TITLE: STUDY OF CELL MIGRATION IN INTRAPERITONEAL INFECTION BY ESCHERICHIA COLI IN MICE SWISS

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ABSTRACT:
Escherichia coli (*E. coli*) is present in the gut of humans, in addition to being in the microbiota of healthy individuals, however when its presence is associated with immunosuppressed individuals or even when occurs a violation barriers present in the gastrointestinal tract, not pathogenic strains can cause infection and damage to the same. The present work was performed at the Filadelfia University Center (UniFil), and had as main objective to evaluate the cell migration in Swiss mice infected experimentally via intraperitoneal by different variety of *E. coli*. Were divided into 4 groups (mice infected by *E. coli* enterohemorrhagic (EHEC-EDL 993), *E. coli* enteroinvasive (EIEC EDL – 1284), *E. coli* (ATCC 25922) and a negative control without bacteria. A suspension containing 1 x 10^5 CFU/ml of *E. coli* (EHEC, EIEC, ATCC) were inoculated intraperitoneally into a single dose in certain groups. After periods of zero (control), 30 minutes, 3, 6, 12 and 24 h inoculation of bacteria. For obtaining peritoneal exudate were inoculated 4 mL of intraperitoneal saline solution. Reading the leukocytes of samples from the exudates of mice. The results may show that the migration of leukocytes to the peritoneal cavity comes to occur differently among the strains studied front to infection with *E. coli*. It was observed that the amount of leukocytes present in the peritoneal cavity of infected animals by EHEC strains and had a significant higher EIEC those of standard strains ATCC. Animals infected with the standard strain showed an increase in the number of leucocytes in peritoneal cavity, where it reached its peak in 12h after infection (4 x 10^3), and declined from 12h (3, 3 x 10^3), i.e. with the cell migration leukocytes recruited affecting on microorganism disposal studied, what didn't happen with virulent strains. In animals infected with EHEC and EIEC numbers of leukocytes in the peritoneal cavity reached the maximum after 12h the infection (6,37x10^3; 9,57x10^3; $p < 0.001$). The adaptive response of animals began after the 6h of infection, but this infection had not yet ceased until the 12h After the completion of this study it can be concluded that the amount of defense cells that have migrated to the peritoneum of the infected animals by EIEC strains and were significantly larger EHEC, when compared with the amount that migrated to the peritoneum of animals infected by the ATCC strains.

Keywords: Cell Migration, *Escherichia coli*, Immunity and Infections, innate immune response, Leukocytes.

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