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ALEIDA FERNANDEZ CHARDIET DOCENT HOSPITAL

I VIRTUAL STUDENT SCIENTIFIC FORUM

THE BEHAVIOR OF UPPER GASTROINTESTINAL BLEEDING AT ALEIDA FERNANDEZ CHARDIET HOSPITAL

AUTHORS:

- **Cheila Molina García***
- **Danger López Perdomo***
- **Melanie Suárez Otaño***

***Students of Medicine.**

TUTOR:

- **Dr. Víctor Manuel Sierra Alfonso**

Profesor Asistente de Cirugía General

Especialista de Primer Grado en Cirugía General

Especialista de Primer Grado en Medicina General Integral

CONSULTANT:

- **Dr. Abel Fernández Rodríguez**

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"(…) lo que importa no es solo que las personas vivan muchos años, sino que vivan bien, que se sientan bien, que se sientan saludables, que se sientan atendidos, que se sientan seguros, que se sientan dignas. "

Fidel Castro Ruz

SUMMARY

Acute upper gastrointestinal bleeding is a medical emergency, commonly defined as bleeding arising from the esophagus, stomach, or duodenum. Blood may be observed in vomit (hematemesis) or in altered from in the stool (melena). It was carried out an observational, descriptive, longitudinal-cut retrospective study-based and consisted of all patients who suffer from upper gastrointestinal bleeding at Aleida Fernández Chardiet Hospital in Güines from April 2018 to April 2019. To determine the incidence and mortality of acute upper gastrointestinal bleeding at Aleida Fernandez Chardiet Hospital. From 2014-2019 at “Aleida Fernandez Chardiet” Hospital, the year with more incidence of mortality by upper gastrointestinal bleeding was 2019 with 14 deceased and the months with more incidence of death were January and Jun. The mortality rate of upper gastrointestinal bleeding, showed that from 2014 to 2017 it was an increase of this pathology, but from 2017 to 2019 it began to decrease, while the incidence rate from 2014 to 2016 increased, in 2017 decreased, in 2018 increased substantially and in 2019 declined sharply. From April 2018 to April 2019 at “Aleida Fernandez Chardiet” Hospital, the predominant sex was male, with 56 patients and the leading age group was from 61 to 80 years. The most common associated pathologies were High blood pressure and Cirrhosis. Only 28 patients had endoscopy and the leading etiology of the bleeding was the gastrointestinal ulcer.

Key words: upper, gastrointestinal, bleeding, incidence, mortality.

INTRODUCTION

Acute upper gastrointestinal bleeding is a medical emergency, commonly defined as bleeding arising from the esophagus, stomach, or duodenum. Blood may be observed in vomit (hematemesis) or in altered from in the stool (melena). Bleeding from the upper gastrointestinal tract (esophagus, stomach, and duodenum) occurs in approximately 100 per 100 000 people annually. It is a medical emergency associated with substantial mortality. About 75% of patients presenting to the emergency department with gastrointestinal bleeding have an upper source. A UK audit in 2017 found an overall mortality of 10%. This practice pointer provides a guide to the initial management of upper gastrointestinal bleeding and subsequent management of bleeding that results from peptic ulceration, the most common cause. This entity has an annual incidence of 48 to 160 cases per 100,000 adults, with a mortality rate of 10% to 14%. Classically, UGIB is divided in non-variceal hemorrhage and variceal hemorrhage, being more frequently observed the first one (80%-90%). [(1)]

The mortality rate for upper gastrointestinal bleeding varies from 3.5 to 7% in the United States. However, a British study carried out in 2017 in 74 hospitals serving a population of 15.5 million inhabitants reported a mortality rate of 14%. Most deaths occurred in patients who were very elderly or who had severe concurrent illnesses (mortality was three times higher in patients who were already hospitalized for another reason when bleeding started). Mortality for patients younger than 60 years in the absence of malignancy or organ failure at the time of presentation was only 0.6%. Among the most important reasons why the mortality rate associated with upper gastrointestinal bleeding has remained stable at approximately 10% since 2015, are the increasing age of patients presenting with HDA and the subsequent increase in associated comorbid diseases. [(2)]

The causes of upper gastrointestinal bleeding are aorto-enteric fistulas, peptic ulcer, and tears in the lining of the tube that connects your throat to your stomach (Mallory-Weiss tears), esophageal varices, esophagitis, gastritis, benign tumors and cancer. [(3)]

Forrest classification

Acute hemorrhage

- Forrest I a (Spurting hemorrhage)
- Forrest I b (Oozing hemorrhage)

Signs of recent hemorrhage

- Forrest II a (Non bleeding Visible vessel)
- Forrest II b (Adherent clot)
- Forrest II c (Flat pigmented haematin (coffee ground base) on ulcer base)

