

## **Bacterial translocation in acute liver failure induced by 90 per cent hepatectomy in the rat.**

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### **Cited In:**

Br J Surg. 1993 Jan;80(1):66-71

### **Bacterial translocation in acute liver failure induced by 90 per cent hepatectomy in the rat.**

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### **Abstract**

Bacterial infection and bacteraemia have been observed in patients with acute liver failure. The exact source of bacteria and nature of pathophysiological mechanisms explaining the development of infection remain unclear. In the present study, acute liver failure was induced by 90 per cent hepatectomy in the rat. The mesenteric lymph nodes and organs were harvested aseptically for bacteriological culture after sham operation or 90 per cent hepatectomy. Function of the liver and reticuloendothelial system (RES) was assayed; gut oxygen extraction was also measured. Translocation of enteric bacteria occurred 2 h after operation and increased with time following hepatectomy. Overgrowth of *Escherichia coli* in the distal small intestine started 2 h after operation. RES function decreased immediately after 90 per cent hepatectomy; uptake rates per gram tissue in other organs increased significantly. These results indicate that bacterial translocation occurred early after 90 per cent hepatectomy, associated with a decrease in RES function and gut oxygen extraction, and overgrowth of intestinal bacteria.

### **Reference**

Anand, A.C., Irshad, M., Acharya, S.K., Gandhi, B.M., Joshi, Y.K. and Tandon, B.N.: Fibronectin in acute and sub-acute hepatic failure. *Journal of Clinical Gastroenterology* 11(3): 314-319, 1989