

TITLE: EVALUATION OF THE PREVALENCE OF *LISTERIA MONOCYTOGENES* IN HIV POSITIVE PREGNANT WOMEN

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Abstract:

Listeriosis is an infection caused by *Listeria monocytogenes* and affects, mainly, pregnant women, elderly, children and immunosuppressed individuals. The main route of transmission is through the ingestion of contaminated food, which makes this bacterium a relevant pathogen among the diseases transmitted by food (DTA, in Portuguese). In pregnant women, listeriosis can be asymptomatic or exhibit symptoms similar to influenza. However, in certain cases, like in HIV positive pregnant women, listeriosis can be fatal. The goal of this study was to evaluate the prevalence of *Listeria monocytogenes* in HIV positive pregnant women, in the second and third trimesters of gestation, by analyzing the feces with the traditional microbiological method and with the molecular method of Chain Reaction Polymerase (PCR). The pregnant women participating in this study are part of the Program of Assistance to HIV Positive Pregnant Women from the Institute of Child Care Martagão Gesteira / University Hospital Clementino Fraga Filho (IPPMG/UFRJ). Bacteriological steps of isolation, phenotypic and molecular characterizations were developed in the Bacterial Zoonoses Laboratory, IOC / FIOCRUZ. A total of 79 feces samples were seeded in selective medium for *Listeria* and submitted to cryoenrichment in *Listeria* Enrichment Broth (LEB) for 30 days at 4-8°C. These samples were also seeded in the primary and secondary enrichment media Modified University of Vermont I and II (UVM I and UVM II), and plated in PALCAM medium and blood agar base supplemented with defibrinated sheep blood at 5%. The phenotypic characterization followed the methodology defined by Gasanov *et al.*, 2005. The DNA for molecular detection of *Listeria* spp. was extracted with the QIAamp DNA Blood Mini Kit, following the kit instructions, from the fresh feces and from the cryoenrichment after 15 and 30 days. Two primers, 23S rDNA (*Listeria* genus marker) and *hly* (*L. monocytogenes* hemolysin marker) were utilized in the PCR. Preliminary results of this study showed that of the 79 (100%) stool samples analyzed, 7 (8.8%) were positive for *Listeria* spp. Three samples were identified as *Listeria innocua*, representing 3.79% of the total, and four samples were identified as *Listeria monocytogenes*, representing 5.06% of the total. This result indicates the possible circulation of *L. monocytogenes* in the gastrointestinal tract of those patients.

Keywords: *Listeria monocytogenes*; Listeriosis; Pregnant women; HIV.