Lesions without active bleeding

- Forrest III (Lesions without signs of recent hemorrhage or fibrin-covered clean ulcer base) [4]

Signs and symptoms of Gastrointestinal bleeding can be either obvious (overt) or hidden (occult). Signs and symptoms depend on the location of the bleed, which can be anywhere on the GI tract, from where it starts the mouth to where it ends the anus and the rate of bleeding. Vomiting blood, which might be red or might be dark brown and resemble coffee grounds in texture, black, tarry stool, rectal bleeding, usually in or with stool. With occult bleeding the symptoms are: Lightheadedness, difficulty breathing, fainting, chest pain, abdominal pain. Symptoms of shock: Drop in blood pressure, not urinating or urinating infrequently, in small amounts, rapid pulse, unconsciousness. [5]

The main purpose of the gastrointestinal tract is the transport of food and the absorption of nutrients. Many pathologic conditions of the gastrointestinal tract impair either or both of these functions. The gastrointestinal tract, and especially the colon, is a common site of malignancy. The two main symptoms related to pathology of the gastrointestinal tract are abdominal pain and gastrointestinal hemorrhage. [6]

Diagnosis process is based in laboratory test as well as endoscopy. The first one is required to elaborate risk scores previously described and provide blood transfusion if it is necessary. In addition, lactate levels are related with outcomes. In addition, a systematic review found that a blood urea nitrogen (BUN): Cr ratio of greater than 30 is 93% specific for a UGIB, with a positive likelihood ratio of 7.5. [7]

The differential diagnosis for abdominal pain can be classified as either acute or chronic, based upon the length of time of the pain. The four categories of the causes of acute abdominal pain are (1) inflammation, including appendicitis, cholecystitis, pancreatitis, and diverticulitis; (2) perforation; (3) obstruction; and (4) vascular disease, including acute ischemia and ruptured abdominal aortic aneurysm. [8]

Upper Gastrointestinal Bleeding treatment depends of the etiology. Due to that, we are going to summarize it attending to the presence or absence of variceal.

Non-variceal hemorrhage: Endoscopy provides a range of techniques to stop as well as prevent further bleeding. It includes injection (adrenaline), thermo-ablative (coagulation probes) and mechanical (clipping) therapies. Nowadays is suggested to combine these techniques to improve the outcomes. Adrenaline injection promotes a local vasoconstriction and tamponade effect, which allows stopping the bleeding applying a thermo-ablative or mechanical therapies on the vessel. There are other therapies include Hemospray, Endoclot, and Blood Stopper. Hemospray effect is based in its capacity to absorb water and forms a cohesive and adhesive gel in contact with, which stops bleeding through a combination of mechanical effects (tamponade) and possible pro-coagulatory effects on platelets and clotting factors. [9]

Variceal hemorrhage: In esophageal varices, variceal band and sclerotherapy provide similar results in terms of re-bleeding rate, mortality rate and rate of death due to re-bleeding. Due to that, hospital conditions, operator experience, and the characteristics of esophageal varices should be considered to choice the treatment. Gastric varices may be classified according to their location and relationship to esophageal varices. Gastroesophageal varices (GOV) type 1 are defines as those that continue from esophageal varices and extend for <5 cm along the lesser curvature of the stomach. If gastroesophageal varices extend towards the fundus along the greater curvature are defined as GOV type 2. On the other hand, isolated gastric varices (IGV) are not in continuation with esophageal varices and may be in the fundus (IGV type 1) or anywhere distally (IGV type 2). (10)

Vasoactive drugs reduce portal hypertension by decreasing portal blood flow. These treatments include terlipressin and somatostatin or its analogues (such as octreotide). Terlipressin treatment is preferred due to it is the only one to have shown a reduction in mortality. Antibiotics which could be given include cetiriaxone, nortioxacin, ciprotioxacin or other broad spectrum antibiotics such as tazocin. (11)

An upper gastrointestinal bleed can cause complications such as: Shock, anemia, death. (12)

To help prevent an upper gastrointestinal bleeding you most: Limit your use of non-steroidal anti-inflammatory drugs, limit your use of alcohol, if you smoke, quit, if you have GERD, follow your doctor's instructions for treating it. (13)

Scientific Problem: “Is there an increase of the incidence and mortality of upper gastrointestinal bleeding at Aleida Fernandez Chardiet Hospital?”

Justification of the Scientific Problem: It is necessary to verify the true existence of an increase in the incidence of upper gastrointestinal bleeding and to characterize the patients in order to determine if the increase of the risk factors is associated with the development of this disease, and to prevent and modify them.

