International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 06, 2020
ISSN: 1475-7192

BLEEDING FROM UPPER GASTROINTESTINAL TRACT AT AL-DIWANIYAH-IRAQ; A RETROSPECTIVE STUDY OF ENDOSCOPIC RECORDS.

[1]Mohammed Abdlmohsin Abdlmaged, [2]OsamahTahir Muslim, [3]Abbas Hamza Nejm

Abstract: *Bleeding from upper gastrointestinal tract is a world wide serious and life-threatening medical emergency that needs hospitalization with optimal treatment. It is common in males than females. The prevalence rate rises with increasing age. Esophagogastroduodenoscopy is a valuable device in determining cause, location ofbleeding from upper gastrointestinal tract as well as establishing endoscopic treatment.*

Objectives: *The purpose of this study is to evaluate the endoscopic findings for those patients presented with bleeding from upper gastrointestinal tract and the distribution of these findings in relation to patient's age and sex.*

Patients and methods: *The study done at AL-Diwaniyahgastroenterology and hepatology center in Iraq in a periodbetween November 2015 and November 2017. The endoscopic records of (225) patientspresented with bleeding from upper gastrointestinal tract and underwent esophagogastroduodenoscopy, are analyzed and evaluated in correlationwith age and sex of patients.*

Results: *(225) patients presented with bleeding from upper gastrointestinal tractand underwent esophagogastroduodenoscopy.(141males, 62.67%) and (84 females, 37.33%) in a ratio of (1.7:1), The mean age of presentation is(43.71years). Patient's age range is (9-85 years). Hematemesis is the commonest mode of presentation in patients with bleeding from upper gastrointestinal tract(51.50%) and the most common finding on endoscopy are peptic ulcers (duodenal and gastric ulcers),(41.33%); (81 patients) have duodenal ulcer (36 %) and (12 patients) have gastric ulcer (5.33%). The otherfindings consist of gastric erosion (13.33%), esophageal variceswith or without gastric varices (10.67%), gastrodoudenitis (7.55%), gastritis (7.55%), CA stomach (3.55%) and gastroesophageal reflux disease (GERD) (2.67%). Esophagitis and vascular ectasia: each one cause show (2.22%),Mallory-Wiess tears (1.78%) and Dieulafoy's lesionshow (0.9%). No cause identified by endoscopy is recorded in (6.23%).*

Conclusions: *Peptic ulcers (duodenal ulcer more than gastric ulcer) arethe commonest endoscopic finding in those patients presented withbleeding from upper gastrointestinal tract and the males areaffected more than females.*

[1] Gasteroenterolgy Center, AL-Diwaniyah Teaching Hospital, Al-Qadisiyah
[2] Department of Internal Medicine, College of Medicine, University of Al-Qadisiyah
[3] Department of Internal Medicine, Afaq General Hospital, Al-Qadisiyah

Received: 22 Dec 2019 | Revised: 13 Jan 2020 | Accepted: 05 Feb 2020

Keywords:*Endoscopic findings, bleeding from upper gastrointestinal tract, peptic ulcers, hematemesis.*

I. INTRODUCTION

Bleeding from upper gastrointestinal tract is a world wide serious and life-threatening medical emergency that needs hospitalization with optimal treatment. It's annual incidence rateabout 50 to 150/100,000 population[1]. Approximately, bleeding from upper gastrointestinal tract is four times more common compared to bleeding from lower gastrointestinal tract[2,3,4,5].However, it is common in males than females and the prevalence rate rises with agemore than 60 years.The mortality rate about 6-10%, is equal for both sexes [2,6,7,8].Bleeding from upper gastrointestinal tracthappens when the site of bleeding is proximal to ligament of Treitz [9]. The bleeding can be presented as melena or hematemesis or both, or may occasionally presentas hematochezia[10].Spontaneous stopping of bleeding occurs in around 80% of patients, however the mortality rate in patients with continuous bleeding who require intervention for stopping the bleeding, is high[11]with 15% chance risk of rebleeding[12].

Bleeding from upper gastrointestinal tractcan occur from several sites and differentlesions in the gastrointestinal tract,also it may be insignificant or tremendous, visible or invisible[13].The causes of bleeding vary greatly in different geographical areas, depends on socioeconomic and demographics factors[14].Bleeding from peptic ulcers still the commonest cause, accounted about 50% of cases, followed by esophageal varices (14%), Mallory-Weiss tears (5%). Other etiological factors comprise arteriovenous malformations, tumors and erosion[15].Hemorrhage from esophageal varicesis a very significant etiology of bleeding from upper gastrointestinal tract, with high rate of mortality and morbidity[11].

