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Reviewing Pathogenesis about cholestasis (updating information)

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Abstracts

contamination food with *Vibrio cholera* causes acute diarrhea responsible for ~99,000 deaths per year worldwide and has been extensively studied in human patients. However, there is limited data in animal tissues about the effect of oral infection with *vibrio cholera* on pathology and immunology or DNA damage in the reproductive organs of laboratory animals. Reporting data showed that Bacterial infection with *Vibrio's cholera* caused liver necrosis; kidney abscesses and brain degeneration with increased expression of CD4's and CD8's marker's. A well as causing generic's damage and mutations in XY and XX gens.

INTRODUCTION

Pathological reports on *cholera spp.* pathogenicity depending on experimental work in mouse rats and rabbits (1, 2, 3). Also studying the intestinal model explains some aspects of the main pathology of specialized lesions (4) *cholera* infections experimentally can cause clear damage in the liver and gall bladder and bile in rabbits (5) Cholera primary is an acute infection and can be fatal if there is no treatment's (6)(7). Virulence of *Vibrio cholera* course throws mucosal adherence on mucosal surfaces of the intestine and its producing enterotoxin causes very dangerous pathognomonic lesion, evident reported on electron microscopy, characterized by the dissolution of the brush border of the enterocyte at the site of attachment.(8) *V. Cholerae* reach the critical locus anatomic site of host-bacterium interaction in the wall of the proximal small intestine and attempts to put down the host's nonspecific defense mechanisms of peristalsis and a mucus layer coating the small intestinal luminal space (9) Motility supplying via the vibrio's unipolar flagellum it's an important virulence's properties' that allows *V. cholerae* to rapidly enter the mucus-secreting epithelial layer and still down in intervillous's spaces within minutes to a few hours (10) Surface antigens on *V. cholerae* that adhere to mucosa include lipopolysaccharide (LPS) flagella sheath protein and other flagella's antigens is also considered the most dangerously virulent factors (11). There's poor information on the pathogenesis of cholera in laboratory animals and there are no studies bout pathology and zoonosis in different



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animal species and different pathological investigations. We aim to make reviewing in some pathological and immunological effects of cholera on the tissues of rats, mice and rabbits also collect data's in the examined DNA of the testicular and uterus tissues of mice. In order to open the door to different future study on different animal species, we go to improving that *V. cholerae* can infect different animal species as well as human beings.

MATERIALS AND METHODS

Depending on experimentally data reports of the author's previous work in concern of *vibrio cholera* pathology as well as zoonotic effects in different type of lab animals .(1;2;3;4;5)

RESULTS AND DISCUSSION

Cholera induces watery diarrhea in animal models due to toxic secretions within intestinal villi (15)(16). Information and data about pathogenesis and zoonosis of vibrio cholera infection via human feces with vibrio cholera caused general necrotic and hemorrhagic lesions mainly in the intestine, liver; brain, and genital tract on rat, mice, or rabbits. These lesions look more predominant in dead animals than not dead animals which looked like sick animals before scarifying at the end of experiments and these observations agreed with the author's opinions mainly in mice and rats (17)(18)(19).as well as agreed with the author's opinions in rabbits (20). *V. cholera* caused general necrotic lesions associated with virulence factors mainly toxin and flagella protein.(21). And caused increased lymphocyte markers CD4 and CD8 usually associated with immune suppression due to lipopolysaccharide and other proteins secreted by Vibrio Cholera causes immune reaction appear in rat's lymphoid tissues as heavy brownish coloration due to depositions of immune marker over lymphocytes(22) Effects of *V cholera* from human stools on pathology and immunology in humans have been reported(23)(24)(25). Reported data about CD4: CD8 percent in rat's immune tissues and DNA damage scores in mouse's spermatocytes samples were studied when chemotherapy was injected in mice and rats were probably suffering secondary bacterial infection (22) Data reported necrotic lesions in the kidney, brain, liver, testes and lymphoid organs of rabbits and rats and mouse .others authors study mainly intestine model(26)(3)or liver model(5). The author's workers revealed marked loss of spermatogenesis (Azoospermia) with necrotic changes in the testes and uterus with papillary protrusion and degenerative and necrotic changes which may be attributed to virulence of cholera's toxin as reported previously (22) As well as they observed deletion, translocation of chromosomes) on TK (11qE2)/XY gene as described by author's results (27) Kaper et al., (1988). Mortality increased with time according to some author's experiments as showed previously that the limited number of sick animals survive only (20%) of the total population (28)(29). Other



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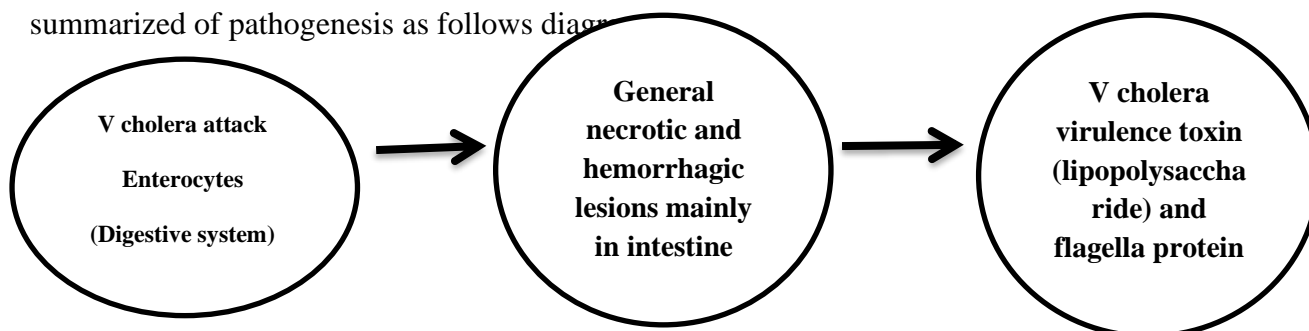
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authors found that wells waters contain different types of virulence pathogens (30). **Conclusion:** summarized of pathogenesis as follows diagram



The above diagram done by Dr. Hashim M.S.Alamery 2024.

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