

Microbiological profile of diabetic foot osteomyelitis. The role of potentially multiresistant bacteria. Preliminary results.

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Objectives: To describe microbiological profile of diabetic foot osteomyelitis (DFO), and to evaluate the possible association between potentially multiresistant bacteria bone infection and prognosis. **Methods:** prospective observational study over two years and at least 12 months of follow up period in diabetic patients with a foot lesion attended in a multidisciplinary diabetic foot clinic. Culture of post debridement bone biopsy was required to be included. Healing was defined as complete epithelization without amputation and absence of relapse at the end of the follow up period. Bivariate statistical analysis was performed by Fisher exact test or t-Student test for qualitative or quantitative variables, respectively. **Results:** Between June, 2007 and June, 2009, 81 episodes of DFO in 77 patients have been evaluated. Polimicrobial flora including gram negative microorganisms was isolated in 39 episodes, 50% in ulcers that were present for less than one month. Staphylococcus aureus (SA) was the main microorganism isolated (28/81), including 5 Meticillin-resistant Staphylococcus aureus (MRSA), followed by plasmococcal negative staphylococcus (PCNS) (22/81). Non fermenting gram negative bacteria (NFGNB) were the main microorganisms isolated (14/81) among the gram negative group (34/81). 12/23 (52%) of SA, 13/22 (54%) of PCNS and 7/14 (50%) of NFGNB were isolated as monomicrobial infection. 79%, 96% and 100% of SA isolates (MRSA not included) were susceptible to ciprofloxacin, amoxicillin/clavulanic acid and cotrimoxazole respectively. Among the gram negative group (excluding NFGNB), 38% were resistant to amoxicillin/clavulanic acid, 15% to ciprofloxacin and 11% to both. 7/14 (50%) of NFGNB were resistant to ciprofloxacin. 73% of PCNS were susceptible to cotrimoxazole. Until this moment, 47 episodes have finished the follow up period. Conservative treatment was successful in 33, 8 underwent minor amputation and 6 didn't heal. Conservative treatment failure was not associated with MRSA, NFGNB or PCNS bone infection. **Conclusion:** Presence of polimicrobial flora and potentially multiresistant bacteria should be considered in the initial management of deep infected diabetic ulcers in our setting. Until this moment we have not found an association between MRSA, NFGNB or PCNS bone infection and worse prognosis.