Folia Cardiologica 2024, 19
DOI: 10.5603/fc.95129
Copyright © 2024 Via Medica
ISSN 2353–7752
e-ISSN 2353–7760

Acute coronary syndrome in a patient with exacerbation of left ventricular heart failure, persistent atrial fibrillation and active gastrointestinal bleeding

Ostry zespół wieńcowy u pacjentki z zaostrzeniem lewokomorowej niewydolności serca, utrwalonym migotaniem przedsionków oraz aktywnym krwawieniem z przewodu pokarmowego

Alicja M Jarząbek

Clinical Department of Internal Medicine and Endocrinology, Anna Gostynska Wolski Hospital, Warszawa, Poland

Abstract

An 85-year-old woman was admitted to the hospital with symptoms of gastrointestinal bleeding in the form of tarry stools. She was previously taking rivaroxaban for persistent atrial fibrillation. On admission, she was in a serious general condition. She reported weakness and chest tightness. In the course of diagnostics, exacerbation of left ventricular heart failure with pleural effusion and severe posthaemorrhagic anaemia were diagnosed. Based on the clinical picture, high levels of cardiac enzymes and the results of diagnostic tests, the diagnosis of non-ST segment elevation myocardial infarction was made. The endoscopic examination of the gastrointestinal tract did not reveal the source of bleeding. On the other hand, further diagnostics required a focal lesion of the posterior wall of the stomach, described in a computed tomography scan of the abdominal cavity with contrast and not visible in endoscopy. As the patient required anti-haemorrhagic treatment, including transfusion of blood products, the coronary angiography procedure with possible angioplasty was postponed until the patient's condition stabilized and the bleeding stopped permanently. After the treatment, the patient was discharged home in a clinically improved state with a recommendation to perform an accelerated coronary angiography. However, 3 months after discharge from the ward, gastrointestinal bleeding recurred. At that time, gastroscopy showed a nodular lesion in the stomach wall suspected of gastrointestinal stromal tumour. The patient was referred for urgent oncological diagnostics. In the case of the described patient, the inclusion of effective treatment for each of the acute diseases was contradictory and the selection of the safest and effective therapy was extremely difficult.

Keywords: acute coronary syndrome, atrial fibrillation, chronic heart failure, gastrointestinal bleeding

Folia Cardiologica 2024; 19: 60–62

Address for correspondence: Alicja M Jarząbek MD, Kliniczny Oddział Chorób Wewnętrznych i Endokrynologii, Szpital Wolski im. Anny Gostyńskiej, ul. Kasprzaka 17, 01–211 Warszawa, Poland, e-mail: ala12gf@wp.pl

Received: 11.04.2023 Accepted: 10.07.2023 Early publication date: 08.06.2024

This article is available in open access under Creative Common Attribution-Non-Commercial-No Derivatives 4.0 International (CC BY-NC-ND 4.0) license, allowing to download articles and share them with others as long as they credit the authors and the publisher, but without permission to change them in any way or use them commercially.

Introduction

The management of cardiac patients with concomitant severe bleeding is quite a challenge in medical practice [1, 2]. Gastrointestinal bleeding worsens the prognosis of patients in intensive care units [2]. Patients with multimorbidity, advanced age and chronic use of antiplatelet and anticoagulant drugs for cardiovascular reasons have a higher risk of gastrointestinal bleeding [3]. Upper gastrointestinal (GOPP) bleeding is more common in these patients. To reduce the risk of this bleeding, proton pump inhibitors [4] can be used in parallel with antiplatelet and anticoagulant drugs during active bleeding and continued for 2–3 months until sustained clinical improvement is achieved. However, it should be remembered that in patients requiring antiplatelet therapy for cardiovascular reasons, it is necessary to continue therapy for life.

The following study presents a cardiac-laden patient with severe gastrointestinal bleeding complicated by acute coronary syndrome and exacerbation of chronic heart failure.

