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Management of Emergencies in the Hepato-Gastro-Enterology Department of the Kara University Hospital

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ABSTRACT

Introduction: Emergency care in hepato-gastroenterology (HGE) at CHU-Kara is expanding. Objective: To assess the management of emergencies in the general hospital ward at CHU-Kara. Materials and methods: This was a retrospective study of patient records from 1 January 2023 to 30 June 2024. It ran from July 1 to September 31, 2024. Results: 170 emergencies were identified, with a hospital frequency of 20.90% and a sex ratio of 1.6. The average age was 49 years. Digestive haemorrhage was the leading emergency (69.41%), dominated by ruptured oesophageal varices (RVO), followed by peptic ulcers. Other emergencies were hepatic encephalopathy (12.94%), acute abdominal pain (11.77%), ingestion of caustic products (2.94%) and chronic vomiting (2.94%). All patients had undergone an initial assessment combined with non-specific resuscitation. All patients had not undergone aetiological investigation. Vasoactive drugs in the splanchnic territory were not available. In addition to secondary prevention of RVR, their management was based on the administration of non-cardioselective beta-blockers used alone. The course of treatment was marked by a high mortality rate of 31.76%, due to the delay in consultation, the severity of the life-threatening condition, the patients' lack of financial resources, the absence of health insurance and the inadequacy of the technical facilities. Conclusion: Emergencies in the Emergency Department are frequent at CHU-Kara; they are dominated by upper digestive haemorrhage, which is life-threatening.

Keywords: Emergency, hepato-gastroenterology, CHU-Kara.

INTRODUCTION

Health services are regularly faced with situations requiring emergency treatment [1]. These situations include hepato-gastroenterology (HGE) emergencies, which can have fatal consequences for patients. Hepato-gastroenterology, which specialises in pathologies arising from multiple organs (digestive tract, liver, bile ducts and pancreas), deals with a wide variety of emergencies on a daily basis [2].

In France, digestive haemorrhage is the number one emergency in hepato-gastroenterology [2]. It accounts for approximately 80 to 140 cases per 100,000 inhabitants per year, and is a frequent and serious pathology, responsible for a significant clinical and economic burden, and constitutes an absolute emergency [2]. Other emergencies include ingestion of foreign bodies; ingestion of caustic products, which affects around 15,000 people a year in France; digestive obstruction; acute angiocholitis; and digestive ischaemia and infarction, which affects more than 10,000 people a year in France, with an increasing incidence [2].

These emergencies require immediate action and hospitalisation, usually in a hepato-gastroenterology unit, after a possible stay in an intensive care unit or medical or surgical intensive care unit [3]. Emergencies require a rapid, targeted diagnosis, and interdisciplinary decisions are sometimes necessary. Around the world, the management of different emergencies is well codified [4].

In Togo, a tropical country with limited resources and only two hepato-gastroenterology departments to date, a study on the management of hepato-gastroenterology emergencies carried out in 2004 at the university hospital (CHU) campus in Lomé, in the southern part of the country, identified five emergencies: digestive haemorrhage was the most frequent, followed by hyperalgesic abdominal pain syndrome, vomiting and accidental ingestions of caustics [5].

The management of hepato-gastroenterology emergencies at the CHU-Kara, in the northern part of Togo, is expanding. In order to evaluate this, this study was initiated with the general objective of describing the management of emergencies in this department and specifically to: identify the different emergencies; determine their hospital frequency; describe the diagnostic and therapeutic management of the different emergencies; report the evolution of the patients treated.

MATERIALS AND METHODS

Study Framework

The study took place in the hepato-gastroenterology department of CHU-Kara, 420 km from Lomé. It covers an area of 8,713 hectares with an estimated population of 98,512 (2022). It serves as a reference facility for the northern part of Togo (covering 36% of the population).

The CHU-Kara has medical-technical services grouped into departments:

- Department of Medicine and medical specialities (internal medicine, emergency medicine, neurology, cardiology, rheumatology, dermatology, hepato-gastro-enterology, pneumology, psychiatry, addictionology, anaesthesia, nephrology, medical imaging); Department of Surgery and surgical specialities; Department of Gynaecology and obstetrics; Department of Paediatrics; Department of Laboratory and medical biology; Hospital Pharmacy Department.
- Hepato-gastro-enterology department, CHU-Kara

The HGE department at CHU-Kara employed: two hepato-gastro-enterologists, one of whom was a senior assistant and head of the department and the other an assistant head of clinic; two state-qualified nurses. One secretary.

