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Evaluation of initial antimicrobial treatment of diabetic foot infection in a regional hospital in Russia.

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Introduction: The spectrum of diabetic foot infections ranges from simple superficial cellulitis to chronic osteomyelitis and necrotizing cellulitis. Infections in patients with diabetes both types are difficult to treat because these patients have impaired microvascular circulation and a poor concentration of antibiotics in the infected tissues. The initial antimicrobial treatment is the most important factor for successful result of management. **Objectives:** The aim of the study was to appreciate a of initial antimicrobial treatment of diabetic foot infection treatment in regional hospital in Russia and compare results to national and world standards of management. **Materials and methods:** We obtained information from 176 medical files of patients who was treated with antimicrobial agents in 2006-2007 in regional hospital in Smolensk Russia. We divided the patients into 2 groups according to PEDIS infection grade: grade 2 or mild infections 58 (33%) and grade 3 or moderate infections 118 (67%) patients.
Results: In the group mild infections as an initial treatment doctors administrated cefasolin 18.9%, amoxicillin 13.8%, ciprofloxacin 12.0%, ampicillin 8.6%, gentamicin 8.6% and other 38.1% (co-trimoxasol, pefloxacin, penicillin, cefepim, cefotaxim, ceftriaxon, amicacin, oxacillin, metronidasol). In the group of moderate infections as an initial treatment doctors administrated cefasolin 27.9%, linkomycin 15.2%, ampicillin 13.5%, ceftriaxon 10.1%, oxacillin 7.6%, gentamicin 7.6%, ciprofloxacin 6.7% and other 11.4% (cefepim, metronidasol, amoxicillin, erytromicin, penicillin). We didn't discover combinations of antimicrobial agents in both groups. **Conclusions:** We used IDSA guidelines to estimate administrations of practitioners. For treatment of mild infections ampicillin and gentamicin are ineffective. Doctors not administrated amoxicillin/clavulanate, clindamicin and levofloxacin for management of diabetic foot infections. In the group of moderate infections combinations of drugs were absent. The main antimicrobial agent was cefasolin in both groups. It was found the lack of modern and effective drugs such as ertapenem, linezolid, piperacillin/sulbactam and levofloxacin. We believe it result from absence of adequate classification of diabetic foot infection in Russia, incorrect prognosis for limb- and life-threatening infections and the lack of effective antimicrobial agents.