The primary evaluation of patients suffering from bleeding from upper gastrointestinal tract in order to stabilize the circulatory system is an important action. In order to reduce the death rate, so early and aggressive resuscitation of patients with hemodynamic instability is necessary[16].Esophagogastroduodenoscopy is anecessary and valuabledevicein determiningetiology and location of bleeding fromupper gastrointestinal tract,allowing interventional therapysuch as band ligation for bleeding esophageal varices, adrenaline injection or clipping for bleeding ulcers and biopsiesfrom doubtful region[17].

II. PATIENT AND METHOD

Aretrospective case study done forthe patients who referredfor esophagogastroduodenoscopic unit in the gastroenterology and hepatology center (a tertiary center) at AL-Diwaniyah teaching hospitaldue tobleeding from upper gastrointestinal tract(for determining the bleeding cause)during two years period from November 2015 till November2017. The data of this study are collected from a computerized endoscopic reports of (225 patients). The obtained informations from the endoscopic records include: request for endoscopy,age, sex,indication for referral(hematemesis, hematemesis and /or melaena),endoscopic findings and any therapeutic intervention done.Hematemesisis considered if the patient presented with coffee ground vomitus, vomiting of blood or blood clots, while melaenais considered if the patient complained from passage of dark, tarry stools.Thepatients are divided into four age groups (<30, 30-49, 50-69, and $\geq$70 years).In all patients, the procedure is performed when they became hemodynamically stable.10% xylocaine spray with or without sedation (in form of 2.5-5 mg midazolam injection) is

Received: 22 Dec 2019 | Revised: 13 Jan 2020 | Accepted: 05 Feb 2020

used before theprocedure. The endoscopic procedures are performed by a consultant gastroenterologistor by a qualified physicians for doing diagnostic endoscopy. Consultant gastroenterologist deal with those patients who need endoscopic intervention. The endoscopic examination done by (Olympus GIF-2T240, Olympus GIF-XK240) scopes.

III. RESULT

Out of total (225) patients who underwent esophagogastroduodenoscopy forbleeding from upper gastrointestinal tract, (141 patients, 62.67%) are males and (84 patients, 37.33%) are females, table (2), figure(1). The male to female ratio is (1.7:1). Patient's age range is (9-85 years) and the mean age is (43.71years). The most common mode of presentation in patients with bleeding from upper gastrointestinal tract is hematemesis (116 patients, 51.50%) out of (225, total patients number) followed by melaena (78 patients, 34.70%), while (31 patients, 13.80%) presented with both hematemesis and melaena, table(1), figure(2). The most age presentation of bleeding from upper gastrointestinal tract is in range of (50-69 years), table(2)

The most common finding on endoscopy are peptic ulcers (duodenal and gastric ulcers) (93 patients, 41.33%),(81) patients of them have duodenal ulcer (36 %, 58 males, 23 females), male: female ratio is (2.5:1) and (12patients) have gastric ulcer (5.33%, 8 males, 4 females), male: female ratio is (2:1) followed by gastric erosion (30 patients, 13.33%), esophageal varieswith or without gastric varices (24 patients, 10.67%). The other less frequent causes of bleeding from upper gastrointestinal tract includes gastrodoudenitis (17 patients, 7.55%), gastritis (17 patients, 7.55%), CA stomach (8 patients, 3.55%) and gastroesophageal reflux disease (GERD) (6 patients, 2.67%). Esophagitis and vascular ectasia: each one cause show (5 patients, 2.22%). Others:Mallory-Wiess tears show (4 patient, 1.78%) and Dieulafoy's lesionshow (2 patients, 0.9%). No cause identified by endoscopyis recorded in (14 patients, 6.23%), table(2 and 3), figure(3).

IV. DISCUSSION

Although theincidence of the bleeding from upper gastrointestinal tracthas been fallen in last decades[18],it remain a common cause of mortalityand morbidity. Determination of the cause of bleeding issignificant in the management and prognosis of the patients.

