INTENSIVE INFUSION THERAPY FOR GASTROINTESTINAL HEMORRHAGE WITH GRADE 3 HEMORRHAGIC SHOCK IN AN EMERGENCY MEDICAL CARE SETTING: A CLINICAL CASE.

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Abstract: *This article presents a clinical case of patient U, suffering from peptic ulcer disease of the ventricle and 12-intestine (hereinafter referred to as "UD", complicated by gastrointestinal bleeding with hemorrhagic shock of the 3rd degree and ODN for a long time. The clinical case describes the results of infusion therapy and oxygen therapy provided to patient U by an ambulance brigade (hereinafter referred to as EMT). The purpose of this clinical case is to attract special attention to this category of patients on the part of ambulance doctors and paramedics, surgeons, anesthesiologists, reanimatologists in order to replenish the volume of circulating blood (hereinafter - CBC) as quickly and correctly as possible in hemorrhagic shock.*
Keywords: *peptic ulcer disease, gastrointestinal bleeding, hemorrhagic shock, infusion therapy, circulating blood volume, oxygen therapy.*

Introduction:

Currently, in the Russian Federation, despite the treatment and preventive measures taken by the Ministry of Health, the number of patients suffering from peptic ulcer disease of the stomach and duodenum continues to grow. According to current data from Rosstat, in 2022, 1211 new cases of peptic ulcer disease will be registered, which is 49.4 cases/100 thousand population, 95% of these cases are in the adult population [4].

IBD is a chronic recurrent disease with alternating periods of exacerbation and remission, characterized by the formation of ulcerative defects in the wall of the 12-intestine and stomach. PJD occurs due to imbalance of two factors: acid-peptic aggression of gastric contents and elements of gastric and 12-intestinal mucosal defenses [5]. A number of complications may appear in patients suffering from long-term ulcer disease, taking anti-ulcer therapy, among which gastrointestinal bleeding is the most dangerous and frequently occurring.

In 39% -55% the cause of bleeding from the gastrointestinal tract is gastric and 12-intestinal ulcers, with sources of bleeding, eroded vessels at the bottom of the ulcer, bleeding edges of the ulcer crater, erosive gastroduodenitis concomitant [2]. Bleeding from ulcers in the GI tract, as a rule, begins suddenly, and have a difuse character. The first clinical sign observed in GI ulcers is the discharge of unchanged or altered blood during vomiting or defecation. Vomiting scarlet (fresh) blood is characteristic of massive, high rate arterial bleeding, it appears 5-7

minutes after the onset of bleeding. If bleeding is not abundant and occurs at a low rate of 1 to 3 hours, before the appearance of vomiting, blood poured into the lumen of the stomach as a result of which under the influence of enzymes of gastric juice and hemoglobin formed hydrochloric acid hematine. As a result, vomiting masses the color of "coffee grounds", and fecal masses black <<color-melena>> [3]. In most cases, patients develop hemorrhagic shock due to profuse bleeding in the GI tract. Hemorrhagic shock is a pathologic condition occurring against the background of massive blood loss of one or more than 10% of circulating blood volume accompanied by multiorgan failure [4]. Clinical manifestations of hemorrhagic shock are characterized by a decrease in CAD less than 90 mmHg, oliguria, tissue hypoxia, acute respiratory failure, acute renal failure, impaired consciousness, cardiogenic shock, peripheral cyanosis [1].

Clinical case: patient U, suffering for a long time from gastric ulcer and 12-pert colon, Hypertension 2st, 2st, risk 1, having conservative therapy for these two diseases on a permanent basis takes: Prestanes, bisoprolol, atorvastatin, cardiomagnil, concor pantoprazole, dyspatalin. On 29.05.2024 he called an ambulance with complaints of tachycardia, severe dizziness, BP decrease to 80/50 mmHg and dyspnea of funny character, vomiting blood more than 9 times and general weakness. According to the patient's words, the above symptoms began to bother him from 9:45 until the arrival of the ambulance crew, no medical assistance was provided. Upon arrival of the ambulance, the patient's condition was assessed as severe, pallor of skin, rash, anisocoria, nystagmus, wheezing, symptom of peritoneal irritation, and no edema. The patient's behavior is calm, consciousness is stunned according to Glasgow school: 14 (E 4 V 4 M 5), pupils are normal, reaction to light is present, muscle strength is weakened, meningeal signs are absent, respiration at auscultation vesicular increased, dyspnea of funny character, percussion clear pulmonary. Clear and rhythmic heart tones, rhythmic and thready pulse, tongue covered with blood, abdomen on examination and palpation without features, weakened peristalsis. Urination and stools are not detected at the SMP.