OBJECTIVES

General

- To determine the incidence and mortality of acute upper gastrointestinal bleeding at Aleida Fernandez Chardiet Hospital in Güines.

Specifics

- To identify the months and years with the higher mortality.
- To describe the patients according sex and age.
- To determine the associated pathologies.
- To determine the etiology of the bleeding.

MATERIAL AND METHODS

Type of investigation

It was carried out an observational, descriptive, longitudinal cut retrospective study-based and consisted of all patients who suffered from upper gastrointestinal bleeding at Aleida Fernández Chardiet Hospital in Güines from April 2018 to April 2019.

Universe and sample

The universe was composed by 101 patients in the surgery service at Aleida Fernandez Chardiet Hospital from April 2018 to April 2019 with upper gastrointestinal, and the sample was 84 patients chosen according the standard inclusion.

Standard Inclusion

- That the patient had been ingress in the hospital, in the studied period, in the surgery service with upper gastrointestinal bleeding.
- With an age over 18 years.
- That the necessary data for the research were collected in the book of the dead and the clinical history.

Standard exclusion.

- Not related with the standard inclusion.

Information Source

It was search the Upper gastrointestinal bleeding behavior from 2018 to 2019 in the Statistics Department.

From the medical records, the data was obtained and recorded in the data collection sheet.

This data collection worksheet was prepared for this purpose by the author and validated by the scientific council at Aleida Fernandez Chardiet Hospital. (Annexe 1)

Description of the variables

Variable	Type of Variable	Classification Scale	Description
Month	Nominal Qualitative	January, February, March, April, May, June, July, August, September, October, November, December	According the month of death in the hospital
Year	Discreet Quantitative	2014, 2015, 2016, 2017,2018	According to the year in study
Sex	Nominal Qualitative	Male , Female	According the patients analyzed
Age Groups	Discreta Quantitative	20-40 years, 41-60 years, 61-80 years, more than 81 years.	According the patients analyzed

Associated pathologies	Nominal Qualitative	- High Blood Pressure - Diabetes - Cirrhosis - HIV - TB - None	According what was found in the clinical cases of the patients
Bleeding Etiology	Nominal Qualitative	- Gastroduodenal Ulcer - Esophageal Varices - Acute Gastritis - Stomach Cancer - Others - Non endoscopic confirmation	According what was found in the endoscopy

Statistics

All data were processed in Microsoft Office Excel 2010® and IBM SPSS statistics®. The χ^2 goodness-of-fit test, the Fisher's exact test and the Freeman–Halton test were used to test differences between groups regarding dichotomous variables. Unpaired Mann–Whitney U test and the Kruskal–Wallis test were used to compare continuous variables. Variables with a significant *p*-value in the univariate analysis were entered into a multiple logistic regression analyses in an attempt to identify independent predictors of having an AUGIB and clinically significant bleeding. All tests were two-tailed and were conducted at a 5% significance level. The results are presented as medians and interquartile range (IQR) or means and standard deviation (SD).

Data collection

Before the endoscopic procedure, the gastroenterologist noted the indication for the endoscopy and its findings were recorded in a prospective fashion and later verified with analysis of medical records. The gastroenterologists recorded the indication for the UGE, whether or not GI bleeding was suspected or present and whether or not the bleeding was clinically significant. Bleeding was considered clinically significant if the patients needed blood transfusions (hemoglobin (Hb) < 100 g/l), became hemodynamically unstable (pulse > 100, systolic pressure < 100), required surgery or died. Other variables noted were: co-morbidities, history of GI bleeding, signs of bleeding during UGE, extent and findings of the endoscopy. Nurses in the endoscopy ward interviewed the subjects thoroughly before the endoscopy regarding their history of drug use. The drugs recorded were the following: NSAIDs, LDA, warfarin, SSRIs, bisphosphonate drugs, platelet inhibitors, low-molecular-weight heparin (LMWH), heparin, corticosteroids and proton pump inhibitors (PPIs).

Techniques for procedures and analysis of the results

Once collected the data, is poured in the base of data, after is they processed the results of each variable.

Ethical Aspects

- ✓ It was request the authorization of the Surgery department and the direction of the hospital center in the implementation of the research.
- ✓ It was check the data obtained of the clinical cases of the patients.
- ✓ It was not expressed in the study data of personal identity of the patients such as names, initials, or direction.

Proposed Statistics Analysis.

It was used the SPSS on Windows package and the analysis was made with percentages and rates.

Mortality Rate of Upper Gastrointestinal Bleeding: Quotient between the total of deceased by upper gastrointestinal bleeding in 2019 and total of deceased in that year multiply by 100.

Incidence Rate of Upper Gastrointestinal Bleeding: Quotient between the total of patient with upper gastrointestinal bleeding and the total of patients in the surgery service multiply by 100.

