis and perforation	Fundus	Recovery
31	Mishima et al. [43]	2012	M	12	ND	abdominal pain following an episode of binge eating unstable	EL Dilated stomach Necrosis and perforation partial gastrectomy	AW	Recovery

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32	Franco-López et al [44]	2012	F	31	BN	abdominal pain following an episode of binge eating	NGT decompression fail EL Dilated stomach decompression gastrostomy was performed;	non	recovery
33	Darji [45]	2012	M	11	AN	RIF pain ? acute appendicitis	Open appendectomy large amount of free gas and free purulent fluid in right iliac fossa and right paracolic gutter with normal looking appendix. The incision was extended transversely and inspection gastric perforation. Primary repair	AW	recovery
34	Mishima et al[46]	2012	M	12	ND	abdominal pain following an episode of binge eating unstable	EL Dilated stomach Necrosis and perforation Partial gastrectomy	AW	Recovery
35	Hausler [47]	2011	F	21	AN	abdominal pain following an episode of binge eating	NGT decompression Hospital course: Chronic lung aspiration, haemothorax,	non	Recovery

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							ECMO/ICU prolonged stay, cholecystitis Conservative* for dilatation, but surgical for other complications [intubation, chest tube, cholecystectomy]		
36	Choirat [48]	2010	F	19	AN	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
37	Morse [14]	2010	F	18	AN	abdominal pain following an episode of binge eating vitally unstable peritoneal signs tension pneumothorax	Chest tube Gastric dilatation, necrosis and perforation. Total gastrectomy, ruptured diaphragm, repaired compartment syndrome of the abdomen necrotic right hemi-colon, necrotic appendix right hemicolectomy, placement of an esophageal drain and colostomy; subsequent distal ileum resection	LC	Recovery

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							hospital course: ARDS, DIC, multi-system organ failure.		
38	García Salido et al [49]	2010	F	16	AN	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
39	Tweed-Kent [50]	2010	F	26	AN	abdominal pain following an episode of binge eating	NGT decompression no improvement Surgical [gastrotomy, surgical decompression]	non	Recovery
40	Kashyap AS [51]	2009	F	36	ED	abdominal pain following an episode of binge eating	NGT decompression no improvement Surgical [gastrotomy, surgical decompression]	non	Recovery
41	Trindade et al. [52]	2008	F	13	ND	abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach Necrosis and perforation Partial gastrec-tomy Partial gastrec-tomy partial gastrectomy	AW	Recovery

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42	Hattori et al. [53]	2008	F	22	BED	abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach Necrosis extended to spleen and perforation Partial gastrec-tomy Partial gastrec-tomy A total gastrectomy with splenectomy Post op DIC MOF	GC	Expired
43	Arie [54]	2008	F	16	AN	Admitted electively for feeding abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach Gastric necrosis and perforation Total gastrectomy roux-en-y esophagojejunostomy. A feeding jejunostomy	cardia	recovery
44	Libeer et al. [19]	2007	F	3	ND	vomiting after a large meal unstable	EL Perforation Sleeve gastrectomy Post op cardiac arrest	AW	Recovery
45	Gyurkovics et al [10]	2006	F	22	ND	abdominal pain following an episode of binge eating vitally	NGT failed EL Dilated stomach Gastrostomy femoral pulses reappeared. exploration	non	expired

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						unstable lower limb ischemia	around the ileocecal region revealed a chronic, inflammation-like bowel mass with inter-intestinal fistulas and abscesses. suspicious of Crohn's disease. ileocecal resection with an ileoascendostomy Post op DIC +MOF		
46	Sinicina et al. [15]	2005	F	19	AN	Autopsy Neurogenic shock	EL Dilated stomach necrosis and perforation	AW	expired
47	Mathevon[55]	2004	F	25	ND	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
48	Qin et al [56]	2000	F	4	ND	vomiting after a large meal unstable	EL Dilated stomach Perforation Partial gastrectomy	GC	Recovery
49	Nakao et al. [57]	2000	F	17	AN	abdominal pain following an episode of binge eating	EL Dilated stomach necrosis and perforation Partial gastrectomy	AW	Recovery

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						vitally unstable			
50	De Caprio [58]	2000	M	16	AN	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
51	Willeke et al [59]	1996	F	19	AN	abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach necrosis and perforation Partial gastrectomy	PW	Recovery
52	Adson et al [60]	1995	F	35	ND	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
53			F	30	BN	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
54	Roseborough and Felix [61]	1994	F	43	BN	abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach necrosis and perforation DIC post op	LC	expired