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The department included hospital wards shared with the other specialties in the Department of Medicine; two medical consultation rooms; and a digestive endoscopy unit.

The activities carried out included: medical visits to in-patients; medical consultations; diagnostic endoscopic examinations (oesophago-duodenal fibroscopy, total colonoscopy, anorectoscopy); medical procedures and nursing care; student supervision (medical and paramedical students).

Medical consultations were held every working day, with a daily medical check-up and a weekly digestive endoscopy (every Wednesday).

The on-call service was provided by an intern for the entire medical department, together with a senior member of staff and, where necessary, specialists.

Study Materials and Method

Type and Period of Study:

This was a descriptive, retrospective, cross-sectional study conducted on patient records from January 1, 2023 to June 30, 2024 during the study period from July 1 to September 31, 2024.

Study Population

Inclusion Criteria:

All medical records of patients hospitalised in the HGE department of CHU-Kara for an emergency between 1 January 2023 and 30 June 2024 were included in the study.

Non-inclusion Criteria:

The study did not include the medical records of patients treated in the department on an outpatient basis or the records of patients hospitalised in the department for non-emergency reasons.

Exclusion Criteria:

All medical records of patients hospitalised for emergencies but who could not be analysed were excluded from this study.

Data Collection:

Collection Methods

Patient registers, patient records, treatment sheets and data support sheets were the means used for data collection.

Collection Procedure

We asked the ward supervisor about human and material resources and work organisation.
We have listed the epidemiological, clinical and diagnostic data, the treatments received and the complications.

Variables Studied

- Quantitative variables: number of patients, age (in years), quantity of product ingested (in ml), temperature (in °C), quantity of blood transfused (in ml), haemoglobin level (in g/dl), time taken to carry out examinations (in days).

- Qualitative variables: sex, origin, history/comorbidities, lifestyle, reason for admission, mode of onset of symptoms, mode of progression of symptoms, nature of product ingested, impact on haemodynamic status, nature of abdominal pain, vitals: BP, pulse, respiratory rate, peripheral oxygen saturation (SpO2), existence of a syndrome, diagnosis, type of treatment, paraclinical examination, evolution.

Data Processing:
An electronic Google Forms form available at https://forms.gle/vUR9tkyVCcxkpbZn6 was used to collect data from the department's medical files and registers. Data entry, processing and analysis of data, figures and tables were carried out using Microsoft Office Word 2013, Microsoft Office Excel 2013, Epi-Info 7.2.6.0.

Ethical Considerations:
During our study, we respected patient anonymity on the survey form and ensured data confidentiality.

Administrative Authorization:
Before carrying out this study, we first obtained authorisation for data collection from the management of the CHU-Kara.

RESULTS

Epidemiological Data

Frequency:
A total of 170 emergency cases were recorded out of 812 hospitalised patients, representing a frequency of 20.93%.

Sex:
Of the 170 patients, 106 were male (62.35%) and 64 female (37.65%), giving a sex ratio of 1.65.

Age:
The mean age was 49.0 ± 16.4 years, with extremes of 15 and 110 years.

Source:
Patients from the Kara region represented (59) 34.70% and those from other localities outside the Kara region represented (111) 65.30%.

Comorbidities:
Table 1 shows the various comorbidities, dominated by chronic viral hepatitis (18.82%).

Table 1: Distribution of comorbidities among patients.

	Workforce	Percentage
Chronic viral hepatitis	32	18,82
Cirrhosis	28	16,47
Diabetes	5	02,94
HIV/AIDS	5	02,94
HTA	5	02,94
Haemorrhoidal disease	1	00,59

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Sickle cell disease	1	00,59
Bipolar disorder	1	00,59
Total	78	45,88

Comorbidity accounted for 45.88%.

Emergency Profile

Five types of emergency were recorded: digestive haemorrhage 118 cases (69.41%); hepatic encephalopathy 22 cases (12.94%); acute abdominal pain 20 cases (11.77%); caustic ingestion 5 cases (2.94%) and vomiting 5 cases (2.94%)

Digestive Haemorrhage:

The different ways in which haemorrhage is revealed are summarised in table 2. Haematemesis associated with melena accounted for 45.77% of emergencies, followed by haematemesis alone (23.73%) and melena alone (12.71%).

