

MULTIDISCIPLINE PROCEEDINGS OF
**DIGITAL FASHION
CONFERENCE**

KOREA, REPUBLIC OF

Multidiscipline Proceedings of

DIGITAL FASHION CONFERENCE

November 2023 (*Volume 3, No.6*)

Copyright © 2023
By Woongjin Think Big Co., Ltd.
All rights reserved.
Available at digitalfashionsociety.org
Published:
서울 합정역
파주출판도시
ISSN 2466-0744
Seoul
Korea, Republic of

EDITORIAL BOARD

Katharina Sand

*PhD Candidate - Faculty of Communication, Culture and Society, USI -
Università della Svizzera italiana*

Alice Noris

*PhD Candidate - Faculty of Communication, Culture and Society, USI -
Università della Svizzera italiana*

Michela Ornati

*Faculty of Communication, Culture and Society, USI - Università della
Svizzera italiana*

ELSEVIER



SRN
Societal Research Network

Universal
Impact Factor



SELECTED LABORATORY PARAMETERS FOR COVID-19-ASSOCIATED ASEPTIC NECROSIS OF THE HIP JOINT IN MILITARY PERSONNEL

Bayjanov Allabergan Kadirovich

Research Institute of Virology of the Republican Specialized Scientific Medical
Center for Epidemiology, Microbiology, Infectious and Parasitic Diseases of the
Republic of Uzbekistan

Muxitdinova Iroda Ravshanovna,

Military Hospital of Border Military Service of State Security

Ibragimova Nilufar Xamidullaevna²

Military Hospital of Border Military Service of State Security

drbayjanov@mail.ru

irodahonmuhitdinova88@gmail.com

Keywords: aseptic osteonecrosis, COVID-19, leukocytosis, thrombocytopenia, lymphopenia, leukopenia.

Introduction.

Aseptic necrosis of the femoral head (avascular, ischemic necrosis) is a disabling disease caused by insufficient blood supply to the subchondral region of the femoral head. Osteonecrosis is sometimes called "coronary disease of the hip," since the essence of the disease is similar to heart damage of ischemic origin. One of the main causes of avascular necrosis is COVID-19 [1, 2]. Aseptic necrosis of the femoral head is the cause of hip replacement in 5-12% of patients undergoing hip arthroplasty and is an important problem, imposing a huge economic and social burden on patients and the government [4, 5]. COVID-19-associated aseptic necrosis, in addition to clinical manifestations, is accompanied by changes in biochemical parameters and blood coagulation parameters. Available scientific sources contain a certain amount of information that with the development of osteonecrosis, changes in certain laboratory parameters in the blood are observed. The severity of laboratory changes is statistically correlated with the degree of osteonecrosis of the femoral head [3].

The aim of this research: The purpose of this study was to study changes in the composition of peripheral blood in sick military personnel hospitalized in a hospital with post-Covid aseptic necrosis of the femoral head.

Material and methods of research:

The medical records of 24 sick military personnel with post-Covid aseptic necrosis of the femoral head were analyzed. Those examined from the anamnesis were all ill with coronavirus infection for different periods of time (from 6 months to 18 months). All patients included in the study groups were male. In 14 patients, the second degree of necrosis was detected (patients' age 18-50 years, average age 35.6 years, and 10 patients - fourth degree of aseptic necrosis (patients age 19-48 years, average age 33.2 years).

Results: In a comparative analysis of clinical blood test parameters in examined sick military personnel hospitalized at the Military Hospital of Border Military Service of State Security for inpatient treatment with a diagnosis of "Long-COVID-19 associated aseptic necrosis of the femoral head," the hospital found that leukocytosis was detected in 7.1% of patients with the second stage of osteonecrosis and 20.0% with the fourth stage of aseptic necrosis.

Leukopenia in the blood was observed in 21.4 and 50.0% of patients, respectively, in

the study groups ($p < 0.05$). The levels of erythrocytes in the peripheral blood in patients with stage 2 and stage 4 necrosis of the femoral head were 4.1 and $4.5 \times 10^{12}/l$, respectively, with $p > 0.05$.

Lymphopenia was typical for both study groups, i.e. it was observed in 64.2% and 80.0% of patients, respectively.

Thrombocytopenia in the second stage of aseptic post-Covid avascular necrosis of the femoral head was observed in 28.5% of patients, and in the fourth stage - in 60.0% ($p < 0.05$).

Conclusion: Thus, changes in the composition of peripheral blood in sick military personnel with a history of coronavirus infection are one of the factors involved in the formation of post-Covid aseptic necrosis (osteonecrosis) of the femoral head.

References:

1. Guan WJ, Ni ZY, Hu Y et al. China Medical Treatment Expert Group for COVID-19. Clinical characteristics of coronavirus disease 2019 in China. *N Engl J Med* 2020. DOI: 10.1056/NEJMoa2002032
2. Liu Y., Yang Y., Zhang C. et al. Clinical and biochemical indexes from 2019-nCoV infected patients linked to viral loads and lung injury. *Sci China Life Sci* 2020. DOI: 10.1007/s11427-020-1643-8
3. Shostak N.A., Demidova N.A., Kondrashov A.A. et al. Osteonecrosis of the femoral head not associated with trauma: pathogenetic aspects, clinical and instrumental picture / *Medical business*, N2, 2021. - p. 4-16. DOI: 10.24412/2071-5315-2021-12326
4. Wang D., Hu B., Hu C. et al. Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus-infected pneumonia in Wuhan, China. *J Am Med Assoc* 2020. DOI: 10.1001/jama.2020.1585
5. Huang C., Wang Y., Li X. et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 2020; 395: 497-506.