Per rectum - black colored feces - melena.

Additional data: Patient's PV is 70 KG, patient is oriented in person, space and time, facial symmetry is not disturbed, tongue on the midline, paresis and paralysis are not defined, sensitivity in the extremities is reduced, coordinator tests are not performed. The patient is lethargic, answers questions late. Vomiting coffee grounds color more than 9 times, shock index algovera =1.5.

13:40-Arterial pressure-72/40 mmHg, HR 103 beats/min, pulse 103 beats/min, HR 31 per minute, Body temperature- 36.0, SrO2 89%, and blood glucose level-4.5 mmol/L.

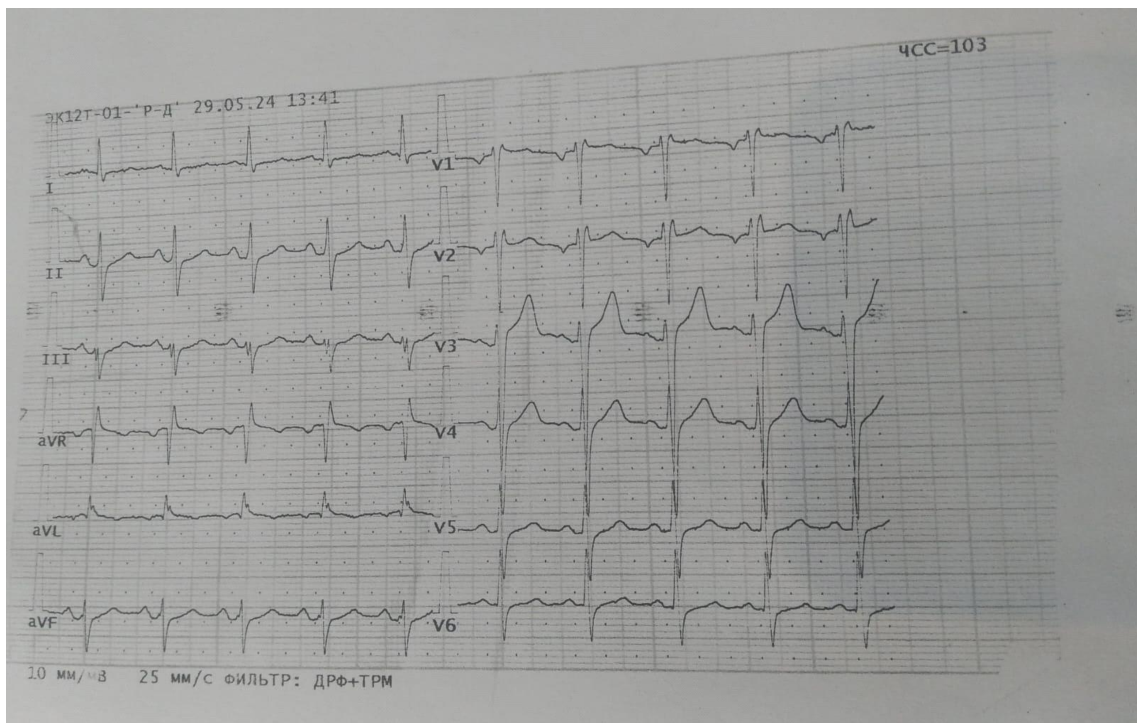

Fig.1: Sinus rhythm, correct, QRS not dilated, HR 103 bpm, ST in isolation, EOS-horizontal position, BPNPH, systolic tachycardia.

Diagnosis: Gastrointestinal bleeding, severe hemorrhagic shock, acute respiratory failure of the 2nd degree.

Medical care provided:

- General examination of the patient. 13:40
- Utanization of two venous accesses on both cubital veins.
- Placement of a urinary catheter
- Oxygenotherapy with O2 through Rika apparatus with a face mask at a rate of 7 l/min.
- To replenish CCA and stop bleeding, the patient was administered: Stage 1.
- right-13:43
- 1-Sol. Sibasoni Tranexam 750 mg - 15 mg
- + Sol. Natrii chloridi 0.9%-200ml intravenously by trickle.
- left-13:43
- Sol. dexametasoni 16 mg- 4ml
- + sol. Natrii chloridi 0.9%-10.0ml intravenously fractionally.
- 13:44 -sol. Ringer 200 ml intravenously.
- Stage #2.
- right: 13:50
- Sol. Rhopolyglucini 200 ml intravenously by trickle.
- left-13:57
- Sol. Sol. Amyli hydroxyaethylici 6% 400 ml intravenous drip.