Table 2: Ways in which digestive haemorrhage is revealed

	Workforce	Percentage
Haematemesis and melena	54	45,77
Haematemesis	28	23,73
Méléna	15	12,71
Rectorrhagia	11	9,32
Haematemesis and rectal bleeding	7	5,93
Anemia (occult bleeding)	3	2,54
Total	118	100

NB. HDH was difficult to specify because many patients had not undergone endoscopy before death or discharge from hospital.

Vomiting:

There were 5 cases of vomiting (2.94% of emergencies): 2 food-related and 3 fetid.

Caustic Ingestions:

They accounted for 2.94% of emergencies (5 cases), with 3 deliberate and 2 accidental.

Acute Abdominal Pain:

They accounted for 11.77% of emergencies, with a sudden onset in 6 cases and a progressive onset in 14 cases.

Hepatic Encephalopathy:

The 22 cases (12.94%) of hepatic encephalopathy were 4 stage 2, 6 stage 3 and 12 West Haven stage 4

Patient Management

Data from The Initial Assessment:

Digestive Haemorrhage:

Table 3 shows the initial signs associated with haemorrhage.

Of the 118 patients with digestive haemorrhage, 44 (37.30%) were in shock. Other signs of impact on haemodynamic status are shown in this table.

Table 3: Signs of haemodynamic damage

	Workforce	Percentage
Asthenia	86	72,80
Tachycardia (pulse > 100/min)	64	54,20
Polypnoea (FR > 20 cycles/min)	45	38,10
Hypotension (PAS < 90 mmHg)	44	37,30
Thirst	33	28,00
Dizziness	32	27,10
SpO2 < 90	17	14,40
Cold ends	11	9,30
Profuse sweating	10	8,50
Impaired consciousness	10	8,50

Emergency biological examinations were carried out: haemogram (CBC) (100%); blood grouping (100%); renal assessment (89%) and blood ionogram (66.90%). The mean haemoglobin level was 7.0 ± 3.2 g/dl, with extremes of 1.2 g/dl and 17.7 g/dl. Of the 105 patients who underwent renal assessment, 24.8% had renal failure. Of the 79 patients who had a blood ionogram, 19.0% had hyponatraemia and 6.3% hypokalaemia. The ionogram was normal in 74.7% of patients.

Vomiting:

One of the 5 patients had signs of dehydration and arterial hypotension (PAS < 90 mmHg). Two (2) patients showed signs of undernutrition with a body mass index of 14.4 and 15.8 kg/m^2 respectively. Nutritional status was not assessed in 3 patients. None of the patients admitted for vomiting had an occlusive syndrome. A minimum biological work-up was carried out as an emergency under the following conditions: CBC (4 cases), renal work-up (4 cases) and blood ionogram (3 cases) Of the patients who had a CBC, 1 had an elevated haematocrit. CBC was normal in 75%. Renal function tests were normal in 75% of cases, with 1 case of renal failure. For every 3 blood ionograms performed, there was 1 case of hyponatremia.

Ingestion of Caustic Products:

Ingestion was accidental in 2 patients and voluntary in 3. The quantity ingested was assessed in all patients and was 24 ± 15.5 ml, with extremes of 10 ml and 50 ml. Of the 5 patients, 1 presented with a sign of severity within 24 hours of admission: haematemesis with an impact on haemodynamics and a haemoglobin level of 4.6 g/dl. The caustic ingested was 50 ml caustic soda. Associated signs included abdominal pain (3 cases), hypersialorrhoea (3 cases), odynophagia (2 cases) and dysphagia (2 cases)

Acute Abdominal Pain:

Of the 20 patients admitted with abdominal pain, onset was abrupt in 6 patients and progressive in 14, with 60% experiencing moderate pain and 40% severe pain.

Hepatic Encephalopathy:

Table 4 shows the factors triggering hepatic encephalopathy.

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Table 4: Distribution of patients according to factors triggering hepatic encephalopathy.

	Workforce	Percentage
Renal insufficiency	12	54,50
Taking infusions	12	54,50
Hyponatremia	8	36,40
Sepsis	7	31,80
Carcinomatous degeneration	4	18,20
Upper gastrointestinal haemorrhage	3	13,60
Diarrhoea	2	9,10

NB. There were combinations of two or three triggers in the same patient.

Resuscitation Data:

Table 5 summarises the non-specific resuscitation undertaken in all patients.

