

Patient after treatment of Hodgkin's lymphoma: A typical... cardiological patient

Grzegorz Sławiński¹⁻³, Izabela Nabiałek-Trojanowska^{3,4}, Ewa Lewicka^{1,3}

¹Department of Cardiology and Electrotherapy, Medical University of Gdańsk, Gdańsk, Poland

²Club 30, Polish Cardiac Society, Poland

³Cardio-Oncology Outpatient Clinic, University Clinical Center, Gdańsk, Poland

⁴1st Department of Cardiology, Medical University of Gdansk, Gdańsk, Poland

Correspondence to:

Prof. Ewa Lewicka, MD, PhD,
Department of Cardiology and
Electrotherapy,
Medical University of Gdańsk,
Debinki 7, 80-952 Gdańsk, Poland,
phone: +48 58 584 47 70,
e-mail: elew@gumed.edu.pl

Copyright by the Author(s), 2023

DOI: 10.33963/KPa2023.0025

Received:

January 24, 2023

Accepted:

January 26, 2023

Early publication date:

January 27, 2023

We read with interest the article "Multiple late cardiovascular complications after combined oncological treatment of Hodgkin's lymphoma" by Stępień et al. [1]. The discussed issue concerns an important clinical problem; thus we would like to add some comments on it. The authors presented a patient with advanced late cardiovascular complications after chest and neck radiotherapy used in the treatment of Hodgkin lymphoma at the age of about 34. On admission to the cardiology department, the patient was diagnosed with arterial hypertension and dyslipidemia and was an active smoker. The authors focused their attention on vascular complications: stenosis of the left and right internal carotid arteries, stenosis of the left subclavian and vertebral arteries, and stenosis of the left descending artery and right coronary artery (RCA). These are typical complications of upper mantle irradiation; however, rarer complications should also be considered, including possible damage to the sinus or atrioventricular nodes [2]. It seems that in the described patient with such a significant manifestation of radiotherapy-induced cardiotoxicity, and in view of his withdrawal from the RCA revascularization, it would also be reasonable to perform prolonged Holter ECG monitoring to exclude the above-mentioned complications.

The important role of the radiation dose applied to the heart and individual structures should also be emphasized. It has been shown that it correlates with the frequency of later complications [3].

The choice of the optimal method of treatment in the case of coronary artery lesions in patients after thoracic radiotherapy is

difficult, and the studies evaluating the results of percutaneous coronary interventions (PCI) and coronary artery by-pass grafting surgery (CABG) in these patients are inconclusive. We agree that CABG is a high-risk procedure for these patients. In the presented case, the aorta was heavily calcified, which did not allow for safe clamping, and the patient was a smoker, which in the case of lung disease raises the risk of complications in the postoperative period. Delayed healing of the skin and sternum after radiotherapy can cause additional problems. In the described patient, the mammary arteries were probably also fibrotic and unavailable for graft use, and the risk of progression of aortic stenosis should be taken into account when planning any thoracic surgery. Could the authors describe where the changes on the leaflets of the aortic valve were located? After radiotherapy, the aortic-mitral curtain is affected, and when its thickness exceeds 6 mm, it is associated with increased mortality [4].

It has recently been suggested that the risk of cardiovascular events depends on the degree of calcification (calcium score) of the aortic valve and coronary arteries – were these parameters also determined?

There are reports of more frequent cases of restenosis after PCI in patients after thoracic radiotherapy [5]. Could the authors comment on this: what antiplatelet treatment was prescribed to the patient, and for how long? We believe that this patient is a good candidate for extended dual antiplatelet therapy. Also, rigorous control of dyslipidemia and well-controlled blood pressure is required.

The authors rightly point to the lack of follow-up examinations recommended by the

International Cardio-Oncology Society in the described patient. At the same time, the entire medical system failed, starting with hematologists and family doctors and ending up with cardiologists (numerous modifiable cardiovascular risk factors, including smoking, which particularly increases the risk of cardiovascular complications after irradiation). The presented case emphasizes that a patient successfully cured of cancer should be the focus of our attention due to the possible complications and cardiotoxicity of anticancer treatment that he received.

Article information

Conflict of interest: None declared.

Funding: None.

Open access: This article is available in open access under Creative Commons Attribution-Non-Commercial-No Derivatives 4.0 International (CC BY-NC-ND 4.0) license, which allows downloading and sharing articles 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. For commercial use, please contact the journal office at kardiologiapolska@ptkardio.pl.

REFERENCES

1. Stępień K, Del Carmen Yika A, Bilecki K, et al. Multiple late cardiovascular complications after combined oncological treatment of Hodgkin's lymphoma. *Kardiol Pol.* 2023; 81(1): 78–79, doi: [10.33963/KP.a2022.0244](https://doi.org/10.33963/KP.a2022.0244), indexed in Pubmed: [36300531](https://pubmed.ncbi.nlm.nih.gov/36300531/).
2. Daniluk P, Sławiński G, Nabiałek-Trojanowska I, et al. Sinus node dysfunction as a late complication of Hodgkin lymphoma treatment. *Fol Cardiol.* 2020; 15(6): 424–427, doi: [10.5603/fc.2020.0062](https://doi.org/10.5603/fc.2020.0062).
3. Nabiałek-Trojanowska I, Sinacki M, Jankowska H, et al. The Influence of Radiotherapy on the Function of the Left and Right Ventricles in Relation to the Radiation Dose Administered to the Left Anterior Descending Coronary Artery-From a Cardiologist's Point of View. *Cancers (Basel).* 2022; 14(10), doi: [10.3390/cancers14102420](https://doi.org/10.3390/cancers14102420), indexed in Pubmed: [35626025](https://pubmed.ncbi.nlm.nih.gov/35626025/).
4. Desai MY, Wu W, Masri A, et al. Increased aorto-mitral curtain thickness independently predicts mortality in patients with radiation-associated cardiac disease undergoing cardiac surgery. *Ann Thorac Surg.* 2014; 97(4): 1348–1355, doi: [10.1016/j.athoracsur.2013.12.029](https://doi.org/10.1016/j.athoracsur.2013.12.029), indexed in Pubmed: [24565403](https://pubmed.ncbi.nlm.nih.gov/24565403/).
5. Kirresh A, White L, Mitchell A, et al. Radiation-induced coronary artery disease: a difficult clinical conundrum. *Clin Med (Lond).* 2022; 22(3): 251–256, doi: [10.7861/clinmed.2021-0600](https://doi.org/10.7861/clinmed.2021-0600), indexed in Pubmed: [35584837](https://pubmed.ncbi.nlm.nih.gov/35584837/).