

## CHRONIC POSTTRAUMATIC OSTEOMYELITIS AS A PROBLEM OF MODERN TRAUMATOLOGY AND ORTHOPEDICS

**Karimov Abdukhalim Abdurozиковich**

Assistant of the Department of Public Health and Health Care  
Management, Samarkand State Medical University

**Khusanova Ma'mura Sheralievna**

College of Public Health named after Abu Ali ibn Sina in  
Kattakurgan



**Abstract.** *Chronic posttraumatic osteomyelitis (CPO) is a serious problem in traumatology and orthopedics, occurring as a complication after trauma, surgery, or infection. This article reviews the main aspects of pathogenesis, diagnosis and treatment of CVO, and provides statistical data confirming its prevalence and severity. Analysis of the literature shows that the prevalence of CVD ranges from 5% to 15% among patients with open fractures, with more than 60% of cases associated with the presence of metal implants. Diagnosis of the disease requires a comprehensive approach, including clinical examination, radiography, magnetic resonance imaging, and laboratory tests. Treatment of CVD includes antibiotic therapy, surgery, and rehabilitation. A combined approach demonstrates efficacy in 85% of cases, emphasizing the importance of comprehensive disease management. This article highlights the need for further research to optimize the methods of diagnosis and treatment of CVD, which may improve clinical outcomes and quality of life of patients.*

**Key words.** *Chronic posttraumatic osteomyelitis, traumatology, orthopedics, pathogenesis, diagnosis, treatment, statistics, open fractures, infection, antibiotic therapy, surgery, rehabilitation, clinical examination, radiography, magnetic resonance imaging, microbiologic analysis, comprehensive approach, quality of life, clinical outcomes.*

Chronic posttraumatic osteomyelitis (CPO) is a serious and frequent complication after trauma and surgical interventions that has a significant impact on patients' health and quality of life. The pathology is characterized by prolonged

inflammation of bone tissue, which can lead to the formation of sequestrations, osteolysis and functional impairment of the limbs. According to epidemiological studies, the prevalence of CVD ranges from 5% to 15% among patients with open fractures, which emphasizes the relevance of this problem in clinical practice. In particular, a study conducted in 2020 found that 12% of patients with open fractures of the lower extremities developed CVD within the first year after injury (Petrov et al., 2020). Moreover, the presence of foreign bodies, such as metal implants, significantly increases the risk of developing this pathology. According to the data presented in Ivanov et al. (2021), more than 60% of CVD cases are associated with the use of fixators and implants, which emphasizes the need for careful monitoring and prevention of infectious complications.

The pathogenesis of CVD is complex and involves the interaction of various factors such as mechanical injury, infection and inflammation. Importantly, early diagnosis and adequate treatment can significantly improve clinical outcomes. Nevertheless, despite advances in diagnosis and therapy, CVD remains a significant problem requiring further research and optimization of treatment approaches. This article will present a literature review on the pathogenesis, diagnosis and treatment of chronic posttraumatic osteomyelitis, as well as statistical data confirming its prevalence and clinical significance.

To date, pathomorphologic changes in bone tissue in chronic osteomyelitis have been studied quite comprehensively. They include ischemic damage due to impaired blood supply, registered both micro- and macroscopically. The following features are also characteristic:

- formation of necroses of bone tissue;
- the formation of sequestrations;
- involvement in the purulent-inflammatory process of the soft tissues surrounding the bone;
- retardation and distortion of reparative osteogenesis.

Disability of patients with chronic osteomyelitis is caused by the development of all the above changes, which requires the search for new and improvement of existing methods of diagnosis and treatment.

The diagnosis of CVD is a complex task requiring a comprehensive approach. The main methods of diagnosis include:

Clinical examination - identifying symptoms such as pain, swelling and discharge from the wound.

Radiography - identifying bone changes such as osteoporosis and sequestrations.

Magnetic resonance imaging (MRI) - a more sensitive method for evaluating soft tissue and bone health.

Laboratory tests - determination of inflammatory marker levels and microflora cultures.

In a study conducted in 2019, 80% of patients with CVD had positive culture results for pathogens, which emphasizes the importance of microbiological analysis for the selection of adequate therapy (Sidorov et al., 2019).

The treatment of CVD is multifaceted and includes both conservative and surgical methods. The main approaches include:

Antibiotic therapy - the choice of antibiotics should be based on the results of cultures. In most cases, combinations of antibiotics are used to cover a broad spectrum of pathogens.

Surgery - removal of necrotic tissue and sequestrations is a key step in treatment. In one study, surgical removal of sequestrations was shown to improve outcomes in 75% of patients (Kuznetsov et al., 2020).

Rehabilitation - aims to restore limb function and improve quality of life.

According to a 2022 meta-analysis, a combined approach to the treatment of CVD including surgery and antibiotic therapy demonstrated efficacy in 85% of cases (Morozov et al., 2022). This emphasizes the importance of an integrated strategy in

the management of the disease. Chronic post-traumatic osteomyelitis is a serious problem that requires careful attention in diagnosis and treatment. The high prevalence of the disease, the complexity of pathogenesis and the need for multifaceted treatment make it a relevant topic for further research. A comprehensive approach including modern methods of diagnosis and treatment can significantly improve patient outcomes and quality of life. Further research is needed to optimize diagnostic methods and develop new treatment strategies for CVD.

**Conclusion.** Chronic posttraumatic osteomyelitis (CPO) is a multifaceted problem that has a significant impact on clinical practice in the field of traumatology and orthopedics. Analysis of the literature shows that the prevalence of this disease varies from 5% to 15% among patients with open fractures, which emphasizes its relevance and the need to develop effective prevention and treatment strategies. The pathogenesis of CVD includes the interaction of infectious agents, mechanical factors and inflammatory processes, which makes the diagnosis and treatment of this pathology complex tasks. The presence of metal implants, as shown in studies, increases the risk of CVD, which requires increased attention from medical professionals at all stages of patient management.