In this study we detect the mean age of the patients presented with bleeding from upper gastrointestinal tract is (43.71 years). Approximately, this result also seen by Hameed I. Al-Zagrootand his colleagues, in a study done at Al-Ramadi province in Iraq, who found the mean age of patients is (46.6 years) [19]. In Africa, a similar result also reportedMwanahawa S *et al*[20]. However a higher reading of mean age reported in western countries [4,14], this can be attributed to aged population in the west. By looking to age distribution of patients with bleeding rom upper gastrointestinal tract, table (3), the common presenting age is in (50-69 years) group, which involve (80 patients, 35.56%) followed by groups of (< 30 years) (28.44%), (30-49 years) (27.11%) and ($\geq$70 years) (8.89%) respectively. A similar result is reported in Iran by *AfsanehSharifianet al* [21]. This increased upper gastrointestinal bleeding distribution in older people might be attributed to geriatric illnesses (ischemic heart diseases, rheumatological diseases) that necessitate use of antiplatelet medications like aspirin and other nonsteroidal anti-inflammatory drugs known to be associated with bleeding from upper gastrointestinal tract[22].

In reviewing to gender distribution of bleeding from upper gastrointestinal tract in this study, we found the males contribute the large percent in comparison to the females, male patients consist of (141 case, 62.67%) and female patients consist of (84 case, 37.33%), in a ratio of (1.7:1). A similar results also seen in study done in Karbala, that record (150 patients , 92 males and 58 females)[23]. This male predominance also reported by others [24,25], this might be due to higher prevalence of ischemic heart diseasesin males.

In this study, it is evident that the commonest cause of bleeding from upper gastrointestinal tractare peptic ulcers (41.33%), a result also seen in previous studies done in Iraq [19,26]. Similar evidence also reported in other part of the world like Iran, Europe and united states [14,21,27].

According to the endoscopic findings in this study, we found the duodenal ulcer exist more frequently (81patients, 36%) than gastric ulcer (12 patients, 5.33%), figure (4). The second common cause of bleeding from upper gastrointestinal tract in this study is gastric erosion that occurred in (27 patients,12%) of total cases. Approximate result also seen by Zahra H. *et al* in Karbala[23]. They detect also that the third cause of bleeding from upper gastrointestinal tractare esophageal varices in (6.7%). This result also appeared in this study in which the esophageal varices with or without gastric varices ranked the third cause in (23 patients, 10.22%), a result evident also in previous report in Ekiti in Nigeria [28]. The contrast to this results occurred in studies done in Iran by which the esophageal varices ranked the second cause[21], while in studies done in Egypt and Tanzania, the esophageal varices are reported as the most prevalent cause of bleeding from upper gastrointestinal tract[29,30]. This contradiction might be due to the high prevalence of chronic liver disease in African countries that cause portal hypertension (specially schistosomiasis and hepatitis C viral infection) and esophageal varices in comparison with the western countries and Iraq. The other less common causes of upper gastrointestinal bleeding are gastrodoudenitis and gastritis (7.55%), CA stomach (3.55%), GERD (2,67%), esophagitis (2.22%), vascular ectasia (2.22%), Mallory-Weiss syndrome (1.78%), and Dieulafoy's lesion (0.9%). A nearly similar results detected in previous Iraqi and Iranian studies [19,23,31].

In this study, the cause of bleeding is not been identified in about (6.23%) of patients and this reveal that the cause of bleeding from upper gastrointestinal tract can be founded in (93.77%). Nearly similar result, which is (7%) seen at Al-Ramadi Teaching Hospital(Gastroenterology and hepatology department)[19], but lower percent (3.3%) seen at Karbala in Al-Hussien Teaching Hospital[23]. Higher figure reported in Delhi, India; in which no lesion detected in 11.2% [32].

V. CONCLUSION

Peptic ulcers (duodenal ulcer more than gastric ulcer) are the commonest endoscopic finding in the patients presented withbleeding from upper gastrointestinal tract and the males are affected more than the females.

Received: 22 Dec 2019 | Revised: 13 Jan 2020 | Accepted: 05 Feb 2020

VI. TABLES AND FIGURES

Patient presentation	Number (%)
Haematemesis	116 (51.50%)
Melaena	78 (34.70%)
Haematemesisandmelaena	31 (13.80%)
Total (%)	225 (100%)

Table (1): The presenting mode of patients with bleeding from upper gastrointestinal tract.

