



**WIMC**

WARSAW INTERNATIONAL MEDICAL CONGRESS

# ABSTRACT BOOK





# 16th Warsaw International Medical Congress

29<sup>th</sup>-30<sup>th</sup> May 2021  
Warsaw, Poland

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[wimc@wum.edu.pl](mailto:wimc@wum.edu.pl)

## **Contact**

The Students' Scientific Association  
of the Medical University of Warsaw  
1a Oczki St., 02-007 Warsaw, Poland  
[www.stn.wum.edu.pl](http://www.stn.wum.edu.pl)  
[stn@wum.edu.p](mailto:stn@wum.edu.p)

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# Basic & Preclinical Science

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Central European Journal of Immunology

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# [1035] Pathomorphological features of liver and lung fibrosis in patients with non-alcoholic steatohepatitis and obesity for comorbidity with chronic obstructive pulmonary disease

**Authors:** Hryniuk OYe, Khukhlina OS

**Affiliation:** Bukovinian State Medical University / Department of Internal Medicine, Clinical Pharmacology and Occupational Diseases

**Trustee of the paper:** Khukhlina OS

Corresponding author: Olha Hryniuk (hryniuk.olha@gmail.com)

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## Introduction

The comorbid course of nonalcoholic steatohepatitis (NASH) on the background of obesity and chronic obstructive pulmonary disease (COPD) has a number of clinical features and is characterized by the syndrome of mutual burden.

## Aim of the study

To study the histochemical and histological features of liver and lung tissues in patients with non-alcoholic steatohepatitis (NASH) and obesity by a comorbid course with chronic obstructive pulmonary disease (COPD).

## Materials and methods

The autopsy material was used for 27 cases of NASH, including 13 cases of NASH and obesity of I degree (group 1), 14 cases of NASH, obesity of I degree with comorbid COPD of II-III stage (group 2). The comparison groups included autopsy material of 12 patients with isolated COPD of II-III stage. (Group 3), as well as 11 practically healthy persons (PHP), the main causes of death were polytrauma or traumatic brain injury or sudden coronary death. The groups were randomized according to age, sex, degree of obesity. The average age of patients was (59,3  $\bar{X}$  3,21) years.

## Results

The volume of connective tissue (CT) in the liver parenchyma in the 2nd group was in 1,9 times higher than in the 1st group ( $p < 0,05$ ), the specific volume of collagen fibers in 1,4 times, the optical density of collagen fibers by 1,2 times ( $p < 0,05$ ). In the 2nd group, the maximum damage to the respiratory parts of the lungs (RPL) was established in terms of percentage of filling of the RPL spaces with desquamated cells (in 9.4 times in comparison with PHP, by 1,3 times compared to the indicator in the 3rd group); increased the specific volume of blood vessels in the peribronchial CT by 1,4 times ( $p < 0,05$ ). The phenomena of venous thrombosis are most pronounced both in the peribronchial CT (they exceed the indicator in the 3rd group by 1,2 times) and in the respiratory parts of the lungs (by 2,4 times) ( $p < 0,05$ ). Patients of the 2nd group had the highest values of the specific volume of CT in the lungs among all study groups (19,8  $\bar{X}$  0,37 ( $p < 0,05$ )).

## Conclusions

The comorbidity of COPD in patients with NASH and obesity contributed to the higher degree of activation of connective tissue components in the liver parenchyma in comparison with the NASH indicators against the background of obesity without COPD, with an increase in the volume of connective tissue (in 1,9 times,  $p < 0,05$ ), specific volume collagen fibers (by 1,4 times,  $p < 0,05$ ), optical density of collagen fibers coloring (in 1,2 times,  $p < 0,05$ ).