

TITLE: STUDY OF HISTOPATHOLOGICAL PROFILE OF INTRAPERITONEAL INFECTION BY DIARRHEOGENIC STRAINS AND NOT DIARRHEOGENIC OF ESCHERICHIA COLI IN SWISS MICE.

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ABSTRACT: E. coli can be an extremely versatile and often fatal pathogen, causing various intestinal diseases and intestinal extra through its virulence factors that affect multiple cellular processes. Infection with entero- Escherichia coli (EHEC-EDL 993) is associated with gastroenteritis that manifests as diarrhea bloody or blood, and not in severe cases of hemolytic uremic syndrome development (HUS). This work aimed to establish a relationship between histopathological results of the early stages of infection in mice intraperitoneally for Escherichia coli enterohemorrhagic. For this, 64 swiss mice were used, divided in 3 groups (control, ATCC 25922 and EHEC) in 24 hours, euthanized and evaluated the morphological changes of small intestine cuts in portion of the jejunum. The use of animals followed the rules established by the Brazilian College of Animal experimentation, and the trial Protocol approved by the Committee of ethics in Animal experimentation of Philadelphia University Center (number 001/2014). According to the parameters analyzed, noticed a predominance of infiltration of inflammatory cells, hemorrhagic foci adjacent basal lamina, decreased amount of Goblet cells in mice infected with EHEC compared to the control group and ATCC corroborating previous studies. On the other hand there was the decrease in the size of the villi that intestinal portion by strain not diarrheogenic, thus it is possible to correlate the tropism of the diarrheogenic strain for the distal portion of the small intestine that is observed in natural bacteria pathogenic infection, so the villi by this strain had no significant changes, but still to be very virulent caused the bleeding. So we can conclude with this histopathological analysis that EHEC strains and ATCC cause different pathogenicity mechanisms both to the host as the defense.

Keywords: *Escherichia coli*, histopathological changes, intraperitoneal infection.

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