Case report

An 85-year-old woman presented to the hospital with GOPP bleeding in the form of profuse tarry stools. The patient had a history of anticoagulant treatment with rivaroxaban for persistent atrial fibrillation, chronic heart failure class III according to the New York Heart Association, and hypothyroidism after a strumectomy years ago. The patient was a non-smoker. On admission, the patient was in severe general condition, conscious, with preserved logical contact. She reported weakness and chest tightness. On physical examination, RR 120/70 mm Hg, heart rate irregular 140/min, features of exacerbation of left ventricular heart failure with fluid in both pleural cavities, pale, dry skin. A fusiform content was visualised in the gastric probe. On per rectum examination, tarry stool was present. In laboratory tests, severe anaemia with Hb 6.4 g/dL and very high levels of cardiac enzymes with an increasing trend were noted — troponin I 35678 pg/mL (normal 15.6), CK-MB 397 U/L (normal 0.0–24) in consecutive determinations. NT-proBNP level was 14601.5 pg/mL (normal < 125).

The ECG described atrial fibrillation with a QRS complex rate of 120/min, intermediate axis, and ST segment depression of the anterior, lateral and inferior walls.

Cardiac echo showed akinesis of the anterior wall, apical and basal segments of the inferior wall and basal segment of the inferior-posterior wall, hypokinesis of the right ventricular free wall, complex aortic defect, calcification of the mitral valve leaflets. The left ventricular ejection fraction was 38%.

Endoscopic examinations of the gastrointestinal tract did not clearly visualise the site of bleeding. They only described superficial inflammatory changes of the gastric mucosa and colonic diverticulosis without any obvious features of bleeding or inflammation. The description of a contrast-enhanced abdominal CT scan, which described the presence of a 25 × 34 mm focal lesion in the posterior gastric wall, below the fundus, not visible on gastroscopy, seemed puzzling. This lesion requires further diagnosis.

Based on the clinical presentation and diagnostic tests performed, a diagnosis of myocardial infarction with ST-segment depression of the anterior, lateral and inferior walls, exacerbation of left ventricular heart failure with reduced left ventricular ejection fraction in the course of active gastrointestinal bleeding was made in a patient chronically treated with rivaroxaban.

During the stay, gastroprotective, diuretic, anti-haemorrhagic, beta blocker, eplerenone and correction of electrolyte disturbances were administered. The patient required a transfusion of blood products several times. After cardiological consultation, it was decided to postpone coronary angiography until the bleeding had permanently stopped and the patient's condition had stabilised. Anticoagulant treatment was gradually implemented and the patient eventually received home apixaban in a therapeutic dose.

Following treatment, the patient's general condition improved, her complaints resolved and her blood laboratory parameters normalised. After rehabilitation, the patient was discharged home in a state of clinical improvement with the recommendation of an expedited coronary angiography. However, 3 months after discharge, severe gastrointestinal bleeding recurred. At that time, a gastroscopy performed described a nodular lesion of the gastric wall, 22–25 mm in diameter with ulceration at the apex in the region of the lesser curvature, suspected to be a gastrointestinal subepithelial neoplasm (GIST). Although histopathological examination did not show a neoplastic entity, the patient was referred for urgent oncological diagnosis.

Discussion

The patient required intensive anti-haemorrhagic treatment and transfusion of blood products, but despite indications for fast-track coronarography, this procedure was abandoned. During the coronary angiography, coronary angioplasty may have been required and thus the need to include antiplatelet treatment, which was not possible in her current situation. Therefore, the procedure was postponed until the bleeding had permanently stopped and anticoagulants could be included.

The patient is an example where the use of effective treatment for each acute condition, contradicts each other. The inclusion of antiplatelet therapy and rivaroxaban in the treatment of cardiac disease would not allow the acute gastrointestinal bleeding to stop and vice versa.

Such dilemmas are posed by the physician in everyday clinical practice. In similar situations, it is necessary to approach the patient on an individual basis and to choose the safest yet effective treatment pathway.

Additional information

Ethics statement

Patient consent has been signed and collected in accordance with the journla's patiens consent policy

Author contributions

The author prepared the manuscript, provided medical care for patient and carried out the diagnostic and treatment process. Preparing the text was performed only by the author of the manuscript.

