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Pathogenicity test of *Vibrio parahaemolyticus* mucinase

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Mucin, epithelial mucus glycoproteins, which line the respiratory and intestinal tracts of mammals, consists of repeating polypeptide sequences that are modified by oligosaccharide chains attached to serine or threonine residues. It has been supposed that mucinase is the critical extracellular enzymes of pathogenic bacterial infection. Mucinase from *Vibrio parahaemolyticus* was partially purified from the culture supernatant by ammonium sulfate precipitation, Q-Sepharose ion-exchange chromatography and Sephacryl S-100 gel filtration. MTT assay and mouse infection experiment were carried out to examine the toxicity of the mucinase. Mice were infected by injecting 200μg of partially purified mucinase into the abdominal cavity. After 7 days, mice were anatomized and jejunum, ileum and large intestine were isolated. The decrease of the number and size reduction of goblet cells on the jejunum, ileum and large intestine was observed. The decrease of the goblet cells was remarkable on the large intestine. This result suggests that the mucinase may play a role in the adhesion and invasion of *Vibrio parahaemolyticus* into the host intestinal tract.