

#### 4. FREQUENCY OF MRSA ISOLATION FROM BIOSUBSTRATE OF PATIENTS HOSPITALIZED IN SURGICAL WARDS OF THE REPUBLICAN CLINICAL HOSPITAL

Catan Lilia

*Academic adviser:* **Vorojbit Valentina**; PhD; Associate professor; Department of Microbiology, Virology and Immunology, State University of Medicine and Pharmacy „Nicolae Testemitanu”, Chişinău, Republic of Moldova.

**Introduction:** Methicillin-resistant *Staphylococcus aureus* (MRSA) is a bacterium responsible for several difficult-to-treat infections in humans. It is also called oxacillin-resistant *Staphylococcus aureus* (ORSA). MRSA is any strain of *Staphylococcus aureus* that has developed, through the process of natural selection, resistance to beta-lactam antibiotics, which include the penicillins (methicillin, dicloxacillin, nafcillin, oxacillin, etc.) and the cephalosporins. Strains unable to resist these antibiotics are classified as methicillin-sensitive *Staphylococcus aureus*, or MSSA. The evolution of such resistance does not cause the organism to be more intrinsically virulent than strains of *Staphylococcus aureus* that have no antibiotic resistance, but resistance does make MRSA infection more difficult to treat with standard types of antibiotics and thus more dangerous. MRSA is especially troublesome in hospitals, prisons and nursing homes, where patients with open wounds, invasive devices, and weakened immune systems are at greater risk of infection than the general public. This study provides information about the aggression and dominance of this bacteria, as well the incidence in surgical wards of Republican Clinical Hospital.

**Materials and methods:** The study was conducted on the principle of bacteriological analysis of 139 samples with *Staphylococcus aureus*, from the Register of laboratory investigations, Form no. 250 / e, approved by Ministry of Health of the Republic of Moldova, no. 828 of 31.10.2011. The data obtained were characterized and interpreted statistically: we evaluated the total number of cases of MRSA infection and its incidence comparing with the total number of cases.

**The result of discussion:** In a study of Republican Clinic Hospital, Bacteriological Laboratory, during 2013 were registered 139 cases of infection with *S.aureus*, 39 of them were found to be MRSA, that represents approximately 28% of all staphylococcal infections. Nearly half of the samples with MRSA belonged to patients hospitalized in the department of General Surgery - 48%, Otorhinolaryngology - 18%, Clinic -13%, and Thoracic Surgery - 11%.

**Conclusion:** MRSA is a „super-bacteria" extensively studied in the present, with a strong resistance to methicillin / oxacillin, frequently hospital infection acquired resistance, the most common in the departments of General Surgery and ENT. As in other countries, cases of MRSA are frequent in Moldova, unfortunately they are increasing.

**Key-words:** Methicillin-resistant *Staphylococcus aureus*; Nosocomial Infection „Super-bacteria”

#### 5. ARGININE VASOPRESSIN RECEPTOR ANTAGONISTS IN THE TREATMENT OF CONGESTIVE HEART FAILURE

Carauş Mihaela

*Academic Adviser:* **Stratu Ecaterina**, M.D., Ph.D., Associate Professor, Department of Pharmacology and Clinical Pharmacology, State University of Medicine and Pharmacy “Nicolae Testemitanu”, Chişinău, Republic of Moldova.

**Introduction:** Arginine vasopressin (AVP) is the major physiological regulator of renal water excretion and blood volume. The AVP pathways of V1a Receptor-mediated vasoconstriction and V2 Receptor-induced water retention represent a potentially attractive target for therapy of congestive heart failure, even more that there is a big class of patients which develop resistance at diuretics.

**Purpose and Objectives:** Highlighting the importance of Arginine vasopressin in the evolution of the congestive heart failure and the potential therapeutic benefit of the AVP receptor antagonists.

**Materials and Methods:** The presentation represents an extensive literature review and is based on up-to-date information extracted from 4clinical trials: EVEREST, SALT 1 and 2, OPTIMIZE-HF.