Monitoring:

1-13:40-Arterial pressure-72/40 mmHg, HR 103 beats/min, pulse 103 beats/min, respiratory rate 31 per minute, body temperature-36.0, SrO2 89%, and blood

glucose level-4.5 mmol/L. Consciousness is stunned, Glasgow scale: 14. Oxygenation therapy.

2-13:45-Arterial pressure-75/45 mmHg, HR 99 beats/min, pulse 99 beats/min, HR 24 per minute, Body temperature-36.0, SrO2 93%, and blood glucose level-4.5 mmol/L. Consciousness is stunned, SH-14. Oxygen therapy.

3-13:50-Arterial pressure-82/52 mmHg, HR 89 beats/min, pulse 89 beats/min, respiratory rate 22 per minute, body temperature-36.0, SrO2 96%, and blood glucose level-4.6 mmol/L. Consciousness is clear, Glasgow scale 15. Oxygen therapy.

4-13:55-Arterial pressure-96/72 mmHg, HR 87 beats/min, pulse 87 beats/min, respiratory rate 20 per minute, body temperature-36.0, SrO2 98%, and blood glucose level-4.6 mmol/L. Consciousness is clear, Glasgow scale-15. Oxygen therapy.

5-14:00-Arterial pressure-112/76 mmHg, HR 86 beats/min, pulse 86 beats/min, HR 18 per minute, Body temperature-36.0, SrO2 100%, and blood glucose level-4.6 mmol/L. Consciousness is clear, Glasgow scale 15. Oxygen therapy.

6-14:05-Arterial pressure-119/79 mmHg, HR 84 beats/min, pulse 84 beats/min, respiratory rate 18 per minute, body temperature-36.0, SrO2 100%, and blood glucose level-4.6 mmol/L. Consciousness is clear, Glasgow scale 15. Oxygen therapy.

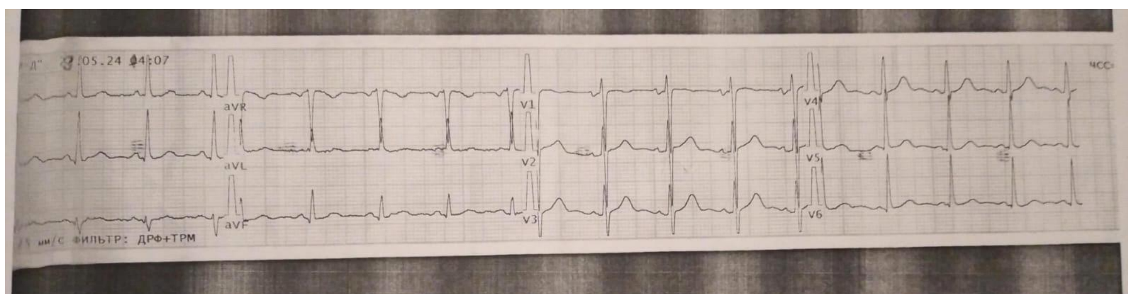

Fig. 2. Sinus rhythm, correct, QRS not dilated, HR 84 bpm, ST in isolation, EOS-horizontal position, BPNPH, systolic tachycardia.

14:10-Arterial pressure-11/79 mmHg, HR 64 beats/min, pulse 64 beats/min, respiratory rate 18 per minute, body temperature-36.0, SrO2 100%, and blood glucose-4.6 mmol/L. Consciousness is clear, Glasgow scale 15. Oxygen therapy.

Conclusion: Based on the presented data of this clinical case, the effectiveness of intensive infusion therapy and oxygen therapy in a patient with gastrointestinal bleeding complicated by hemorrhagic shock and acute respiratory failure is noted in order to replenish the ICU and to stop acute respiratory failure. As a result, there was a complete recovery of CCA, stabilization of hemodynamics and respiratory system parameters. The patient was transported to the emergency hospital for hospitalization in the department of general surgery according to the order of the Ministry of Health of the Russian Federation on hospitalization of patients with HCC.

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