Anexa 5

STANDARDELE MINIMALE, NECESARE ȘI OBLIGATORII
PENTRU ÎNSCRIERE LA CONCURS
pentru ocuparea postului de Asistent Universitar
perioadă nedeterminată

- Deținerea diplomei de Doctor în domeniul postului[1]/Adeverinței Școala Doctorală
  SERIA I NR 0079936
- Deținerea titlului de medic rezident sau a unui titlu medical superior la disciplinele de concurs cu corespondent în Rețeaua Sanitară, în specialitatea postului
  MEDIC SPECIALIST NR. 793 DIN 10.03.2025
- Minimum 2 lucrări în reviste din domeniul postului pentru care candidează (medicină, medicină dentară, farmacie sau științe inginerești, în conformitate cu postul scos la concurs), in extenso, dintre care 1 articol în reviste cotate ISI, prim autor sau autor corespondent, 1 articol în reviste BDI, prim autor.

  Lucrări în revistă cotată ISI[2]

1. PERIVASCULAR ADIPOSE TISSUE INFLAMMATION: THE ANTI-INFLAMMATORY ROLE OF CHEMERIN IN ATHEROSCLEROSIS PROGRESSION
2. CHEMERIN EXPRESSION IN ATHEROSCLEROTIC PLAQUES AND PERIVASCULAR ADIPOSE TISSUE IMPLICATION FOR VASCULAR INFLAMMATION IN PERIPHERAL ARTERY DISEASE

Lucrări în revistă indexată BDI

3. OBESITY-INDUCED ANAT DYSFUNCTION AND ATHEROSCLEROSIS DEVELOPMENT: THE ROLE OF CHEMERIN IN INCREASED MACROPHAGE INFILTRATION
4. AND ADIPOCYTOKINE SECRETION

Pentru posturile de asistent, altele decât cele din domeniul sănătate și științe inginerești (educație fizică, psihologie, limbi moderne), echivalarea standardelor minimale se face conform art.29, al.(9) din Metodologie.

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[1] Nume diplomă, serie, număr
[2] Autori, titlu articol, nume revistă, volum, număr, paginație, factor de impact al revistei pentru anul publicării articolului, link
[3] Autori, titlu articol, nume revistă, volum, număr, paginație, numele bazei internaționale de date, link

24

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Review

Perivascular Adipose Tissue Inflammation: The Anti-Inflammatory Role of Ghrelin in Atherosclerosis Progression

Sorin Nicolae Peiu [1], Radu Florin Popa [1,*], Fawzi Akad [2,3], Iustina S. Cretu-Silivestru [2,3], Bogdan Mircea Mihai [4], Anatolie Visnevschi [5,6], Lorina Vudu [7], Bogdan Tamba [8], Teodor Oboroceanu [3], Daniel Timofte [9,10,*] and Veronica Mocanu [2,3,*]

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Abstract: Perivascular adipose tissue (PVAT) and its adipokines engage in bidirectional crosstalk with the vascular wall. Atherosclerosis disrupts this interaction through inflammation, rupture-prone plaques, and subsequent thrombosis. The cardioprotective effects of ghrelin are in contradiction to its adipogenic properties. The concurrent research of anti-/pro-atherogenic mechanisms of ghrelin and PVAT-derived adipokines provides a better understanding of atherosclerosis progression in metabolic disorders. In-depth coverage of the characteristic features of PVAT concerning vascular dysfunction, with a survey of ghrelin-induced anti-inflammatory effects on adipose tissue macrophage infiltration and the inhibitory activity of ghrelin on the proinflammatory adipokine secretion, show that the impact of ghrelin on the endothelial function should be studied in relation to PVAT.