In order to improve the comprehension of the results we put them in tables and graphics.

RESULTS

Table 1: Deceased patients because of Upper Gastrointestinal Bleeding

At "Aleida Fernandez Chardiet" Hospital

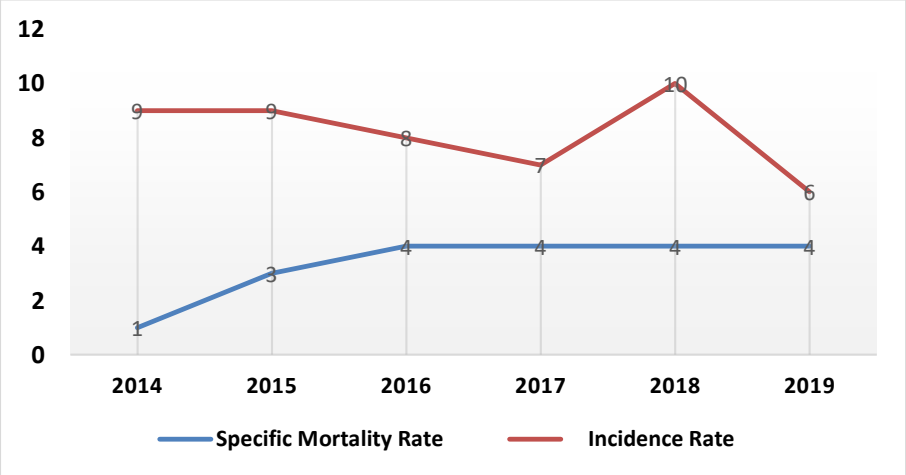
From 2014 to 2019.

MONTHS	2014	2015	2016	2017	2018	2019
January	2	3	3	2	3	2
February	1	-	2	-	2	-
March	-	1	-	2	-	-
April	-	2	1	4	2	1
May	-	-	-	-	1	1
June	2	1	1	1	2	-
July	-	1	2	1	1	-
August	-	-	-	-	-	3
September	-	-	-	1	-	1
October	-	-	1	-	-	3
November	-	-	1	-	-	2
December	-	1	1	-	1	1
Total	**5**	**9**	**12**	**11**	**12**	**14**

Source: Taken from the register of deceased patients from 2014 to 2019

The table shows the distribution of deceased patients because of upper gastrointestinal bleeding at “Aleida Fernandez Chardiet” Hospital during 2014, 2015, 2016, 2017, 2018 and 2019 by months proving the increasing of this pathology becoming the second cause of death in Cuba. The year with more incidence of mortality was 2019 with 14 deceased. From 2014 to 2019, the months with more incidence of death were January and Jun.

Graph 1: Mortality and Incidence Rate of Upper Gastrointestinal Bleeding At “Aleida Fernandez Chardiet” Hospital From 2014 to 2019.



Source: Statistics Department. Table 2.

The graphic 1 shows the mortality and incidence rate of upper gastrointestinal bleeding, determining that the mortality rate from 2014 to 2017 had an increase of this pathology, but from 2018 to 2019 it began to decrease, while the incidence rate from 2014 to 2016 increased, in 2017 decreased, in 2018 increased substantially and in 2019 declined sharply.

Specific Mortality Rate of upper gastrointestinal bleeding at “Aleida Fernandez Chardiet” Hospital from 2014 to 2019

Specific Mortality Rate (UGIB) = Total of deceased by UGIB in 2014 / Total of deceased in 2014 x 100

SMR (UGIB)= 5 / 345 x100 = 0.0144x 100 = 1,44 = 1

Specific Mortality Rate (UGIB) = Total of deceased by UGIB in 2015 / Total of deceased in 2015 x 100

SMR (UGIB)= 9 / 340 x100 = 0.0264 x 100= 2,64 = 3

Specific Mortality Rate (UGIB) = Total of deceased by UGIB in 2016 / Total of deceased in 2016 x 100

SMR (UGIB)= 12 / 308 x100= 0.0389 x 100= 3,89 = 4

Specific Mortality Rate (UGIB) = Total of deceased by UGIB in 2017 / Total of deceased in 2017 x 100

SMR (UGIB)= 11 / 249 x100= 0.0441 x 100= 4,41 = 4

Specific Mortality Rate (UGIB) = Total of deceased by UGIB in 2018 / Total of deceased in 2018 x 100

SMR (UGIB)= 12 / 291 x100 = 0.0412 x 100= 4,12= 4

Specific Mortality Rate (UGIB) = Total of deceased by UGIB in 2019 / Total of deceased in 2019 x 100

SMR (UGIB)= 14 / 382 x100 = 0.0366 x 100= 3,66 = 4

Approximately 4 out of 100 deaths at “Aleida Fernandez Chardiet” Hospital in 2019 were because of Upper Gastrointestinal Bleeding.

