

Study on bacterial translocation of intestine and endotoxin concentration of plasma in obstructive jaundice

Tie-Feng Shi, Wei-Liang Yang

Tie-Feng Shi, Wei-Liang Yang, Department of Surgery, Second Affiliated Hospital, Harbin Medical University, Harbin 150086, Heilongjiang Province, China

Author contributions: All authors contributed equally to the work.

Correspondence to: Dr. Tie-Feng Shi, Department of Surgery, Second Affiliated Hospital, Harbin Medical University, Harbin 150086, Heilongjiang Province, China

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Abstract

AIM: To observe intestinal bacterial translocation and plasma endotoxin concentration in obstructive jaundice.

METHODS: Sixty Wistar rats with an average weight of 220-250 g were used in the experiments. The animals were randomized to undergo ligation and division of the common bile duct (CBD) or sham ligation. The *Escherichia coli* (O₅₅B₅) were labeled by fluorescein at a final concentration of (5×10^6 cfu/L). Specimens of distal

myenteric lymph nodes (MLN), liver, spleen were obtained on the 7th postoperated, blood was collected and endotoxin was measured.

RESULTS: There was a significant ($P < 0.01$) increase in mean (s.e.m) serum bilirubin and significant ($P < 0.05$) improvement on endotoxin concentration. There was no evidence of colonization in MLN, liver, spleen in control rats. In contrast, 20 of 30 CBD-ligated rats labeled *E. coli* in MIN was found in and damage of intestinal mucosa occurred in rats with experimental obstructive jaundice.

CONCLUSION: Bacterial translocation from gastrointestinal tract and endotoxin to the blood stream are central to current theories of sepsis. Our study suggests that the gut is a primary source of infection in obstructive jaundice.

Key words: Jaundice; Endotoxin/blood; Bacterial translocation; Intestine/microbiology

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