Table 5: Non-specific resuscitation measures according to type of emergency

	Digestive haemorrhage	Vomiting	Ingestion of caustic product	Acute abdominal pain	Hepatic encephalopathy	Total
Venous route	118 (100%)	5 (100%)	5 (100%)	20 (100%)	22 (100%)	170 (100%)
Diet	118 (100%)	5 (100%)	4 (80%)	1 (5%)	3 (13,6%)	131 (77,1%)
Transfusion	86 (72,9%)	0	1 (20%)	0	2 (9,1%)	89 (52,4%)
Oxygen therapy	12 (10,2%)	0	0	0	9 (40,9%)	21 (12,4%)
SNG **	20 (16,9%)	1 (20%)	0	0	9 (40,9%)	30 (17,6%)
bladder sampling	3 (2,5%)	0	0	0	4 (18,2%)	7 (4,1%)
Gastric lavage	20 (16,9%)	1 (20%)	0	0	0	21 (12,4%)
Filling	26 (22%)	5 (100%)	5 (100%)	11 (55%)	12 (54,5%)	55 (32,4%)
Noradrenaline	1 (0,8%)	0	0	0	1 (4,5%)	2 (1,2%)
Analgesia	0	0	2 (40%)	20 (100%)	0	22 (12,9%)
Antibiotic therapy	0	0	0	0	10 (45,5%)	10 (5,9%)
Laxatives (lactulose)	0	0	0	0	22 (100%)	22 (12,9%)

The mean amount of blood transfused was 536 ± 285 ml, with extremes of 250 ml and 1750 ml. The labile blood product transfused was exclusively red blood cells. *=blood transfusion **=nasogastric tube

Aetiological Data:

Digestive Haemorrhage:

Table 6 summarises the data from the clinical examination of haemorrhages.

Table 6: Distribution of patients according to clinical examination data

	Workforce	Percentage
Haematemesis and/or melena		
Chronic epigastric pain	56	47,5
Chronic use of NSAIDs *	54	45,8
Chronic alcoholism	53	44,9
Known cirrhosis	15	12,7
Signs of portal hypertension	15	12,7
Food vomiting preceding digestive haemorrhage	3	2,5
Rectorrhagia		
Abdominal pain	6	54,5
Proctalgia	1	9
Fever	1	9
Taking NSAIDs	5	45,5
Chronic alcoholism	6	54,5
Weight loss	1	9
Smoking	2	18,2

*= non-steroidal anti-inflammatory drug

Vomiting:

Two patients had an unstrangulated linea alba hernia, 2 patients had a history of chronic epigastric pain and 1 patient had a fever.

Abdominal Pain:

Abdominal pain was not associated with intestinal obstruction or peritonitis.

Ingestion of Caustic Products:

It included 1 case of acid (HCl) and 4 cases of base (1 cement + 3 caustic soda) and a bipolar disorder.

Hepatic Encephalopathies:

Of the 22 patients with encephalopathy, 10 (45.5%) had known cirrhosis, all of them presenting with hepatocellular insufficiency and their precipitating factors (table 4).

Paraclinical Examinations:

- oesogastroduodenal **fibroscopy** (FOGD): performed in 70 patients (41.20%); total colonoscopy: 3 patients (1.80%); anorectoscopy in 1 patient (0.60%);
- abdominal ultrasound in 43 patients (25.30%);
- abdominal **computed tomography** (CT): in 3 patients;
- radiography of the abdomen without preparation (ASP) in 2 patients;
- alpa fœto-protein (AFP) assay was performed in 4 patients.
- Cytological **examination** of ascites fluid: was carried out in 1 patient;
- Anatomopathological **examination** of gastric biopsy specimens was requested in 7 patients, with a lesion in 6 cases.

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Etiologies:

Digestive Haemorrhage

Table 7 shows the main causes of digestive haemorrhage.

Table 7: Causes of digestive haemorrhage

	Workforce	Percentage
Upper gastrointestinal haemorrhage		
Ruptured oesophageal varices	29	41,43
Duodenal ulcers	12	17,14
Gastric ulcers	11	15,71
Haemorrhagic gastritis	11	15,71
Haemorrhagic bulbitis	7	10,00
Gastric tumours	2	2,90
Mallory-Weiss syndrome	1	1,40
Mycotic oesophagitis	1	1,40
Peptic oesophagitis	1	1,40
Gastric angiodysplasia	1	1,40
Normal examination	5	7,14
Lower digestive haemorrhage		
Haemorrhagic diverticulosis of the colon	2	50,00
Bleeding internal and external haemorrhoids	1	25,00
No lesions	1	25,00

NB. There are associations of two or three endoscopic lesions in the same patient.

