

High frequency of methicillin-resistant Staphylococci detection at post-injecting pyoinflammatory complications in HIV-infected drug users

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Background: In previous studies we have demonstrated the possibility of post-injection pyoinflammatory complications (PIPIC) in HIV-infected IDUs consuming artificial drugs (8-th European Conference on Clinical Aspects and Treatment of HIV-infection, Athens, Greece, 2001, Abst. P 312). In the etiological structure of PIPIC Staphylococci prevailed, while their methicillin-resistance has not been evaluated by us. To determine the role of methicillin-resistant Staphylococci in various forms PIPIC, we carried out an antibiotic sensitivity testing in isolated strains of microorganisms.

Methods: The analysis of purulent material from infectious focus was performed and specimens were studied according to standard bacteriological methods. Susceptibility to antimicrobial agents was tested with the disk-diffusion method.

Results: There were 41 patients under our observation. All of them were IDUs and had HIV-1-infection diagnosis in CDC II stage. Among them there were 24 males and 17 females aged from 18 to 31 years old. In 33 cases PIPIC were presented by abscesses (fig. 1) and in 8 cases – by phlegmones (fig. 2).



Fig. 1. Abscess of the left cubital fossa



Fig. 2. Phlegmon of axilla with the transition to the anterior chest wall

37 monocultures and 4 associations were isolated (Staphylococcus aureus + Staphylococcus epidermidis – 2, S. aureus + Streptococcus pyogenes – 1, S. pyogenes + Neisseria subflava – 1). Gram-positive cocci dominated (95,5%), they were represented predominantly by S. aureus (26 isolates) and coagulase negative staphylococci (S. epidermidis – 8 strains). 9 cultures of streptococci were isolated, most of them - haemolytic streptococci (S. pyogenes – 8, Enterococcus faecalis – 1). Two cultures were attributed to Neisseria species. 62,2% of isolates had a susceptibility to aminoglycosides, 60% - to semisynthetic penicillins, and 46,7% - to fluoroquinolones. Methicillin-resistant staphylococci fraction was 40%, it included 14 cultures of methicillin-resistant S. aureus (MRSA) and 4 isolates of methicillin-resistant S. epidermidis (MRSE). All isolates of MRSA and MRSE retained sensitivity to vancomycin and linezolid.

Conclusions: The data obtained coincide with the general trend of the epidemic spread of MRSA and MRSE in out-of-hospital environment in immunocompetent persons. Empirical antibacterial therapy of PIPIC in HIV-infected IDUs should take into account the high frequency of MRSA and MRSE. This fact must provide a compulsory inclusion of glycopeptide or oxazolidinone antibiotics into the scheme of ethiotropic treatment.