Acknowledgements

None declared.

Conflict of interest

The author declares no conflict of interest.

Supplementary material

None.

Funding

None declared.

Streszczenie

Osiemdziesięciopięcioletnia kobieta zgłosiła się do szpitala z objawami krwawienia z przewodu pokarmowego w postaci smolistych stolców. Dotychczas przyjmowała rywaroksaban z powodu utrwalonego migotania przedsionków. Przy przyjęciu była w ciężkim stanie ogólnym. Zgłaszała osłabienie i ucisk w klatce piersiowej. W toku diagnostyki rozpoznano zaostrzenie lewokomorowej niewydolności serca z płynem w jamach opłucnowych i ciężką niedokrwistość pokrwotoczną. Na podstawie obrazu klinicznego, wysokiego stężenia enzymów sercowych oraz wyników badań diagnostycznych rozpoznano zawał mięśnia serca bez uniesienia odcinka ST. W badaniach endoskopowych przewodu pokarmowego nie uwidoczniono źródła krwawienia. Natomiast dalszej diagnostyki wymagała zmiana ogniskowa tylnej ściany żołądka opisana w badaniu tomografii komputerowej jamy brzusznej z kontrastem a niewidoczna w endoskopii. Ponieważ pacjentka wymagała leczenia przeciwkrwotocznego, w tym przetoczenia preparatów krwiopochodnych, zabieg koronarografii z ewentualną angioplastyką odroczono do czasu ustabilizowania stanu chorej i trwałego ustąpienia krwawienia. Po zastosowanym leczeniu pacjentka została wypisana do domu w stanie poprawy klinicznej z zaleceniem wykonania koronarografii w trybie przyspieszonym. Jednak po 3 miesiącach od wypisu z oddziału ponownie doszło do krwawienia z przewodu pokarmowego. Wówczas w wykonanej gastroskopii opisano zmianę guzowatą ściany żołądka podejrzaną o nowotwór podścieliskowy przewodu pokarmowego. Pacjentka została skierowana na pilną diagnostykę onkologiczną. W przypadku opisanej pacjentki włączenie skutecznego leczenia każdej z ostrych chorób było sprzeczne a wybranie najbezpieczniejszej i skutecznej terapii niezwykle trudne.

Słowa kluczowe: ostry zespół wieńcowy, migotanie przedsionków, przewlekła niewydolność serca, krwawienie z przewodu pokarmowego

Folia Cardiologica 2024; 19: 60–62

References

1. Nikolsky E, Stone GW, Kirtane AJ, et al. Gastrointestinal bleeding in patients with acute coronary syndromes: incidence, predictors, and clinical implications: analysis from the ACUITY (Acute Catheterization and Urgent Intervention Triage Strategy) trial. J Am Coll Cardiol. 2009; 54(14): 1293–1302, doi: 10.1016/j.jacc.2009.07.019, indexed in Pubmed: 19778672.
2. Sakai S, Tara S, Yamamoto T, et al. Gastrointestinal bleeding increases the risk of subsequent cardiovascular events in patients with acute cardiovascular diseases requiring intensive care. Heart Vessels. 2021; 36(9): 1327–1335, doi: 10.1007/s00380-021-01822-1, indexed in Pubmed: 33683409.
3. Krag M, Perner A, Wetterslev J, et al. SUP-ICU co-authors. Prevalence and outcome of gastrointestinal bleeding and use of acid suppressants in acutely ill adult intensive care patients. Intensive Care Med. 2015; 41(5): 833–845, doi: 10.1007/s00134-015-3725-1, indexed in Pubmed: 25860444.
4. Li L, Geraghty OC, Mehta Z, et al. Oxford Vascular Study. Age-specific risks, severity, time course, and outcome of bleeding on long-term antiplatelet treatment after vascular events: a population-based cohort study. Lancet. 2017; 390(10093): 490–499, doi: 10.1016/S0140-6736(17)30770-5, indexed in Pubmed: 28622955.