Incidence Rate of upper gastrointestinal bleeding at “Aleida Fernandez Chardiet” Hospital from 2014 to 2019

Incidence Rate (UGIB) = Total of patients with UGIB in 2014 / Total of patients in the surgery service in 2014 x 100

IR (UGIB)= 48 / 562 x100 = 0.0854 x 100 = 8,54 = 9

Incidence Rate (UGIB) = Total of patients with UGIB in 2015 / Total of patients in the surgery service in 2015 x 100

IR (UGIB)= 43 / 492 x100 =0.0873 x 100= 8,73 = 9

Incidence Rate (UGIB) = Total of patients with UGIB in 2016 / Total of patients in the surgery service in 2016 x 100

IR (UGIB)= 48 / 572 x 100 = 0.0839 x 100= 8,39 = 8

Incidence Rate (UGIB) = Total of patients with UGIB in 2017 / Total of patients in the surgery service in 2017 x 100

IR (UGIB) = 36 / 496 x100 = 0.0726 x 100 = 7,26 = 7

Incidence Rate (UGIB) = Total of patients with UGIB in 2018 / Total of patients in the surgery service in 2018 x 100

IR (UGIB) = 68 / 695 x100 = 0.0978 x 100 = 9,78 = 10

Incidence Rate (UGIB) = Total of patients with UGIB in 2019 / Total of patients in the surgery service in 2019 x 100

IR (UGIB) = 84 / 1323 x100 = 0.0634 x 100 = 6,35 = 6

Approximately 6 out of 100 patients in the surgery service at "Aleida Fernandez Chardiet" Hospital IN 2019 were because of Upper Gastrointestinal Bleeding.

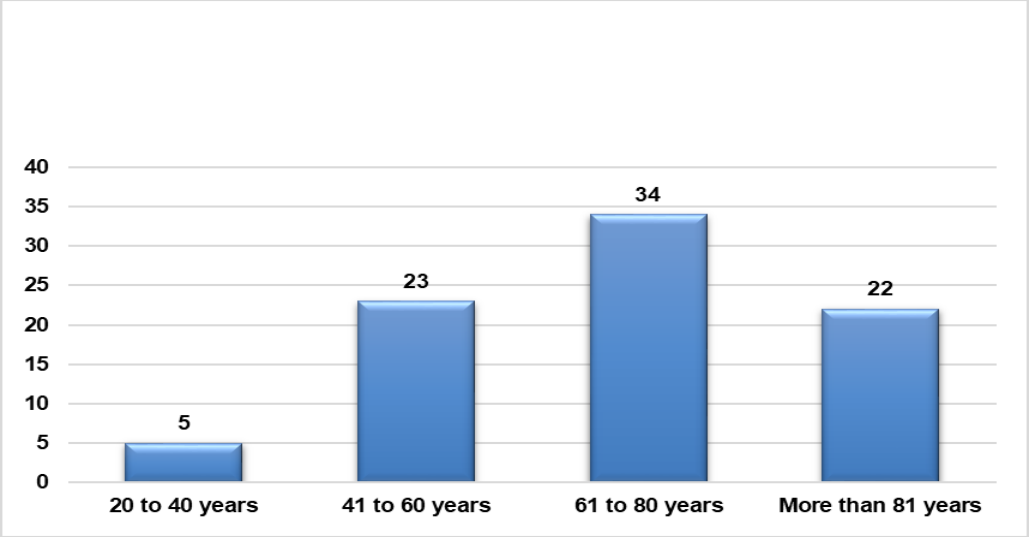
Table 3: Patients with Upper Gastrointestinal Bleeding at "Aleida Fernandez Chardiet" Hospital from April 2018 to April 2019 by sex.

SEX	FREQUENCY	%
Male	56	66,7
Female	28	33,3
Total	**84**	**100**

Source: Medical Records of patients.

The table shows the distribution of patients by sex from April 2018 to April 2019 at "Aleida Fernandez Chardiet" Hospital, indicating that the predominant sex was male, with 56 patients.

Graph 2: Patients with Upper Gastrointestinal Bleeding At "Aleida Fernandez Chardiet" Hospital From April 2018 to April 2019 by age groups.



Source: Medical Records of patients. Table 4

The graphic 2 shows the distribution of patients from April 2018 to April 2019 by age groups at "Aleida Fernandez Chardiet" Hospital, indicating that the leading age group was from 61 to 80 years, with 34 patients.

