



Our surgery experience of non-oesophageal varices upper gastrointestinal bleeding

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ARTICLE INFO

ABSTRACT

Article History

Received 25 / 08 / 2020
Accepted 19 / 10 / 2020
Online Published 26 / 01 / 2021

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Keywords:

Bleeding
Outcomes
Surgery
Upper gastrointestinal

Necessity for surgery in the treatment Acute Upper Gastrointestinal Bleeding (AUGIB) is gradually decreasing. In spite of the decrease in the need for surgery, there is no decrease in rates of mortality and complication following surgery. The aim of this study is to present outcomes of the patients operated on AUGIB. Files of the patients operated on AUGIB, from 1 January 2010 to 2020, were examined. Age, gender and diagnosis of the patients, conservative treatment methods prior to surgery, surgery, duration of hospital stay, rates of mortality and complications were retrospective analyzed. 15 patients with UGH diagnosis were involved in the study. Out of 15, 12 male and 3 female, and their mean age was 61.26 (22-88). All the patients received endoscopic examination before the surgery. 2 patients received total gastrectomy, 1 distal gastrectomy, 3 gastrostomy and haemorrhage control, 6 HM pyloroplasty and bilateral truncal vagotomy, 2 HM pyloroplasty + gastrojejunostomy and bilateral truncal vagotomy, and 1 Whipple surgery. Average hospital stay was 10.53 (1-19) days. Mortality rate was 33%, complication was 26%. Surgical need for AUGIB was decreased by 2% over the years. Despite decrease in the need of surgery, rates of mortality and complication were 30% and 55% respectively. Mortality is generally caused by co-morbid disease.

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1. Introduction

Acute Upper Gastrointestinal Bleeding (AUGIB) is commonly seen in emergency cases. Depending on medical development, need for surgery is rare, which, however, still stands as a nightmare for surgeons. Because of decreasing need of surgery, experience of the surgeons is getting limited within the last 20 years. Our aim in this study is to present the outcomes of the patients who were operated on AUGIB.

2. Material and method

The patients, who came to general surgery clinics of Ondokuz Mayıs University, and could not be treated

with conservative treatment, and operated with AUGIB diagnosis, were examined.

Age, gender, and diagnosis of the patients, conservative treatment methods prior to operation, surgery, duration of hospital stay, rates of mortality and complication were analysed retrospectively.

Since it was retrospective study, approval of ethic committee was not necessary.

3. Result

15 patients, 12 male and 3 female, whose mean age was 61. 26 (22-88) years, were included into the study. All of the patients got endoscopic intervention before the

surgery but bleeding could not be brought under control. 6 patients received computed tomography angiography, 1 scintigraphy, 1 conventional angiography. Surgical indications were unstable hemodynamically or bleeding which could not be stopped with endoscopic interventions.

Location of bleeding were anatomically 2 in stomach cardia, 3 in stomach corpus, 9 in bulbus, 1 in duodenum second part. Total gastrectomy was performed to 2 patients, distal gastrectomy to 1 patient, gastrostomy and haemorrhage control to 3 patients, Heineke-mikulicz pyloroplasty and bilateral truncal vagotomy to 6 patients, Heineke-mikulicz pyloroplasty + gastrojejunostomy and bilateral truncal vagotomy to 2 patients, and Whipple surgery to 1 patient. Patients who underwent Heineke-mikulicz pyloroplasty and bilateral truncal vagotomy were given gastroduodenal artery ligation in 3 locations.

Whipple surgery was performed to a patient because of bleeding occurred on the second day of following the Heineke-mikulicz pyloroplasty+ bleeding control.

Average length of hospital stay was 10.53 (1-19) days. Complications were found in 4 patients, which were pneumonia in 1; surgical wound infection in 1, intraabdominal abscess in 1, pneumothorax in 1 patient. 5 patients died. Rates of mortality and complication were 33% and 26% respectively. The features of patients are presented at Table 1.

4. Discussion

The bleeding originated proximal to treitz ligament is named as AUGIB. Patients generally admit to hospital with presenting hematemesis, hematochezia and/or melena.

According to USA data, frequency of AUGIB is 65/100.000 people/year (Wuerth and Rockey, 2018). Upper gastrointestinal bleeding was six time more frequent than Lower gastrointestinal bleeding. Upper gastrointestinal bleeding was seen more in male patients than female ones in terms of increasing age (Longstreth, 1995; Lanas et al., 2005)

A common reason for AUGIB is gastroduodenal ulcer. The risk factors of gastroduodenal ulcer bleeding are Helicobacter pylori infection, emotional stress, nonsteroidal anti-inflammatory drugs use and excessive gastric acid production. Eliminating or reducing those factors decrease the risk of ulcer recurrence and repetitive bleeding (Rockey et al., 2017).

