PREVALENCE AND ASSOCIATION OF MULTIDRUG RESISTANT ORGANISMS (MDRO) AND LEVELS OF GLYCOHEMOGLOBIN A1C IN PATIENTS WITH DIABETIC FOOT INFECTION IN NICARAGUA.

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Background: MDRO are a relevant problem in patients with diabetic foot infection. Their association with levels of HbA1c has not been clearly established. Purpose: To determine the prevalence and association between MDRO – methicillin resistant Staphylococcus aureus (MRSA) and Gram negative bacilli producing extended spectrum beta lactamase (ESBL) – with the levels of glycohemoglobin A1c (HbA1c) in patients with diabetic foot infection. Methods: A retrospective study in Hospital Metropolitan Vivian Pellas and Hospital Bautista in Managua, Nicaragua from January 2009 to December 2012. The bacterial identification and the antibiotic susceptibility were performed with Microscan®. Different clinical variables were measured, with emphasis in metabolic control (levels of HbA1c) and their association with the presence of MDRO. Results: 51 patients were included in the final analysis. The mean age was 66.3 ± 14.1 years. The mean level of HbA1c was 9.8 ± 2.1%. A total of 70 microorganisms were identified. S. aureus (48.6%), K. pneumoniae (14.3%), E. coli (12.9%), and coagulase-negative Staphylococci (10.0%) were the most frequent microorganisms. 20.6% of the S. aureus were MRSA, 70.0% of the K. pneumoniae and 44.4% of the E. coli were ESBL positive. The global prevalence for MRSA, K. pneumoniae and E. coli ESBL positive were 10.0%, 10.0%, and 5.7% respectively. A significant higher mean level of HbA1c was observed in patients with K. pneumoniae ESBL positive (11.8% vs 8.2%), p=0.01. Conclusion: K. pneumoniae ESBL positive was associated with higher levels of HbA1c. There was not association of levels of HbA1c and MRSA or E. coli ESBL positive.