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The study of preventive effects of *Saccharomyces boulardii* on the lesions caused by *Salmonella typhimurium* in broiler chickens.

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Salmonellosis is an infectious disease of all animal species caused by a number of different species of *Salmonella* and manifested clinically by acute septicaemia or enteritis. Many recent investigation suggested that some probiotics such as *Saccharomyces boulardii* can inhibit multiplication of enteropathogenic bacteria, such as *Salmonella*, *in vitro*, and it is possible that it can prevent pathological changes caused by them. This study was conducted to investigate the preventive effects of *Saccharomyces boulardii* on the pathologic effects of *Salmonella typhimurium* lesions in broiler chickens. Thirty conventional broiler chickens were divided in two groups randomly, the experimental group (n=15) and control group (n=15). Blood samples were obtained from all chickens for detection of ALT and AST values. Chickens in the experimental group received 1ml of saline contained 3.3×10^7 CFU of *Saccharomyces boulardii* orally for three days and chickens in the control group received only 1 ml of saline. On day four all chickens were challenged orally with 5×10^5 *Salmonella typhimurium*. On day ten, after obtaining blood samples, all chickens were euthanized and specimens of liver and different parts of intestine were fixed in 10% buffered formalin solution for histopathological examination. Serum levels of ALT and AST increased significantly in the control group but did not show any significant changes in the experimental group. At necropsy no macroscopic changes were detected in the liver and intestine in either group but microscopic changes were observed in the control group. The results of this study indicate that *Saccharomyces boulardii* has preventive effects on the development of microscopic lesions associated with *Salmonella typhimurium* infection in broilers chickens.