Not all patients had undergone digestive endoscopy: fibroscopy (70), colonoscopy (3).

Chronic Vomiting

Table 8 shows the four causes of chronic vomiting.

Table 8: Causes of chronic vomiting

	Workforce	Total
Tumours of the cardia	2	2
Tumour of the gastric antrum	1	1
Mycotic oesophagitis	1	1
No lesions	1	1

There were 4 cases of lesions out of 5.

Acute Abdominal Pain

Table 9 shows some of the main causes of acute abdominal pain.

Table 9: Causes of acute abdominal pain

	Workforce	Total
Hepatocellular carcinoma (HCC)	3	3
Duodenal ulcer	2	2
Pancreatic cancer	1	1
Gastritis	2	2
Infection of ascites fluid	1	1

No lesions	11	11

There were 9 cases of lesions out of 20.

Ingestion of Caustic Products

The lesions in cases of ingestion of caustic products were:

- Caustic oesophagitis stage IIIb with Zargar stage IIIa fundic gastropathy in 1 patient;
- partial caustic stenosis of the oesophagus in 1 patient;
- no lesion in 1 patient;
- FOGD was not performed in 2 patients.

Hepatic Encephalopathy (HE)

Hepatic encephalopathy (HE) was dependent on cirrhosis with the precipitating factors in Table 4.

Specific Treatments:

Ruptured Oesophageal Varices:

One ligation out of 29 oesophageal varices (OV) + 18 out of 29 on Carvedilol + 9 patients on Propranolol (beta blockers) + 2 without beta blockers. All patients had received antibiotic prophylaxis (ceftriaxone). Prevention of hepatic encephalopathy using lactulose. Omeprazole by direct intravenous injection (IVD) if epigastric pain or active bleeding.

Peptic Ulcer Disease (PUD):

For the 25 patients with gastric and/or duodenal ulcers:

- 17 were on quadruple therapy + eradication of Helicobacter Pylori and 8 were on triple therapy.
- All gastritis and/or bulbitis patients had received quadritherapy.
- The patient who presented with Mallory-Weiss syndrome had received anti-emetic treatment with Metopromazine and Pantoprazole.
- The 2 patients with mycotic oesophagitis had received Fluconazole 200 mg/24h orally for 21 days.

Tumours:

No specific treatment for gastric angiodysplasia or colonic diverticulosis. The 2 patients with haemorrhagic gastric neoplasia had received symptomatic treatment. The 2 patients with tumours of the gastric antrum were transferred to general surgery. The patient with the cardiac tumour with metastases (liver, lung) had received palliative medical treatment.

Patients with hepatocellular carcinoma (HCC) or pancreatic head cancer had benefited from palliative care. Cholestyramine was used for pruritus in patients with pancreatic head cancer.
Zargar stage IIIb caustic oesophagitis with stage IIIa fundic gastropathy was transferred to general surgery. The caustic stenosis had been treated medically and then transferred to surgery.

Other Specific Treatments:

Infection of the ascites fluid was treated by IV administration of ceftriaxone 2g/24h, followed by oral administration.

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Supportive psychotherapy was given to all patients who had ingested caustic. All hepatic encephalopathies had benefited from treatment with lactulose, coupled with treatment of the triggering factor in 20 patients (90.90%). Treatment of renal failure was volume expansion with 0.9% INS + gelatins (Plasmion, Gelofusine) or blood, regardless of the stage of renal failure.

Evolution

Of 170 emergencies admitted and managed in the department, short-term outcomes were good in 106 patients (62.40%), 102 of whom (60%) were discharged for outpatient follow-up and 04 were transferred to general surgery.

Complications:

Fifty-four (54) deaths were recorded in the department (31.76%), including 28 cases of digestive haemorrhage with haemorrhagic shock (51.85%); 20 patients (37.04%) of hepatic encephalopathy; 5 patients (9.26%) of acute abdominal pain, and 1 patient (1.85%) for deliberate ingestion of caustic soda, haematemesis of great abundance with haemodynamic repercussions.

Factors Related to Death

Of the 54 deaths, 24 (44.44%) had at least one comorbidity. Of the patients who died of HD, 4 had diabetes, 4 were HIV positive, 1 had sickle cell disease and 10 had hypertension. Of the patients who died from EH, 1 was diabetic, 1 was HIV positive and 3 had hypertension.

Period of Death:

Table 10 shows the period of death during hospitalisation.