Endoscopic findings		Males	Females	Total (%)	
Peptic ulcers	DU	58	23	81 (36%)	93(41.33%)
	GU	8	4	12 (5.33%)	
gastric erosion		17	13	30 (13.33%)	
Esophageal varices+ gastricvarices		13	11	24 (10.67%)	
Gastrodoudenitis		11	6	17 (7.55%)	
Gastritis		9	8	17 (7.55%)	

Received: 22 Dec 2019 | Revised: 13 Jan 2020 | Accepted: 05 Feb 2020

CA stomach	6	2	8 (3.55%)
GERD	4	2	6 (2.67%)
Esophagitis	3	2	5 (2.22%)
Vascular ectasia	3	2	5 (2.22%)
Mallory-Wiess tears	3	1	4 (1.78%)
Dieulafoy, s lesion	2	0	2 (0.89%)
No cause identified	4	10	14 (6.23%)
Total (%)	141 (62.67%)	84 (37.33%)	225(100%)

Table (2): Distribution of bleeding from upper gastrointestinal tract according to sex of patients.DU: duodenal ulcer, GU: gastric ulcer, GERD: gastroesophageal reflux disease.

Endoscopic findings		**< 30 years**	**30-49 years**	**50-69 years**	**>70 years**	**Total (%)**
Peptic ulcers	DU	23	27	29	2	81 (36%)
	GU	1	2	8	1	12 (5.33%)
gastric erosion		12	8	7	3	30 (13.33%)
Esophageal varices+ gastricvarices		4	3	12	5	24 (10.67%)
Gastrodoudenitis		5	6	4	2	17 (7.55%)
Gastritis		5	7	4	1	17 (7.55%)
CA stomach		0	1	5	2	8 (3.55%)
GERD		2	1	2	1	6 (2.67%)
Esophagitis		1	1	1	2	5 (2.22%)
Vascular ectasia		2	1	2	0	5 (2.22%)

Received: 22 Dec 2019 | Revised: 13 Jan 2020 | Accepted: 05 Feb 2020

Mallory-Wiess tears	2	1	1	0	4 (1.78%)
Dieulafoy, s lesion	1	0	1	0	2 (0.89%)
No cause identified	6	3	4	1	14 (6.23%)
Total (%)	64(28.44%)	61(27.11%)	80(35.56%)	20(8.89%)	225(100%)

Table (3): Distribution of bleeding from upper gastrointestinal tract according to age group of patient.DU: duodenal ulcer, GU: gastric ulcer, GERD: gastroesophageal reflux disease.

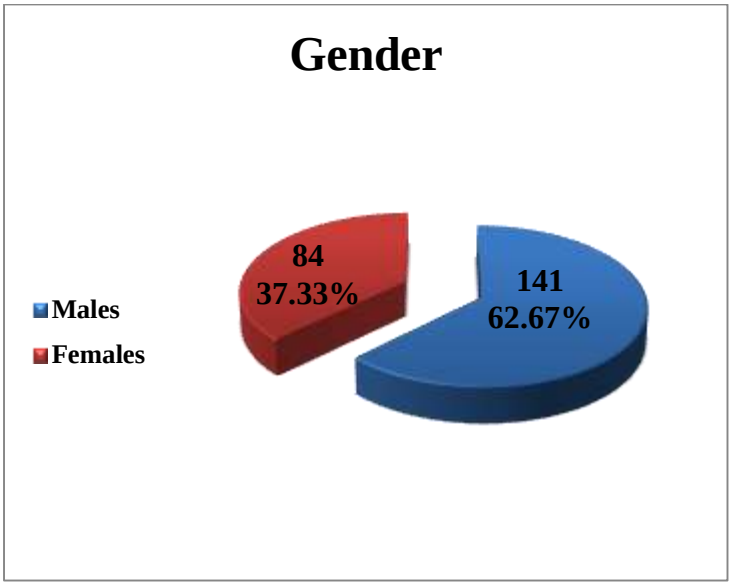

Figure (1): Distribution of bleeding from upper gastrointestinal tract according to sex of patients.

