

Hanarz M, Gołab A, Pilcner, Undas A. Direct oral anticoagulants in patients with atrial fibrillation following bariatric surgery: a single center experience. Kardiol Pol. 2021.

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METHODS

In sleeve gastrectomy, the majority of the stomach is vertically resected and a tube-shaped remnant is left along the lesser curvature. In Roux-en-Y gastric bypass, a small gastric pouch is connected to the small intestine, bypassing the stomach, duodenum, and the proximal part of the jejunum [1].

Arterial hypertension was diagnosed when systolic or diastolic blood pressure ≥ 140 mm Hg and/or ≥ 90 mm Hg, respectively, and/or during antihypertensive treatment. Type 2 diabetes was diagnosed according to the World Health Organization criteria [2]. Heart failure was diagnosed based on the European Society of Cardiology guidelines for acute and chronic heart failure [3]. Dyslipidemia was defined as the current use of cholesterol-lowering drugs or LDL cholesterol above 3.0 mmol/l and/or triglycerides above 1.7 mmol/l [4]. Specific types of AF (persistent and permanent) were defined according to European Society of Cardiology [5]. Vascular disease was diagnosed as a history of peripheral arterial disease, coronary arterial disease or myocardial infarction. Renal function impairment was defined as an estimated glomerular filtration rate < 60 ml/min/1.73 m² and severe thrombocytopenia as the platelet count $< 50\ 000/\mu\text{l}$. Liver disease was defined as known acute, chronic hepatitis, liver cirrhosis or alanine or aspartate aminotransferases above 2 fold the upper limit of the reference range.

Stroke and transient ischemic attack were diagnosed based on World Health Organization criteria. Systemic embolism was defined as symptomatic embolic episode in the arteries supplying extremities, intestines or other internal organs except for ischemic events in the central nervous system, documented by imaging in medical records [6]. Major bleeding and clinically relevant nonmajor bleeding were

defined according to the International Society on Thrombosis and Haemostasis [7]. The HAS-BLED score was used to evaluate the risk of bleeding [8].

The concentrations of apixaban and rivaroxaban were measured using the chromogenic Biophen DiXal test (Hyphen BioMed, Neuville-sur-Oise, France) with specific calibrators. Plasma levels of dabigatran were determined using the Hemoclot thrombin inhibitor assay (Hyphen BioMed).

REFERENCES

1. Peterli R, Wölnerhanssen BK, Peters T, et al. Effect of Laparoscopic Sleeve Gastrectomy vs Laparoscopic Roux-en-Y Gastric Bypass on Weight Loss in Patients With Morbid Obesity: The SM-BOSS Randomized Clinical Trial. *JAMA*. 2018; 319(3): 255-265, doi: 10.1001/jama.2017.20897.
2. Gorczyca I, Michta K, Pietrzyk E, et al. Predictors of post-operative atrial fibrillation in patients undergoing isolated coronary artery bypass grafting. *Kardiol Pol*. 2018; 76(1): 195-201, doi: 10.5603/KP.a2017.0203.
3. McDonagh TA, Metra M, Adamo M, et al. 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure. *Eur Heart J*. 2021; 42(36): 3599-3726, doi: 10.1093/eurheartj/ehab368.
4. Jabłonowska-Lietz B, Wrzosek M, Włodarczyk M, et al. New indexes of body fat distribution, visceral adiposity index, body adiposity index, waist-to-height ratio, and metabolic disturbances in the obese. *Kardiol Pol*. 2017; 75(11): 1185-1191, doi: 10.5603/KP.a2017.0149.
5. Hindricks G, Potpara T, Dagres N, et al. 2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association for Cardio-Thoracic Surgery (EACTS): The Task Force for the diagnosis and management of atrial fibrillation of the European Society of Cardiology (ESC) Developed with the special contribution of the European Heart Rhythm Association (EHRA) of the ESC. *Eur Heart J*. 2021; 42(5): 373-498, doi: 10.1093/eurheartj/ehaa612.

6. Hendricks AK, Zieminski JJ, Yao X, et al. Safety and Efficacy of Oral Anticoagulants for Atrial Fibrillation in Patients After Bariatric Surgery. *Am J Cardiol.* 2020; 136: 76-80, doi: 10.1016/j.amjcard.2020.09.020.
7. Kaatz S, Ahmad D, Spyropoulos AC, et al. Subcommittee on Control of Anticoagulation. Definition of clinically relevant non-major bleeding in studies of anticoagulants in atrial fibrillation and venous thromboembolic disease in non-surgical patients: communication from the SSC of the ISTH. *J Thromb Haemost.* 2015; 13(11): 2119-2126, doi: 10.1111/jth.13140.
8. Pisters R, Lane DA, Nieuwlaat R, et al. A novel user-friendly score (HAS-BLED) to assess 1-year risk of major bleeding in patients with atrial fibrillation: the Euro Heart Survey. *Chest.* 2010; 138(5): 1093-1100, doi: 10.1378/chest.10-0134.

Table S1. Comorbidities and laboratory investigations according to their anticoagulant therapy

Variable	All patients (n = 29)	Anticoagulant therapy		P-value
		DOACs patients (n = 14)	VKA patients (n = 15)	
Comorbidities, n (%)				
Dyslipidemia	25 (86.2)	12 (85.7)	13 (86.7)	1.00
T2D	19 (73.1)	9 (64.3)	10 (66.7)	0.89
Vascular disease: CAD, MI and/or PAD	18 (62.1)	9 (64.3)	9 (60.0)	0.81
CAD	16 (55.2)	8 (57.1)	8 (53.3)	0.84
MI	10 (34.5)	5 (35.7)	5 (33.3)	0.89
Hypertension	16 (55.2)	8 (57.1)	8 (53.3)	0.84
Heart failure	12 (55.2)	6 (42.9)	6 (40.0)	0.88
Laboratory investigation				
Hemoglobin, g/d	12.9 (1.1)	12.8 (0.7)	13.0 (1.4)	0.67
Platelets, 10 ⁹ /l	202 (170–256)	200 (151–262)	202 (184–241)	0.50
eGFR, ml/min/1.73 m ²	102.7 (9.4)	102.1 (10.1)	103.3 (9.0)	0.74
Glucose, mmol/l	4.7 (4.3–5.5)	4.5 (4.3–4.9)	5.1 (4.4–5.8)	0.12
hsCRP, mg/l	3.2 (2.5–4.0)	3.8 (2.0–5.0)	3.2 (2.5–3.8)	0.35
Fibrinogen, g/l	3.5 (2.8–4.2)	3.5 (2.8–3.7)	3.6 (2.7–4.4)	0.76
D-dimer, µg/l	385.7 (141.2)	366.1 (142.9)	403.9 (142.1)	0.48

Data are given as mean (standard deviation [SD]), median (interquartile range [IQR]) or number (percentage)

Abbreviations: CAD, coronary artery disease; DOACs, direct oral anticoagulants; eGFR, estimated glomerular filtration rate; hsCRP, high-sensitivity C-reactive protein; MI, myocardial infraction; PAD, peripheral artery disease; T2D, type 2 diabetes; VKA, vitamin K antagonists