Table 10: Breakdown of deaths during hospitalization

	Workforce	percentage
<24 hours	20	37,04
24-72 hours	22	40,74
4-7 days	6	11,11
8-14 days	6	11,11

DISCUSSION

Methodology

This retrospective study on the management of hepato-gastroenterological emergencies at the CHU-Kara is limited by the number of patients discharged against medical advice, which was two. This has little influence on the total number of patients. It was a well-representative sample of the department's activity during the period.

Epidemiological Data

Number of Patients:

The number of emergencies recorded was 170, representing a frequency in the hepato-gastroenterology department of 20.9%. The higher number of emergencies in our series could be explained by the longer duration of the study. This was higher than the 65 reported by Djibril et al [5] in Lomé over 12 months, or 9.44% per month in our setting, compared with 5.41% per month for Djibril [5] 20 years ago. Emergencies account for more than a fifth of activity, and are a major concern. Better organisation is needed to reduce the consequences of these

emergencies. An intensive care unit should also be set up in the department of medicine and medical specialities to improve emergency management. The high number of emergencies reflects the fact that CHU-Kara is a referral centre for the hepato-gastroenterology department.

Age of Patients

The average age of the patients in our series was 49 years, with extremes of 15 and 110 years. The rest of the children were treated in paediatrics. This average age is similar to that reported by Djibril et al [5] of 42 years. Digestive haemorrhage is one of the most frequent emergencies, generally occurring in adults with risk factors. According to Pateron D, Pourriat J-L [6], the median age at onset of haemorrhage varies from 61 to 71 years depending on the study. Most acute non-traumatic digestive haemorrhages in adults originate in the upper digestive tract. It is important to make these people aware of the risk of exposure to the various most common medicinal factors (table 6).

Gender of Patients

The sex ratio was 1.65. This is linked to the fact that men were more exposed to risk factors, especially alcohol and non-steroidal anti-inflammatory drugs (table 6). According to Pateron D, Pourriat J-L [6], the sex ratio varies from 1.35 to 1.79, with the risk being higher in men.

Origin of Patients

The number of patients (111) from outside the Kara region was almost double (65.3%) that of those living in the Kara region, with 59 patients (34.7%). This is reflected in the fact that there is no hepato-gastroenterology service in the other towns in the northern region of Togo. This explains why most patients do not anticipate emergencies by seeking specialist advice as soon as alarm symptoms appear. This is contrary to what is done elsewhere, according to Piton G et al [4].

Different Types of Emergency

In our series, 5 types of emergency were recorded in descending order: digestive haemorrhage (table 2), hepatic encephalopathy, acute abdominal pain, ingestion of caustic products and vomiting. Digestive haemorrhage was the leading emergency, with a prevalence of 69.41% (table 2). Djibril et al [5] reported 4 types of emergency: digestive haemorrhage, hyperalgesic abdominal pain syndrome with vomiting and ingestion of caustic products without hepatic encephalopathy. The prevalence of HD in our study is similar to the study by Djibril et al [5] with 67.69% and similar to the data in the literature worldwide according to Corcos O [2]. For Bagny A al [7] upper gastrointestinal bleeding at the CHU Campus de Lomé in 2021 had a hospital frequency of 6.58%.

Recorded hepatic encephalopathy was the second most common emergency, with a prevalence of 12.94% linked to several triggering factors (Table 4). The prevalence of clinical HE concerns 30 to 45% of cirrhotic patients, with an incidence of 20% per year according to Thabut D [8]. Ditisheim S and Spahr L [9] recognised the same triggers in their study.

The prevalence of abdominal pain was 11.76%, of which 9 cases had aetiologies that were investigated (table 9). Djibril et al [5] reported a prevalence of 29.23% higher than ours, and Kpossou et al [10] reported a prevalence of 7.38% in 2024 in Benin.

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The prevalence of caustic ingestions in our series is similar (2.94%) to that of Djibril et al [5] with 3.07%. Caustic ingestion in France concerned 15,000 people per year according to Corcos O [2]. It accounts for 3.5% of hospital admissions according to Grozier F, Célérier M. [11] in Morocco, which is similar to our results. Voluntary ingestion for suicidal purposes predominated (60%) over accidental ingestion. Accidental ingestion was predominant in the series by Bencheikh et al (78.7%) [12] and 80% non-voluntary according to Joseph E et al [13]. This may reflect in part the social burden in our populations. In our series, 1 patient had a pre-existing psychiatric illness.