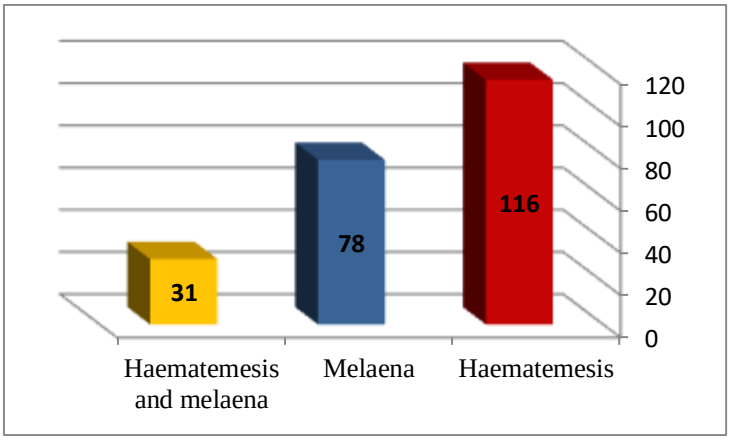

Figure (2): Common presentation of patients with bleeding from upper gastrointestinal tract**.**

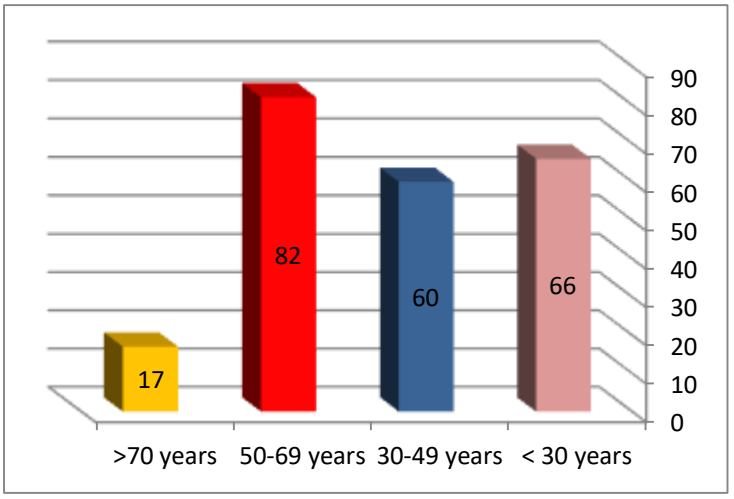

Figure (3): Presentation of patients with bleeding from upper gastrointestinal tract according to age groups.

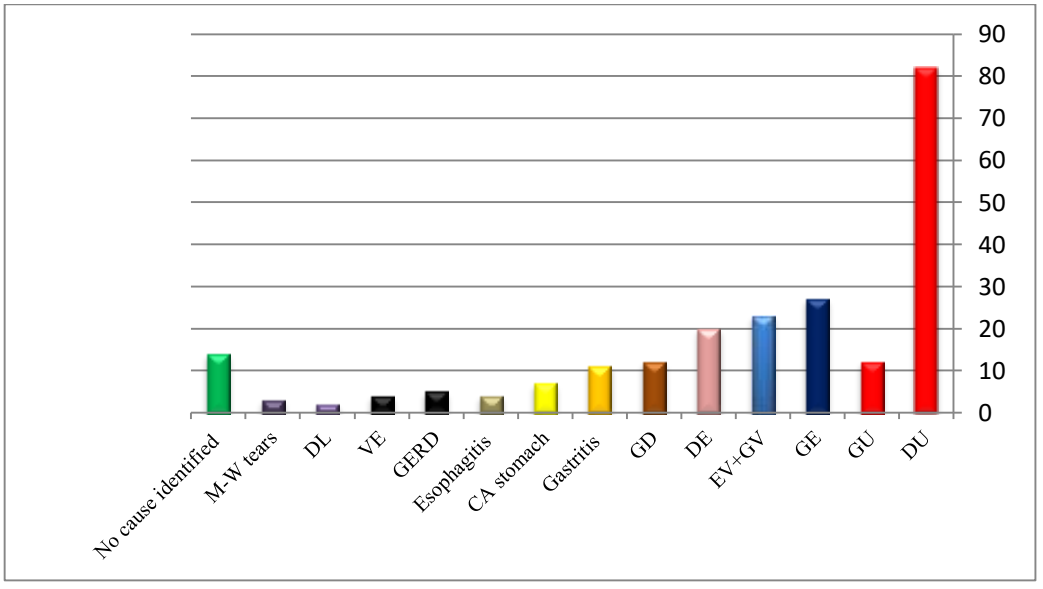

Figure (4): The endoscopic findings of patients with bleeding from upper gastrointestinal tract.DU: duodenal ulcer, GU: gastric ulcer, GE: gastric erosion, EV: esophageal varices, GV: gastric varices, DE: duodenal erosion, GD: gastroduodenitis, GERD: gastroesophageal reflux disease, VE: vascular ectasia, DL: Dieulafoy, s lesion, M-W tears: Mallory-Wiess tears.