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55	Beiles et al [62]	1992	F	24	BN	abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach necrosis and perforation Partial gastrectomy	AW	Recovery
56	Coste [63]	1992	F	19	AN	abdominal pain following an episode of binge eating vitally unstable	EL Gastric dilatation Gastric necrosis total gastrectomy	non	recovery
57	Trott et al[64]	1990	F	17	BN	abdominal pain following an episode of binge eating vitally unstable	NGT decompression failure EL Dilated stomach Gastrotomy	Non	Recovery
58	Downs and Stonebridge [65]	1989	M	70	ND	abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach Perforation Primary repair	LC	Recovery
59	Abdu et al [4]	1987	F	17	BN	abdominal pain following an episode	EL Gastric dilatation, Necrosis, Total gastrectomy	non	Recovery

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						of binge eating vitally unstable limb ischemia			
60	Breslow et al. [66]	1986	F	32	BN	abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach Perforation Primary repair	LC	Recovery
61	Lazebnik et al [67]	1986	M	38	ND	abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach Perforation Primary repair	LC	Recovery
62	Edwards [68]	1985	F	23	BN	abdominal pain following an episode of binge eating vitally unstable	EL Dilated stomach Perforation infarction of the small bowel, septic shock	AW	expired
63	Mastrangelo and Moore [69]	1984	M	31	ND	abdominal pain following an episode of binge eating vitally	EL Dilated stomach Perforation Primary repair	LC	Recovery

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						unstable			
64	Saul et al [70]	1981	F	22	AN	abdominal pain following an episode of binge eating vitally unstable	EL Gastric dilatation, necrosis and perforation Total gastrectomy, then developed small bowel and large intestine infarctions septic shock	AW	Expired
65	Matikainen [71]	1979	F	18	AN	abdominal pain following an episode of binge eating vitally unstable	EL Gastric dilatation, necrosis and perforation primary closure gastrostomy; septic shock	AW	Expired
66	Froese AP [72]	1978	M	16	AN	Admitted for refeeding Developed abdominal pain	NGT decompression	non	recovery
67	Lebriquir [73]	1978	F	23	AN	abdominal pain following an episode of binge eating vitally unstable	EL Gastric dilatation, necrosis and perforation	?	Expired
68	Brook GK	197	F	18	AN	Admitted	NGT	Non	recover

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	[74]	7				for refeeding Developed abdominal pain	decompression		y
69	Bossingham D [75]	1977	F	19	AN	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
70			F	16	AN	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
71	Jennings KP [76]	1974	F	14	AN	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
72			F	25	AN	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery
73	Scobie BA [5]	1973	F	20	AN	abdominal pain following an episode of binge eating	NGT decompression	non	Recovery

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74	Evans DS [77]	1968	F	20	AN	Admitted for refeeding. Developed acute abdominal pain	EL Distended stomach gastric infarction with perforation Gastrectomy and pyloroplasty	GC	Recovery
75	Russell GFM. [3]	1966	F	16	AN	Admitted for refeeding. Developed nausea and vomiting	NGT decompression	non	recovery

Abbreviations:
AN: Anorexia Nervosa
ARDS: Acute respiratory distress syndrome
AW: Anterior Wall
BED: Binge-eating disorder
BN: Bulimia Nervosa
DIC: Disseminated intravascular coagulation
ECMO: Extracorporeal Membrane Oxygenation
EDNOS: Eating disorder not otherwise specified
EL: Exploratory laparotomy
F: Female
GC: Greater Curvature
ICU: Intensive Care Units
LC: Lesser Curvature
M: Male
MOF: Multiple Organ Failure
ND: Not Described
NGT: nasogastric tube
PW: Posterior wall

Statistical analysis of all reported cases in the literature

Parameters	**Total reported cases 75, n(%)**
Age, mean	25.02

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Gender	
M	8 (10.67)
F	67 (89.33)
Eating disorders:	
AN:	36 (48.0)
ND	21 (28.0)
EDNOS:	2 (2.67)
BED:	3 (4.0%)
BN	13 (17.3)
Management:	
Conservative	24 (32.0)
Surgical intervention	61 (81.33)
Laparotomy	60 (80.0)
Laparoscopic	1 (1.33)
Gastrotomy	
Total gastrectomy	2 (2.67)
Partial gastrectomy	2 (2.67)
Not described	1 (1.33)
Primary repair	4 (5.33)
LC: Lesser Curvature,	5 (6.6)
GC: Greater Curvature,	3 (4.0)
AW: Anterior Wall,	7 (9.33)
PW: Posterior wall,	1 (1.33)
Fundus	1 (1.33)
Cardia	1 (1.33)
Outcome	
Recovery	26 (34.67)
Expired	8 (10.67)
Septic shock	3 (4.0)
Small bowel ischemia	2 (2.67)

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