

## MODERN APPROACHES TO THE PREVENTION OF SEPSIS AND SEPTIC SHOCK IN SEVERE BURNS

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**ABSTRACT:** Severe burn injuries cause profound metabolic, immunological, and hemodynamic disturbances in the human body. Sepsis and septic shock remain among the leading causes of mortality in burn patients. This article analyzes the pathogenesis of sepsis in burn injuries, major risk factors, and modern preventive and therapeutic strategies. The importance of early diagnosis and комплекс treatment in reducing mortality is emphasized.

**Keywords:** burn injury, sepsis, septic shock, nosocomial infection, intensive care, combustiology.

### INTRODUCTION

Burn injuries are one of the most pressing problems in modern medicine due to their high rates of mortality and disability. Disruption of the skin barrier, suppression of immune defense, and the need for invasive procedures significantly increase the risk of infection. Sepsis is a common and serious complication in burn patients and poses a direct threat to life. Septic shock is a life-threatening complication of severe infections characterized by impaired tissue perfusion, reduced oxygen delivery to tissues, and the development of multiple organ failure syndrome. Septic shock is more common in children, immunocompromised patients, the elderly, and post-abortion cases. Mortality rates may reach up to 25%.

### AIM

To study the mechanisms of sepsis and septic shock development in patients with severe burns and to scientifically analyze modern methods for their prevention.

### MATERIALS AND METHODS

This article is based on an analysis of recent scientific literature, clinical observations, and international clinical guidelines in combustiology. Risk factors for infection, microbiological patterns, and intensive care outcomes in burn patients were evaluated.

### MAIN PATHOGENS

The most common microorganisms isolated in burn units include:

- Staphylococcus aureus
- Pseudomonas aeruginosa
- Klebsiella pneumoniae
- Acinetobacter baumannii

These pathogens often demonstrate high levels of antibiotic resistance.

### CLINICAL MANIFESTATIONS



- Increase or decrease in body temperature
- Tachycardia
- Tachypnea
- Decreased arterial blood pressure
- Altered mental status

Laboratory findings include leukocytosis or leukopenia, elevated C-reactive protein (CRP), and increased procalcitonin levels.

## PREVENTIVE MEASURES

- Early and proper wound management
- Strict adherence to aseptic and antiseptic principles
- Early necrectomy and skin grafting
- Minimal use of invasive devices
- Early enteral nutrition

## TREATMENT PRINCIPLES

- Broad-spectrum antibiotics
- Fluid resuscitation therapy
- Vasopressors (in septic shock)
- Detoxification therapy
- Continuous monitoring and intensive care support

## CONCLUSION

Sepsis and septic shock are among the leading causes of mortality in patients with severe burns. Early diagnosis, strict infection control, timely surgical interventions, and comprehensive intensive care significantly reduce complications and mortality rates.

### **Adabiyotlar ro'yxati**

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