REFERENCE:

1. Thomopoulos KC, Vagenas KA, Vagianos CE, Margaritis VG, Blikas AP, Katsakoulis EC, *et al.* Changes in aetiology and clinical outcome of acute upper gastrointestinal bleeding during the last 15 years. European Journal of Gastroenterology and Hepatology 2004;16:177–82.

2. Fallah MA, Prakash C, Edmundowicz S. Acute gastrointestinal bleeding. Medical Clinics of North America 2000;84:1183-208.
3. Alema ON, Martin DO, Okello TR: Endoscopic findings in upper gastrointestinal bleeding patients at Lacor hospital, northern Uganda. African Health Sciences 2012; 12:518-521.
4. Rockall TA, Logan RF, Devlin HB, Northfield TC: Incidence of and mortality from acute upper gastrointestinal haemorrhage in the United Kingdom. BMJ 1995; 311:222.
5. Terdiman JP. Update on upper gastrointestinal bleeding. Basing treatment decisions on patients' risk level. Postgraduate Medicine 1998;103:43-7, 51-2, 58-9.
6. Longstreth GF: Epidemiology of hospitalization for acute upper gastrointestinal hemorrhage: a population-based study. American journal of gastroenterology 1995; 90:206-210.
7. Yavorski RT, Wong RK, Maydonovitch C, Battin LS, Furnia A, Amundson DE.Analysis of 3,294 cases of upper gastrointestinal bleeding in military medical facilities.American journal of gastroenterology 1995; Apr.90(4):568-73.
8. Pilotto A, Maggi S, Noale M, Franceschi M, Parisi G, Crepaldi G. Development and validation of a new questionnaire for the evaluation of upper gastrointestinal symptoms in the elderly population: a multicenter study. The Journals of Gerontology Series A Biological Sciences and Medical Sciences 2010 Feb;65(2):174-8.
9. Lirio RA: Management of upper gastrointestinal bleeding in children: variceal and nonvariceal. Gastrointestinal Endoscopy Clinics of North America 2016; 26:63-73.1.
10. Palmer KR, Penman ID, Brown SP. Alimentary tract and pancreatic disease. In: Haslett C, Chilvers ER, Boon NA,Colledge NR, Hunter JAA. Davidson's principles and practice of medicine. 19th ed. Edinburgh: Churchill Livingstone 2002;764-766
11. Ahmed A, Ali L, Shehbaz L, Nasir S, Rizvi SRH, Aman MZ, *et al*: The prevalence of acute upper gastrointestinal bleeding and the factors causing hemorrhage as observed at a tertiary health care centre in Karachi, Pakistan. Pakistan Journal of Surgery 2017; 33:36-40
12. Bardou M, Quenot JP, Barkun A.Stress-related mucosal disease in the critically ill patient.Nature Reviews Gastroenterology and Hepatology 2015 Feb;12(2):98-107.
13. Boonpongmanee S, Fleischer DE, Pezzullo JC, Collier K, Mayoral W,Al-Kawas F, *et al*. The frequency of peptic ulcer as a cause of upper-GIbleeding is exaggerated. Gastrointestinal Endoscopy 2004; 59:788-94.
14. Theocharis GJ, Thomopoulos KC, Sakellaropoulos G,Katsakoulis E, Nikolopoulou V. Changing trends in the epidemiology and clinical outcome of acute upper gastrointestinal bleeding in a defined geographical area in Greece. Journal of Clinical Gastroenterology 2008;42:128-33.
15. Jutabha R, Jensen MD. Management of upper gastrointestinal bleeding in patients with chronic liver disease. Medical Clinics of North America1996; 80(5); 1035-1068.
16. Baradarian R, Ramdhaney S, Chapalamadugu R,Skoczylas L, Wang K, Rivilis S, *et al*. Early intensive resuscitation of patients with upper gastrointestinal African Health Sciences Vol 12 Issue 4 December 2012 521bleeding decreases mortality.American journal of gastroenterology. Apr 2004;99(4):619 -22.