Comorbidities

They were represented by chronic viral hepatitis 18.82%, cirrhosis 16.47%, hypertension, diabetes and HIV/AIDS 2.94% each and bipolar disorder, sickle cell anaemia and haemorrhoidal disease 1 case each (table 1). The latter had a negative impact on the management of emergencies, particularly in terms of infection, haemodynamics and anaemia, as well as decompensation. Comorbidities were aggravating factors and would have explained the high mortality. A prospective study could provide further support.

Patient Management

Evaluation:

For HD, 44 cases (37.3%) in shock (table 3) had benefited from the recommendations of Barkun, Farrell and Osman respectively [14,15,16]. The frequency of haemorrhage was higher than that of Djibril et al [5] (23.1%) with severe anaemia (mean haemoglobin level was 7.0 ± 3.2 g/dl) see biological examinations in table 3. Vomiting led to dehydration in 1 patient and malnutrition in 2.

Biological evaluation revealed 1 case of renal failure, hyponatremia and elevated haematocrit. This approach followed the recommendations of Richecoeur M et al [17]. Not all patients had undergone the minimum work-up mentioned above because of financial insufficiency. Nutritional status was not systematically assessed in all patients. These situations contributed to an underestimation of the data described. Taking nutritional status into account was important and should contribute to the clinical improvement of the patient.

Acute abdominal pain was predominantly progressive (70%) and of moderate intensity in 60% and intense in 40% of patients. No patient had an associated occlusive syndrome or peritoneal irritation. In the series by Djibril et al [5], hyperalgesic abdominal pain with vomiting was associated with cessation of matter and gas in 4 patients. The main aetiologies of abdominal pain were surgical in the series by Kpossou et al [10] at the CNHU in Cotonou; in our context, the systematic calling of senior doctors in the event of acute abdominal pain, introduced by the emergency department, enabled better triage of patients before their admission to the HGE department and avoided surgical abdominal pain (table 9).

The initial assessment in the event of ingestion of caustic products made it possible to diagnose the type of caustic product ingested, which was mainly caustic soda (3 cases), followed by diluted cement (1 case) and hydrochloric acid (1 case). The predominance of strong bases was similar to that of Chirica M [18], at 55%. A digestive haemorrhagic complication related to the severity of the caustic lesion was found in our series. For Challine et al [19], the predominant complications were pulmonary, accounting for 24% of cases.

Treatment:

All patients admitted to the department for a life-threatening emergency had benefited from non-specific resuscitation measures (table 5) depending on the life-threatening condition in question before the exploratory phase in search of aetiology. This attitude reflects the practitioners' level of knowledge of the notion of life-threatening emergency according to PITON G; Djibril and Osman D [4,5,16]. However, endoscopic procedures for emergency treatment and drugs to reduce circulatory flow in the splanchnic territory in the event of HDH were not available as emergency measures (table 5). This finding reflects the inadequacy of the EHG technical platform at CHU-Kara due to the absence of a hospital pharmacist.

Fewer patients had been investigated for aetiology (73 endoscopies, see table 7). The absence of aetiological investigations in the remaining 64 patients (37.64%) was linked to the early death in intensive care of 29 patients (45.31%), 28 of whom were admitted for HD, and to a lack of financial resources in 35 patients (54.69%). In the study by Djibril et al [5] in Lomé, only 1 patient (1.5%) out of 65 had not undergone an investigation for aetiology because they died during the intensive care phase. This high prevalence of patients not being investigated for lack of financial means in our study reveals the low socio-economic level of the populations of northern Togo. Social conditions are no longer the same as they were 20 years ago in the same country. Resources are becoming more scarce and the population is growing.

RVO was the main cause of upper gastrointestinal haemorrhage (HDH) (see Table 7), accounting for 41.43% in our study, more than bleeding ulcers (32.85%). Only 70 patients had undergone FOGD and 3 colonoscopies; early deaths meant that this investigation could not be carried out, and many patients did not have sufficient financial resources to do so. According to the literature worldwide, peptic ulcer disease (PUD) is the leading cause of HDH, with RVO in second place according to Carcos O [2]. Djibril and Razafimahefa [5,20] in Lomé and Madagascar made the same observations as those in the literature. These studies respectively reported UGD at 64% followed by RVO at 28% according to Djibril [5] and UGD at 40.3% followed by RVO at 6.45% according to Razafimahefa [20]. Compared with the data in the literature, the predominance of RVO was particular in our study. This could be explained by the fact that cirrhotic patients with HD consult more frequently because of the association of other concomitant complaints (abdominal distension, asthenia, etc.) with HD. However, these observations need to be confirmed by a prospective study. According to PITON G et al [4], HDH accounts for 80% of cases and low HD for 20%. Future studies could be prospective in order to better address this aspect.