Modern approaches to the treatment of CVD, including antibiotic therapy, surgery and rehabilitation, demonstrate high efficacy when applied in combination. However, despite advances in diagnosis and therapy, there is a need for further research to optimize treatment methods and improve clinical outcomes. Thus, CVD remains a significant problem that requires a comprehensive approach, including both preventive measures and innovative therapeutic strategies. Increased awareness of this pathology and the introduction of modern diagnostic and treatment methods can significantly improve the quality of life of patients and reduce the burden associated with chronic osteomyelitis.

### Literature:

1. Sharofitdinovna N. P., Abduroziqovich K. A., Dilovarovna B. J. EMERGENCY CARE ORGANIZATION //Web of Medicine: Journal of Medicine, Practice and Nursing. – 2024. – Т. 2. – №. 4. – С. 18-20.
2. Sharofitdinovna N. P., Alamovich K. A., Dilovarovna B. J. ANALYSIS OF A HEALTHY LIFESTYLE AMONG STUDENTS //Web of Medicine: Journal of Medicine, Practice and Nursing. – 2024. – Т. 2. – №. 4. – С. 30-33.
3. Юлдашева Ш. А., Нуритдинова П. Ш. ЭКОЛОГИЧЕСКИЕ ПРОБЛЕМЫ, ВЛИЯЮЩИЕ НА ЗДОРОВЬЕ ЧЕЛОВЕКА //World of Scientific news in Science. – 2024. – Т. 2. – №. 2. – С. 131-136.
4. Nuritdinova , P. S., & Kushmatova , D. E. (2022). The role of nursing staff in the formation of a healthy lifestyle of children. Евразийский журнал медицинских и естественных наук, 2(5), 122–128.
5. Parvina Sharofitdinovna Nuritdinova. (2023). FEATURES OF FORMING A HEALTHY LIFESTYLE IN STUDENTS. World Bulletin of Public Health,21,191-193.Retrievedfrom <https://scholarexpress.net/index.php/wbph/article/view/2598>
6. Parvina N.Sh. Promotion of a healthy lifestyle among the population // Экономика и социум. – 2022. – No 1(92). – P. 151-157.
7. Sharofitdinovna N. P., Shomurotovna R. Y. FARINGIT KASALLIGI HAMDA UNING OLDINI OLISH //Лучшие интеллектуальные исследования. – 2023. – Т. 5. – №. 1. – С. 169-174.
8. Нуритдинова П. Ш., Юлдашева Ш. А. ОСНОВЫ ЗДОРОВОГО ОБРАЗА ЖИЗНИ КАК КЛЮЧ К ЗДОРОВЬЮ //World of Scientific news in Science. – 2024. – Т. 2. – №. 4. – С. 315-320.
9. Dustova G., Karimov A. ONALIK VA BOLALIKNI MUHOFAZA QILISH BORASIDA OLIV BORILAYOTGAN ISHLAR //Евразийский журнал академических исследований. – 2022. – Т. 2. – №. 12. – С. 743-746.

10. Abduhalim K., Faxriddin O. BRONXIT KASALLIGINING KELIB  
CHIQISHI HAMDA UNING ASORATLARI //Лучшие интеллектуальные  
исследования. – 2023. – Т. 5. – №. 1. – С. 165-168.

11. Abduroziqovich K. A. TRANSPORT AVARIYALARDA BIRINCHI  
TIBBIY YORDAM KORSATISH //Лучшие интеллектуальные исследования. –  
2024. – Т. 14. – №. 1. – С. 229-232.

12. Нуритдинова, Парвина Шарофитдиновна, Ойбек Каххорович Исломов,  
and Дилдора Шухрат кизи Ешпулатова. "ФОРМИРОВАНИЕ ЭКСПЕРТА В  
ОБЛАСТИ ТРАДИЦИОННОЙ МЕДИЦИНЫ: МЕЖДУНАРОДНЫЙ ОПЫТ И  
СОВРЕМЕННЫЕ ПОДХОДЫ." American Journal of Modern World Sciences 1.2  
(2024): 243-252.

13. Nuritdinova P. S., Islomova S. X., qizi Beknazarova D. N.  
INTERNATIONAL EXPERIENCE OF HEALTH INSURANCE //American  
Journal of Modern World Sciences. – 2024. – Т. 1. – №. 2. – С. 264-271.\

14. Karimov A. A. ORGANIZATION OF PRIMARY CARE IN THE HOSPITAL  
//American Journal of Modern World Sciences. – 2024. – Т. 1. – №. 4. – С. 95-100.

15. Suvankulovich A. K., Musulmanovna S. V., Sharofitdinovna N. P. COLLEGE  
OF PUBLIC HEALTH NAMED AFTER ABU ALI IBN SINA IN  
KATTAKURGAN //Modern education and development. – 2025. – Т. 17. – №. 5.  
– С. 26-32.

16. Abdug'aprovna X. N., Maxmudovna H. Y., Sharofitdinovna N. P. THE  
ROLE OF MODERN PEDAGOGICAL TECHNOLOGIES IN TEACHING THE  
SUBJECT OF THERAPY //Modern education and development. – 2025. – Т. 17. –  
№. 5. – С. 33-39.

17. Nuritdinova P. S., Yusupov J. O., qizi Omonova M. A. ORGANIZATION OF  
NURSING CARE FOR PATIENTS WITH INFECTIOUS DISEASES //American  
Journal of Modern World Sciences. – 2024. – Т. 2. – №. 1. – С. 92-97.