17. Malghani WS, Malik R, Chaudhary FMD, TameezUd Din A, Shahid M, Ahmad S, *et al*. Spectrum of Endoscopic Findings in Patients of Upper Gastrointestinal Bleeding at a Tertiary Care Hospital. Cureus. April 29, 2019, 11(4): e4562. DOI 10.7759/cureus.4562.
18. Van Leerdam ME, Vreeburg EM, Rauws EA, Geraedts AA, Tijssen JG, Reitsma JB, *et al.* Acute upper GI bleeding: did anything change? Time trend analysis of incidence and outcome of acute upper GI bleeding between 1993/1994 and 2000. American journal of gastroenterology. 2003; 98: 1494-1499.
19. Hameed I Al-Zagroot, Maher A Jassim, Yasin H Majeed. Endoscopic Findings in Acute Upper Gastrointestinal Bleeding in Al-Ramadi Teaching Hospital.Iraqi Journal of Community Medicine, April. 2016; Vol: 29 Issue: 2 Pages: 16-20.
20. Mwanahawa S, Segni M, Charles M, Gibson S. The etiology, management and clinical outcome of upper gastrointestinal bleeding among patients admitted at the Kilimanjaro Christian Medical Centre in Moshi, Tanzania. Tanzania journal of Health Research 2010;12 (4):304-308.
21. *AfsanehSharifian, EsmaeilTavakoli, Sara Ashtari, Mohammad Reza Zali.*Endoscopic Findings in Patients with Upper Gastrointestinal Bleeding Referred to Taleghani Hospital, Tehran, Iran.Govaresh/ Vol. 21, No.4, Winter 2017; 260-265.
22. JureidiniZ, AL-Ani O. Upper Gastrointestinal Bleeding: an age Based Comparative Study. Iraqi JGE Issue2001; 1:Vol 1.
23. Zahra;a Hamid Kadhim; Rawa;aAzeez Imran; Ayat Sahib Muhammad; Ali Hussain Al-Tai; Riyadh Mustafa Murtadha.Acute Upper Gastro-Intestinal Bleeding; Its Etiology and Management in Karbala: An Epidemiological study.Kerbala Journal of Pharmaceutical Sciences 2012;Vol: 4, Issue 4, Pages 11-17.
24. Meaden C, Makin AJ: Diagnosis and treatment of patients with gastrointestinal bleeding. Current Anaesthesia and Critical Care 2004; 15: 123-32. 10.1016/j.cacc.2004.03.001.
25. Mustapha S, Ajayi N, Shehu A: Aetiology of upper gastrointestinal bleeding in north-eastern nigeria: a retrospective endoscopic study. The Internet Journal of Third World Medicine 2009, 8:2.
26. Kassir Z. (Hemtemesis and melaena). Fac. Med. Baghdad J .1969 11:22-29.
27. Vreeburg EM, Snel P, de Bruijne JW, Bartelsman JF, Rauws EA,Tytgat GN. Acute upper gastrointestinal bleeding in the Amsterdam area: Incidence, diagnosis, and clinical outcome. American journal of gastroenterology 1997;92:236-43.
28. Oladiniyi AA, Temi AP, Adekunle AE, Abidemi SO, Olatayo AA, Abayomi AM. Aetiology and Management Outcome of Upper Gastrointestinal Bleeding in Adult patients Presenting at Ekiti State University Teaching Hospital, Ado-Ekiti, Nigeria. Greener Journal of Medical Sciences 2013;3:93-7.
29. AbdulkareemYK, Fuad HI, Maher A, Basil AI. Acute upper gastrointestinal bleeding in Kuwait. Kuwait Medical Journal 2001;33:144-7.
30. Jaka H, Koy M, Liwa A, Kobangila R, Mivambo M, Scheppach, *et al*. A fibreoptic endoscopic study of upper gastrointestinal bleeding at Bugando Medical Centre in North Western Tanzania: A retrospective review of 240 cases. BMC Research Notes 2012;5:200.
31. Keshavarz A, Rezvanfar H. Acute Upper Gastrointestinal Bleeding Course in Patients over & under the Age 60. Journal of Kermanshah University of Medical Sciences2007;11:277-85.

32. Pruthi HS, Sharma SK, Singh B, Anand AC. Aetiology of upper gastrointestinal hemorrhage: an endoscopic study. Medical Journal Armed Forces India 2000; 56: 188-191.