Table 5: Patients with Upper Gastrointestinal Bleeding at "Aleida Fernandez Chardiet" Hospital from April 2018 to April 2019 by associated pathologies.

PATHOLOGY	FREQUENCY	%
High Blood Pressure	45	53,6
Diabetes	6	9,5
Cirrhosis	19	22,6
HIV	1	1
TB	2	2,4
None	11	10,7
Total	**84**	**100**

Source: Medical Records of patients.

The table shows the distribution of patients by associated pathologies from April 2018 to April 2019 at "Aleida Fernandez Chardiet" Hospital predominating High blood pressure with 53, 6% and Cirrhosis with 22, 6 %.

Table 6: Patients with Upper Gastrointestinal Bleeding at "Aleida Fernandez Chardiet" Hospital from April 2018 to April 2019 by etiology.

ETIOLOGY	FREQUENCY	%
Gastroduodenal Ulcer	11	13,1
Esophageal Varices	5	5,9
Acute Gastritis	7	8,3
Stomach Cancer	2	2,4
Others	3	3,6
Non endoscopic confirmation	56	66,7
Total	**84**	**100**

Source: Medical Records of patients.

The table shows the distribution of patients by the etiology of the bleeding from April 2018 to April 2019 at “Aleida Fernandez Chardiet” Hospital, determining that only 28 patients had endoscopy, therefore, we should encourage the implement of endoscopy as a diagnosis method to determine the etiology of the bleeding. The leading etiology was gastrointestinal ulcer.

DISCUSSION

From 2014-2019 at “Aleida Fernandez Chardiet” Hospital, the year with more incidence of mortality by upper gastrointestinal bleeding was 2019 with 14 deceased. This patology has a low mortality rate, result that match with a descriptive, retrospective and cross-sectional study that was conducted in «Enrique Cabrera» Hospital from January 2018 to July 2019, to review the clinical cards of the dead patients due to upper digestive bleeding, having as a result 49 decaased of a total of 320 dead patients, because of this patology. (14)

From 2014 to 2019, the months with more incidence of death were January and Jun.

The mortality rate of upper gastrointestinal bleeding, showed that from 2014 to 2017 it was an increase of this pathology, but from 2017 to 2019 it began to decrease, while the incidence rate from 2014 to 2016 increased, in 2017 decreased, in 2018 increased substantially and in 2019 declined sharply.

From April 2018 to April 2019 at “Aleida Fernandez Chardiet” Hospital, the predominant sex was male, with 56 patients and the leading age group was from 61 to 80 years, this result match with a study, with 100 patients with a diagnosis of upper gastrointestinal bleeding at the General University Hospital "Calixto García" in the period of September 2018-September 2019, the higher frequency of upper gastrointestinal bleeding was observed in the study sample in male patients and age over 60 years. (15) It also match with other study of all the patients admitted to the "Joaquín Albarrán" Teaching Clinico-surgical Hospital with a diagnosis of SDA in the period between January 2018 and December 2019 where the group that had the highest representativeness according to the grouping in decades was between 70 and 79 years and the sex of these patients showed a predominance of the male sex. (16)

The most common associated pathologies were High blood pressure and Cirrhosis, this result match with a retrospective, longitudinal and analytical study, with 100 patients with a diagnosis of upper gastrointestinal bleeding at the General University Hospital "Calixto García" in the period of September 2018-September 2019, the most frequent personal antecedents were alcohol consumption and High blood pressure. (15) It also match with other study of all the patients admitted to the "Joaquín Albarrán" Teaching Clinico-surgical

Hospital with a diagnosis of SDA in the period between January 2018 and December 2019 where The highest incidence is observed in hypertension (HT). [16]

Only 28 patients had endoscopy, therefore, we should encourage the implement of endoscopy as a diagnosis method to determine the etiology of the bleeding. The leading etiology of the bleeding was the gastrointestinal ulcer; this result match with the study, with 100 patients with a diagnosis of upper gastrointestinal bleeding at the General University Hospital "Calixto García" in the period of September 2018-September 2019, the most frequent etiology was peptic ulcer. [15] It also match with other study of all the patients admitted to the "Joaquín Albarrán" Teaching Clinico-surgical Hospital where the peptic ulcer had a high incidence. [16]

The principal causes of upper gastrointestinal bleeding are esophagitis, gastrointestinal ulcer and esophageal varices.

