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Adhesion molecule of *V. cholerae* can prevent the leaking of fluid from intestinal cells of mice

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The first step of the pathogenesis of cholera which is due to *Vibrio cholerae* (*V. cholerae*) have to attach onto enterocyte. Enterobacteriaceae usually use fimbriae or outer membrane protein (Omp) as an adhesive protein. Up to nowno researchers have reported that the adhesive proteins *V. cholerae* which found in the pili or Omp of the bacteria. If the adhesive molecules have been found and subsequently the research can be continued with the aim is to determine whether *V. cholera*e adhesion molecule if used as an antigen has the ability in producing antibody and it can prevent the leaking of fluid from intestinal cells in mice.

Fimbriae protein isolation methods using bacterial pili cutter. Omp taken from *V. cholerae* cells by which the fimbriae have been shearedfrom the cell and solubilize using the solvent of N-Octyl-Glycopyranoside (NOG) 0.05%. Sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) was used to monitor the protein profile. Screening of adhesive molecules by using the hem agglutination method. Confirmation of adhesion molecule is done by calculating index of adhesion which use enterocyte. For detecting the activity of adhesive molecule *V. cholerae* for producing antibody and which can to prevent the leaking of fluid from intestinal cells in mice using a Mice Legated Ilea Loop (MLIL) test and cholera toxin (ct) sub unit B as adjuvant.

Research results have clarified that the adhesion molecules of *V. cholerae* have been found in fimbriae as well as in OMP and turned out to have identicalMW 37.8kDa, but under natural conditions OMP adhesive has MW 75.6 kDa. The test results protectives adhesive protein of 37.8 kDa MW fimbriae with adjuvant ct subunit B produce antibodies that can prevent the leaking of fluid into the lumen of the small intestine of mice.

Protein adhesives with MW 37.8 kDa*V. cholerae* in the future may be can to be developed as acellular vaccine candidate cholera.

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