The other reasons for AUGIB are as follows; Mallory Weis tears, gastric stress, Dieulafoy lesion, gastroesophageal varices, GIS malignite, hemobilia and aorta duodenal fistules (Feinman and Haut, 2014). Depending on the bleeding level, hipovolemic shocking symptoms such as hypotension and tachycardia can accompany. The primary aim in the treatment is to stabilize hemodynamically and then to establish the aetiology. The factors leading to bleeding in a patient who is stabilized hemodynamically are NSAID, anticoagulant, antiplatelet agent and selective serotonin uptake inhibitors. They should certainly be questioned. Systemic examination should be performed. While performing rectal examination, surgeons must check if there is any active bleeding or melena. Finding peritonitis symptoms in abdominal examination should suggest bleeding along with ulcer perforation. During the systemic examination, according to the level of bleeding; hypotension, tachycardia, tachypnea, reduced urine, confusion and lethargy can be taken into

Table 1. Table 1. Features of patients

Age	Sex	Forreastclassification	Operation	Cause of death	Comorbidity
72	E	1B	Pyloroplasty ,BTV		None
61	E	2B	Total gastrectomy	Pneumonia	CKD, DM
68	E	1B	Gastrostomy,Haemorrhagecontrol		None
22	E	1A	Pyloroplasty ,BTV		None
56	E	2B	Pyloroplasty ,BTV		DM,
46	K	1B	Pyloroplasty ,BTV, gastrojejunostomy		None
50	E	1B	Gastrostomy,Haemorrhage control		DM
85	E	1B	Whipple operation	MODS	HT, CAD
75	E	2B	Distal gastrectomy		HT, CKD,
58	K	1B	Pyloroplasty ,BTV		HT,
59	E	1A	Pyloroplasty ,BTV		None
74	E	1A	Gastrostomy,Haemorrhagecontrol	MODS	COPD
38	E	1A	Pyloroplasty ,BTV, gastrojejunostomy		DM
88	E	1B	Total gastrectomy	SEPSIS	HT, CAD
67	K	2B	Pyloroplasty ,BTV	SEPSIS	HT

BTV: bilateral truncal vagotomy, MODS: Multiple organ disease, CKD: Chronic kidney disease, DM: Diabetes mellitus, HT: Hypertension CAD: Coronary artery disease, COPD: Chronic obstructive pulmonary disease

consideration (Gutierrez et al., 2004; Kamboj et al., 2019).

Hemodynamic stability can generally be achieved with aggressive fluid therapy. If hemoglobin value is less than 7 g/dl or gets lower 2 g/dl or more, packed red blood replacement may be needed. In addition, PPI treatment on these patients must get started. Proton pump inhibitor use can decrease re-bleeding, surgical need, and mortality (Greenspoon et al., 2012; Srygley et al., 2012; Feinman and Haut, 2014).

Endoscopy is the first method to be selected for diagnosis and treatment., Epinephrine injection, thrombin injection, and thermocoagulation interventions can stop bleeding during endoscopic interventions. If an active bleeding can occur due to ulcer and/or an active bleeding vein during endoscopy, then bleeding rate is high, and need for surgery is increasing (Feinman and Haut, 2014).

In case of endoscopic failure, angioembolization is the second choice to be considered before surgery (Loffroy et al., 2010).

AUGIB surgical need has gradually got lower as 2% throughout the years. Despite this fact, mortality and complication rates due to surgical reason were reported as 30% and 55% respectively (Clarke et al., 2010). Surgery was compulsory in those patients who were unstable, or bleeding could not be stopped by any means apart from surgery. If reasons stand unknown for

UGH, then the subject surgery turns to be a nightmare for surgeon.

The patients, over 65 years old, presenting with hypotension, serious cardiopulmonary problems, ulcer diameter more than 2 cm, 5 units or more blood replacement, and repetitive bleeding in the last 72 hours are considered to be in high risk group. They need due surgery more than the other patients (Tırnaksız and Yorgancı, 2005)

Choosing surgical procedures depends on the source of bleeding. Peptic ulcer haemorrhage is originated from duodenum (75%), stomach (20%), and pylor ulcers (5%) (Bulut et al., 1996). According to the source, oversew, ligation of gastroduodenal artery, pyloroplasty and vagotomy, antrectomy and/or vagotomy, wedge resection, and distal or total gastrectomy may be needed (Feinman and Haut, 2014). In high risk group patients who underwent surgery, bilateral truncal vagotomy should added in order to prevent complication originated from ulcer (Tırnaksız and Yorgancı, 2005).

While the necessity for UGH surgery is decreasing, mortality and complication rates are still high following the surgery. Surgery must be performed on the patients who are unstable hemodynamically and bleeding cannot be stopped.

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