Keywords: perivascular adipose tissue; ghrelin; vascular disease; atherosclerosis; coronary heart disease; endothelium

1. Introduction

The absence of atherosclerosis in myocardial bridges, which have no surrounding fat, led to the misleading hypothesis of a causal role of perivascular adipose tissue (PVAT) in atherosclerosis. PVAT is attached straight to the vascular wall and its adipokines can act directly upon the vascular wall, which for its part modifies PVAT secretome in bidirectional crosstalk. PVAT is neither a mere sustainer of the vascular system nor a risk

27

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Article

Ghrelin Expression in Atherosclerotic Plaques and Perivascular Adipose Tissue: Implications for Vascular Inflammation in Peripheral Artery Disease

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Abstract: Atherosclerosis, a leading cause of peripheral artery disease (PAD), is driven by lipid accumulation and chronic inflammation within arterial walls. **Objectives**: This study investigates the expression of ghrelin, an anti-inflammatory peptide hormone, in plaque morphology and inflammation in patients with PAD, highlighting its potential role in age-related vascular diseases and metabolic syndrome. **Methods**: The analysis specifically focused on the immunohistochemical expression of ghrelin in atherosclerotic plaques and perivascular adipose tissue (PVAT) from 28 PAD patients. Detailed immunohistochemical staining was performed to identify ghrelin within these tissues, comparing its presence in various plaque types and assessing its association with markers of inflammation and macrophage polarization. **Results**: Significant results showed a higher prevalence of calcification in fibro-lipid plaques (63.1%) compared to fibrous plaques, with a notable difference in inflammatory infiltration between the two plaque types ($p = 0.027$). Complicated plaques exhibited increased ghrelin expression, suggesting a modulatory effect on inflammatory processes, although this did not reach statistical significance. The correlation between ghrelin levels and macrophage presence, especially the pro-inflammatory M1 phenotype, indicates ghrelin's involvement in the inflammatory dynamics of atherosclerosis. **Conclusions**: The findings propose that ghrelin may influence plaque stability and vascular inflammation, pointing to its therapeutic potential in managing atherosclerosis. The study underlines the necessity for further research to clarify ghrelin's impact on vascular health, particularly in the context of metabolic syndrome and age-related vascular alterations.

Keywords: peripheral artery disease; atherosclerosis; ghrelin; vascular inflammation; plaque morphology; immunohistochemistry; metabolic syndrome

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1. Introduction

Atherosclerosis, a chronic inflammatory disease predominantly affecting large and medium-sized arteries, is primarily caused by lipid metabolism dysregulation and maladaptive inflammatory responses [1]. This condition is the fundamental pathological basis of peripheral artery disease (PAD), which includes atherosclerosis of the abdominal aorta, iliac, and lower-extremity arteries.

Classically, the pathophysiology of atherosclerosis is characterized by internal factors in the vessel wall, such as endothelial dysfunction, lipid deposition, inflammation, and smooth muscle cell proliferation, ultimately leading to plaque formation [2]. Multiple cell

3 6

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Article

Obesity-Induced PVAT Dysfunction and Atherosclerosis Development: The Role of GHSR-1a in Increased Macrophage Infiltration and Adipocytokine Secretion

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Abstract: In obesity, recent research revealed that increased expression of the growth hormone secretagogue receptor (GHSR) in macrophages plays a pivotal role in the development of meta-inflammation, promoting macrophage infiltration and pro-inflammatory polarization. This study aimed to examine the association between GHSR-1a expression in atherosclerotic plaques and adjacent perivascular adipose tissue (PVAT) from 11 patients with obesity and peripheral artery disease (PAD) who underwent revascularization procedures. Immunohistochemistry was used to assess the expression of CD68, CD80, and CD14, while tissue homogenate levels of adiponectin, leptin, IL-6, and CRP were quantified via ELISA. Serum markers of inflammation were also measured. Among patients with GHSR-1a-positive (+) macrophages in atherosclerotic plaques, we observed significantly higher white blood cell counts and platelet-to-lymphocyte ratios in serum, a lower adiponectin-to-leptin ratio, and elevated IL-6 levels in both arterial and PVAT homogenates. Our findings suggest a link between GHSR-1a and macrophage/monocyte infiltration, macrophage polarization, and adipocytokine secretion in atherosclerotic plaques associated with obesity-induced PVAT dysfunction.

Keywords: ghrelin; GHSR-1a; atherosclerotic plaque; perivascular adipose tissue (PVAT); inflammation; macrophage; peripheral artery disease (PAD)

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