TITLE: EVALUATION OF THE PRESENCE OF BACTERIAL SPECIES OF CLINICAL INTEREST IN SAMPLES OF WATER AND SOIL ON A PUBLIC SQUARE

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Community spaces, such as squares and parks, are physical places that aim to coexist and carry out various leisure activities. These have a natural habitat of microorganisms, representing a source of contamination due to the presence of pathogenic and multiresistant bacteria, such as *Escherichia coli*, *Staphylococcus aureus* and *Pseudomonas aeruginosa*. The propagation of these agents is favored by human contact with the environmental elements, such as water and soil, arranged in ornamental structures. This scenario represents a serious problem in the treatment of infectious diseases, especially in immunocompromised individuals. The objective of this work was to isolate bacteria of clinical interest in soil and water samples from Praça da Liberdade, located in the south-central region of Belo Horizonte (MG). Were obtained four soil and water samples from Praça da Liberdade. Soil samples were enriched in nutrient broth for 48 hours, aiming to promote bacterial growth. The enriched medium was diluted subsequently and seeded in duplicate in a specific culture medium, Baird Parker, Cetrimide and EMB. The water samples were seeded directly into the specific medium, in duplicate. Plates with the seeded samples were incubated at 36-37 °C for 48 hours. Subsequently, bacterial colonies isolation was carried out taking in to the consideration the colony individual morfology and the purity of the colonies, which was verified based on the Gram technique. In total, 84 bacterial colonies were isolated, 38 present in the water samples and 46 bacterial colonies present in the soil. There was no evidence of bacterial growth in the water sample isolated from the single water drinker in the square. The other colonies presented intrinsic characteristics related to the selective medium. Was observed prevalence of Gram-positive bacteria with bacillary morphology and saprophytic characteristics. There was also presence of bacteria with characters suggestive of the *Enterobacteriaceae* family, and to a minor extent, colonies with particularities of the *Micrococcaceae* family. Environmental samples present high ubiquity of microorganisms, with intrinsic variations among strains of the same species. The spread of multiresistant bacteria in widely spaced spaces should not be neglected. It is suggested to carry out new studies with a broader approach to other classes of microorganisms, in an attempt to better understand the phenomenon.

Keywords: *Drug Resistance*, *Enterobacteriaceae*, *Soil Biological Communities*