The esophagitis is a condition in which the lining of the esophagus becomes swollen, inflamed, or irritated. The esophagus is the tube that goes from the mouth to the stomach. It is also known as a feeding tube. Esophagitis is often caused by the reflux of fluid from the stomach into the esophagus. The liquid contains acid, which irritates the tissue. This problem is called gastroesophageal reflux (GERD). An autoimmune disorder called eosinophilic esophagitis also causes this condition. The following factors increase the risk for this condition: Alcohol consumption, cigarette smoking, surgery or radiation to the chest (for example, treatment for lung cancer), take certain medications, such as alendronate, doxycycline, ibandronate, risedronate, tetracycline, potassium and vitamin C pills, without drinking a lot of water, barf, go to bed after consuming large meals. [17]

Esophageal varices are abnormal, enlarged veins in the tube that connects the throat and stomach (esophagus). This condition occurs most often in people with serious liver diseases. Esophageal varices develop when normal blood flow to the liver is blocked by a clot or scar tissue in the liver. To go around the blockages, blood flows into smaller blood vessels that are not designed to carry large volumes of blood. The vessels can leak blood or even rupture, causing life-threatening bleeding. Esophageal varices sometimes form when blood flow to your liver is blocked, most often by scar tissue in the liver caused by liver disease. Causes of esophageal varices include: Severe liver scarring (cirrhosis). A number of liver diseases including hepatitis infection, alcoholic liver disease, fatty liver disease and a bile duct disorder called primary biliary cirrhosis can result in cirrhosis**,** blood clot (thrombosis). A blood clot in the portal vein or in a vein that feeds into the portal vein (splenic vein) can cause esophageal varices, parasitic infection. Schistosomiasis is a parasitic infection found in parts of Africa, South America, the Caribbean, the Middle East and East Asia. The parasite can damage the liver, as well as the lungs, intestine, bladder and other organs. [18]

A gastroduodenal ulcer is a circular or oval sore that appears at the place where the gastric or duodenal mucosa has been eroded by the action of stomach acid and digestive juices. Gastroduodenal ulcers can be caused by infection with the Helicobacter pylori bacteria or by the use of drugs that weaken the gastric or duodenal mucosa. The discomfort caused by ulcers comes and goes, and tends to appear after meals because acid is produced in the stomach after eating. The diagnosis of gastroduodenal ulcer is based on the symptoms of stomach pain and the results of the examination of the stomach with a flexible visualization probe (upper endoscopy). Antacids and other drugs are given to reduce gastric acid and antibiotics to kill Helicobacter pylori bacteria. The ulcer penetrates the mucosa of the stomach or duodenum (the first part of the small intestine). Ulcers can range in size from several millimeters to several centimeters. Ulcers can appear at any age, even in early and second childhood, but are more common in middle-aged adults. The names given to specific ulcers identify their anatomical location or the circumstances under which they develop. The duodenal ulcers, the most common type of peptic ulcer, occur in the first few centimeters of the duodenum. The gastric (stomach) ulcers are less frequent and usually are at the bottom of the stomach. (19)

CONCLUSIONS

- The year with more incidence of mortality was 2019 and the months with more incidence of death were January and Jun.
- The mortality rate of upper gastrointestinal bleeding, showed that from 2014 to 2017 it was an increase of this pathology, but from 2017 to 2019 it began to decrease, while the incidence rate from 2014 to 2016 increased, in 2017 decreased, in 2018 increased substantially and in 2019 declined sharply.
- From April 2018 to April 2019, the predominant sex was male and the leading age group was from 61 to 80 years.
- The most common associated pathologies were High blood pressure and Cirrhosis.
- There was no endoscopic confirmation in more than half of the cases of upper gastrointestinal bleeding
- The leading etiology of the bleeding was the gastrointestinal ulcer.

BIBLIOGRAPHICAL REFERENCES

1-BMJ 2018; 363 doi: https://doi.org/10.1136/bmj.k4023 (Published 25 October 2018) Cite this as: BMJ 2018; 363:k4023

2- Yavorski RT, Wong RKH, Maydonovitch C et al. Analysis of 3294 cases of upper gastrointestinal bleeding in military medical facilities. Am J Gastroenterol 1995; 90 (4): 568-573.

3- Kemp WL, Burns DK, Brown TG. Kemp W.L., Burns D.K., Brown T.G. Eds. Walter L. Kemp, et al.eds. Pathology: The Big Picture New York, NY: McGraw-Hill; 2008. Chapter 14. Gastrointestinal Pathology

http://accessmedicine.mhmedical.com/content.aspx?bookid=499&sectionid=41568297. Accessed May 22, 2019

4- Straube, S; Tramèr, Martin R; Moore, R. Andrew; Sheena Derry, Henry J. McQuay.Disclosures, BMC Gastroenterol .Mortality With Upper Gastrointestinal Bleeding and Perforation: Effects of Time and NSAID Use

5-Jameson JL, et al., eds. 20th Ed. New York, N.Y.: The McGraw-Hill Companies; 2018. Gastrointestinal bleeding. Harrison's Principles of Internal Medicine. https://accessmedicine.mhmedical.com. Accessed Aug. 28, 2018.

