LETTER TO THE EDITOR

LIST DO REDAKCJI

PSORIASIS AND CARDIOVASCULAR RISK. IS THERE ANY ASSOCIATION?

ŁUSZCZYCA I RYZYKO CHORÓB UKŁADU KRĄŻENIA.

CZY ISTNIEJĄ POWIĄZANIA?

Mateusz Gabryszewski^{1(A,B,D,E,F)}, Katarzyna Karp^{1(B,C,D,E)}, Piotr Puźniak^{1(B,C,E,F)}, Paulina Karp^{1(A,C,D,E)}

¹Medical University of Lodz, Poland

Gabryszewski M, Karp K, Puźniak P, Karp P. Psoriasis and cardiovascular risk. Is there any association?. Health Prob Civil. https://doi.org/10.5114/hpc.2024.139476

Tables: 0

Figures: 0

References: 5

Submitted: 2024 May 1

Accepted: 2024 May 7

Address for correspondence / Adres korespondencyjny: Mateusz Gabryszewski, Medical University of Lodz, Kościuszki 4, 90-419 Łódź, Poland, e-mail: mateusz_gabryszewski@wp.pl, phone: +48 42 272 58 03

Copyright: © John Paul II University in Biała Podlaska, Mateusz Gabryszewski, Katarzyna Karp, Piotr Puźniak, Paulina Karp. This is an Open Access journal, all articles are distributed under the terms of the Creative Commons AttributionNonCommercialShareAlike 4.0 International (CC BY-NCSA 4.0) License (http://creativecommons.org/licenses/by-nc-sa/4.0/), allowing third parties to copy and redistribute the material in any medium or format and to remix, transform, and build upon the material, provided the original work is properly cited and states its license.

Keywords: systemic inflammation, cardiovascular risk, psoriasis, myocardial infarction, prevention **Słowa kluczowe:** zapalenie ogólnoustrojowe, ryzyko sercowo-naczyniowe, łuszczyca, zawał serca, profilaktyka

Dear Editor,

We have recently read a very interesting article by Branisteanu et al. [1], describing the association between psoriasis and increased cardiovascular risk (CVR). We believe this article raises an important issue and the dissemination of knowledge about the relationship between these two diseases may promote prevention and earlier diagnosis of cardiovascular diseases (CVD).

Psoriasis is a chronic, papulosquamous skin disorder characterized by chronic inflammation, affecting 3-5% of the general population worldwide [1]. Individuals with psoriasis are at increased risk of hypertension, cardiovascular disease, dyslipidaemia, obesity and diabetes [2]. Research is being conducted to understand the molecular mechanisms between the development of psoriasis and its comorbidities. Recent studies have identified that psoriasis and CVD have various common pathogenic pathways including genetic factors, inflammatory pathways, adipokine secretion, insulin resistance, lipoproteins, angiogenesis and oxidative stress [3]. Reasons for increased CVD risk include both increased systemic inflammation caused by psoriatic lesions, usually covering large areas of the skin and the fact that psoriasis is associated with an increased incidence of modifiable cardiovascular risk factors such as obesity, smoking, hypertension, diabetes mellitus, dyslipidemia, metabolic syndrome and a sedentary lifestyle [3]. The study by Karbach et al. [4] found that psoriatic patients with heart attacks were on average 5 years younger than heart attack patients without psoriasis. Conversely, the study showed lower in-hospital mortality in psoriatic patients with myocardial infarction, probably caused by lower age [4].

The awareness of the links between psoriasis and cardiovascular diseases remains low. Interestingly, a Spanish study assessed the connections between psoriasis and increased CVR and knowledge of screening recommendations in psoriasis patients [3]. This study found that more than 60% of primary care physicians were unaware of psoriasis being associated with CVD [3].

Recent studies have identified that systemic therapy used in the treatment of psoriasis not only reduces inflammation in the skin, which causes the skin lesions to disappear, but also has a systemic anti-inflammatory and anti-cytokine effect. The commonly used psoriasis drug methotrexate has been proven to reduce the incidence of cardiovascular disease, myocardial infarction and stroke. This effect is enhanced by the use of acetylsalicylic acid with methotrexate. According to Branisteanu et al. [1], the use of biological therapy also reduces inflammatory activity in psoriasis, prevents the formation and even limits the development of atherosclerotic plaque. Moreover, it reduces the incidence of myocardial infarction, stroke, transient ischemic attack and unstable angina [1].

Since psoriasis is a disease that increases the risk of developing diseases such as hypertension, circulatory system diseases, dyslipidemia, obesity and diabetes, it is necessary not only to treat skin lesions, but also to approach the patient holistically. Psoriatic patients should undergo regular screening for comorbidities in order to detect and treat them as quickly as possible. It is crucial to educate patients about a healthy lifestyle and promote the Mediterranean diet, non-smoking, healthy sleeping habits, weight control and regular physical activity [5].

References:

- Branisteanu DE, Nicolescu AC, Branisteanu DC, Branisteanu CI, Dragoi AC, Bogdanici CM, et al. Cardiovascular comorbidities in psoriasis (Review). Exp Ther Med. 2022; 23(2): 152. https://doi.org/10.3892/etm.2021.11075
- Yamazaki F. Psoriasis: comorbidities. J Dermatol. 2021; 48(6): 732-740. https://doi.org/10.1111/1346-8138.15840
- 3. Berna-Rico E, Abbad-Jaime de Aragon C, Garcia-Aparicio A, Palacios-Martinez D, Ballester-Martinez A, Carrascosa JM, et al. Cardiovascular screening practices and statin prescription

habits in patients with psoriasis among dermatologists, rheumatologists and primary care physicians. Acta Derm Venereol. 2023; 103: adv5087. https://doi.org/10.2340/actadv.v103.5087

- Karbach S, Hobohm L, Wild J, Münzel T, Gori T, Wegner J, et al. Impact of Psoriasis on Mortality Rate and Outcome in Myocardial Infarction. J Am Heart Assoc. 2020; 9(18): e016956. https://doi.org/10.1161/JAHA.120.016956
- Kaminsky LA, German C, Imboden M, Ozemek C, Peterman JE, Brubaker PH. The importance of healthy lifestyle behaviors in the prevention of cardiovascular disease. Prog Cardiovasc Dis. 2022; 70: 8-15. https://doi.org/10.1016/j.pcad.2021.12.001