The search for precipitating factors in cases of HE (table 4) was not exhaustive, but the main factors were identified. Cytology with culture of ascites fluid to look for spontaneous infection of ascites fluid (ISLA) was performed in only 1 patient (4.5%) for abdominal pain with an infectious syndrome. This situation at CHU-Kara was due to the unavailability of the bacteriology laboratory for this examination, which could only be performed in a private laboratory in the town of Sokodé, 87 km from CHU-Kara. This fact contributed to an underestimation of the ISLA, which should have made it possible to assess the prognosis for the triggers of HAE. It was another factor in the inadequacy of the technical facilities.

Renal failure and infusion use (table 4) were the precipitating factors for HE, with a prevalence of 54.50% in both cases. Renal failure is thought to be related to the ingestion of infusions,

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which are often nephrotoxic, and to the natural progression of cirrhosis, which is a factor in hypovolaemia, the condition in which HE occurred.

From a therapeutic point of view, secondary prevention of RVO was almost exclusively drug-based in our work and based on the prescription of beta blockers, apart from one patient who had undergone oesophageal variceal ligation. First-line treatment is based on a combination of lifelong non-cardioselective beta blockers and iterative ligation of VOs until they are eradicated, according to Marika R [21] and the recommendations of Osman D et al [16]. The absence of VO ligation in association with beta blockers in our series was linked to the absence of a ligator in the endoscopy unit of the CHU-Kara, and to the lack of financial means for patients to be treated in the private centre in the town of Kara where ligation was performed.

Of the patients who presented with renal failure as a trigger for HE (table 4), none had received albumin infusion due to financial insufficiency; blood creatinine monitoring was not routinely performed in all patients to assess volume expansion under 0.9% INS and gelatins alone. Eleven out of 12 patients died in hospital with persistent hepatic encephalopathy. This fatality was linked to financial difficulties due to the low socio-economic status of patients in our context compared with the high cost of albumin and the non-existence of health insurance.

As for tumour lesions (tables 7, 8 and 9), treatment was exclusively symptomatic. No oncological or oncosurgical approach was taken. This situation was linked to the non-existence of an oncology or oncosurgery service in Kara and the lack of funding for a referral 420 km away for this type of treatment.

Evolution

Nearly 54 (31.76%) patients died, 37.04% within 24 hours of admission and more than half within 48 hours (table 10), reflecting the delay in consulting a specialist unit. This delay was linked to the remoteness of the CHU-Kara from areas outside the Kara region (65.30% of our series), and general consultations on the periphery in non-specialised units was a factor in the delay in treatment. Mortality in our context was very high, due to delays in consultation and patients' financial inadequacy, whereas according to Corcos O [2] it was between 5 and 14%.
According to Challine A et al [19] in their study of caustic ingestions, there were 34% complications, including 24% pulmonary complications, 11% surgical complications and 8% deaths. This study recognises the value of treating gastroenterological emergencies in specialist settings.

In spite of all these difficulties linked to the inadequacy of the technical platform and limited human resources, delays in consulting the public and financial shortfalls, there was a 68.24% survival rate for all patients admitted to the department for various vital emergencies. This result reflects the self-sacrifice and rigour of the work carried out by the staff of the CHU-Kara EHG department.

CONCLUSION

In our study, life-threatening emergencies in the hepato gastroenterology department of CHU-Kara were, in descending order: digestive haemorrhage, hepatic encephalopathy, acute abdominal pain, ingestions of caustic products and vomiting. They represented a hospital prevalence rate of 20.90%.

The management approach adopted for all emergencies was essentially an initial assessment coupled with non-specific resuscitation measures, a search for the cause and specific treatment. This management mainly concerned adults. It resulted in a mortality rate of 31.76%, linked to serious pathologies, delayed consultation and the financial inadequacy of parents who often had no health insurance.

This approach had shortcomings: in terms of medical and paramedical human resources and equipment (no therapeutic endoscope, no vasoactive drug acting on the splanchnic territory in the event of digestive haemorrhage due to portal hypertension). It would be advisable to strengthen human resources and provide suitable equipment for these vital emergencies, to ensure the best possible care and reduce mortality.

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