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Session UKR-RF-401 - Ukrainian Virtual Poster Session

Most Common Wound Microbiota in Patients with Different Types of Modern Combat Injuries

June 22, 2025, 9:00 AM - 9:45 AM

Lounge & Learn 3, LACC (outside Exhibit Hall)

Authors

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Disclosures

K.Ksenchyna: None. O.Nazarchuk: n/a. D.Dmytriiev: n/a. R.Chornopyshchuk: n/a. N.Bahniuk: n/a.

Abstract

Relevance: Over the past decades, the number of armed conflicts in the world has increased. However, the number of patients with various types of injuries has also increased. Studying the dependence of the microbial composition of the wound on the traumatic factor is necessary to improve individualized treatment programs. Materials and Methods: We conducted a microbiological study of 100 soft tissue samples collected from wound surfaces in patients with various limb injuries: burns (n=14), mine blast injuries (MBI) (n=22), and gunshot wounds (GW) (n=64). All study participants were men aged 25-60 years. Results: From all the studied samples, we isolated 145 isolates of gram-negative (GNB) and gram-positive bacteria (GPB). In patients with burns, the total number of isolates was 19 (100%), of which 11 (58%) were GNB and 8 (42%) were GPB. The most common were *Staphylococcus aureus* 32%, *Acinetobacter baumannii* 26%, *Klebsiella pneumoniae* 21%, *Pseudomonas aeruginosa* 11%, *Enterococcus faecalis* 5%, *Staphylococcus haemolyticus* 5%. In patients with MBI, the total number of isolates was 31, of which 22 (71%) were GNB and 9 (29%) were GPB: *A. baumannii* 42%, *K. pneumoniae* 19%, *E. faecalis* 13%, *S. aureus* 10%, *P. aeruginosa* 6.5%, *Escherichia coli* 6.5%, *Enterobacter cloacae* 4%. In the group of patients with GW, the total number of isolates isolated was 95, of which 74 (78%) were GNB and 21 (22%) were GPB: *A. baumannii* 29.5%, *K. pneumoniae* 28%, *S. aureus* 10.5%, *P. aeruginosa* 9.5%, *E. faecalis* 8.5%, *E. coli* 4%, *E. cloacae* 1%, *Streptococcus* spp. 1%, *Staphylococcus epidermidis* 1%, *S. haemolyticus* 1%, *Proteus mirabilis* 5%. Conclusions: According to the study results, the prevalence of contamination in patients with GW and MBI was established by GNB, whereas in the group of patients with burns, an approximately equal distribution of GNB and GPB was observed. *S. aureus*, *A. baumannii*, *K. pneumoniae*, *P. aeruginosa* significantly prevailed among the isolated combat wound microbiota. Keywords: limb injuries, microbiota, wound.