6-Overview of GI bleeding. Merck Manual Professional Version. https://www.merckmanuals.com/professional/gastrointestinal-disorders/gi-bleeding/overview-of-gi-bleeding. Accessed Aug. 28, 2018.

7-Strate L, et al. ACG clinical guidelines: Management of patients with acute upper gastrointestinal bleeding. American Journal of Gastroenterology. 2016; 111:459.

8-Definitions and facts of GI bleeding. National Institute of Diabetes and Digestive and Kidney Diseases. https://www.niddk.nih.gov/health-information/digestive-diseases/gastrointestinal-bleeding/. Accessed Aug. 23, 2018.

9-Saltzman JR. Approach to acute upper gastrointestinal bleeding in adults. https://www.uptodate.com/contents/search. Accessed Aug. 23, 2018.

10-Small bowel bleeding. American College of Gastroenterology. http://patients.gi.org/topics/small-bowel-bleeding/. Accessed Aug. 23, 2018.

11- Cappell MS, Friedel D. Med Clin North Am. Initial management of acute upper gastrointestinal bleeding: from initial evaluation up to gastrointestinal endoscopy. 2008; 92:491. [PubMed] [Google Scholar]

12- Doherty GM. USA: McGraw-Hill Companies; 2010. Current Diagnosis and Treatment: Surgery, 13th Ed; p. 0. [Google Scholar]

13- Epidemiology of hospitalization for acute upper gastrointestinal hemorrhage: a population-based study. Longstreth GF. https://www.ncbi.nlm.nih.gov/pubmed/7847286. Am J Gastroenterol. 1995; 90:206. [PubMed] [Google Scholar]

14- Cruz Alonso, Juan Ramón; Anaya González, Jorge Luís.Mortality from upper digestive bleeding in «Enrique Cabrera» Hospital. Rev Cubana Cir v.47 no.4 City of Havana Sep.-Dec. 2019 Cuban Journal of Surgery, printed version ISSN 0034-7493 On-line version ISSN 1561-2945.

15- Rodríguez Hernández, lyemai .Instructor Professor of the ISCM-H: FAC. Girón victory. Cuba. Risk factors that increase morbi-mortality in gastrointestinal bleeding. Rev Cubana Cir v.47 no.4 City of Havana Sep 2018.-Sep 2019 printed version ISSN 0034-7493 On-line version ISSN 1561-2945.

16- Le'Clerc Nicolás, Jean. Degree Specialist in General Surgery. Master in Medical Emergencies in Primary Care. Instructor. "Joaquín Albarrán" Clinico-surgical Teaching Hospital. Havana Cuba. Cuban Journal of Surgery. Rev Cubana Cir v.49 n.2 Havana City Apr.-Jun. 2019 printed version ISSN 0034-7493 On-line version ISSN 1561-2945

17- Richter JE, Friedenberg FK. Gastroesophageal reflux disease. In: Feldman M, Friedman LS, Brandt LJ, eds. Sleisenger and Fordtran's Gastrointestinal and Liver Disease: Pathophysiology/Diagnosis/Management. 10th ed. Philadelphia, PA:ElsevierSaunders;2016:chap44.medlineplus.gov/spanish/ency/article/001153.htm

18- Graman PS. Esophagitis. In: Bennett JE, Dolin R, Blaser MJ, eds. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases, Updated Edition. 8th ed. Philadelphia, PA: Elsevier Saunders; 2015: chap 99. medlineplus.gov/spanish/ency/article/001253.htm.

19- Vakil, Nimish, MD, University of Wisconsin School of Medicine and Public Health. Gastroduodenal ulcer. Last complete revision Jul. 2018

ANNEXES

ANNEXE 1

Compiler spreadsheet

Age: --------- Sex: M------ F--------

Associated Pathologies: ----------

Etiology by endoscopy: ----------

ANNEXE 2

Table 2: Mortality and Incidence Rate of Upper Gastrointestinal Bleeding at "Aleida Fernandez Chardiet" Hospital from 2014 to 2019.

Year	Specific Mortality Rate	Incidence Rate
2014	1	9
2015	3	9
2016	4	8
2017	4	7
2018	4	10
2019	4	6

Source: Statistics Department.

ANNEXE 3

Table 4: Patients with Upper Gastrointestinal Bleeding at "Aleida Fernandez Chardiet" Hospital from April 2018 to April 2019 by age groups.

AGE	FREQUENCY	%
20 to 40 years	5	6
41 to 60 years	23	28
61 to 80 years	34	40
More than 81 years	22	26
Total	**84**	**100**

Source: Medical Records of patients.