

论著

## 肠系膜淋巴管结扎对MODS大鼠的器官保护作用

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**摘要** 目的: 观察结扎肠系膜淋巴管对二次打击致大鼠MODS的肝、肾、心的功能及形态的保护作用。方法: 雄性Wistar大鼠均分为结扎组、未结扎组、假手术组3组。前两组以失血-LPS二次打击方法, 复制大鼠MODS模型。手术创伤后24 h, 全部存活大鼠颈总动脉放血备检; 选择固定位置, 留取肾、肝、肺、心, 观察病理形态。所有动物实验前后的血清均检测TBA、AST、ALT、TP、Aib、BUN、Cr、UA、LDH、LDH-1、HBDH、CK、CK-MB这些反映肝、肾、心功能的生化指标。结果: 二次打击后, 未结扎组与结扎组大鼠血清AST、ALT、TBA、BUN、Cr、LDH-1均显著高于实验前及假手术组( $P<0.01$ ), 且结扎组大鼠血清ALT、TBA、BUN、Cr、UA均显著低于未结扎组( $P<0.01$ ), 结扎组的UN与实验前及假手术组无统计学意义, 未结扎组UN则显著增高( $P<0.01$ ); 病理形态学观察表明, 假手术组的肾、肺、肝、心组织结构基本正常, 未结扎组可见淤血、变性、坏死等改变, 而结扎组病变轻微, 少见坏死。结论: 肠系膜淋巴管结扎可降低失血、LPS二次打击致MODS大鼠器官功能障碍程度和形态学损伤, MODS发病学中的淋巴机制值得重视。

**关键词** [多器官功能衰竭](#); [淋巴系统](#); [结扎术](#)

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## Protective effect of mesenteric lymph duct ligation on organ functions in MODS rats

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### Abstract

<FONT face=Verdana>AIM: To study the protective effect of mesenteric lymph duct ligation on the functions of liver, kidney and heart, and morphology in multiple organ dysfunction syndrome (MODS) rats subjected to two-hit. METHODS: Male Wistar rats were divided into three groups: the mesenteric lymph duct ligation group, the non-ligation group and sham group. The MODS model of two-hit was established by bleeding and LPS administration in both ligation group and non-ligation group. After 24 h, all rats were cannulated to facilitate blood withdrawal for serum sample, then all rats were killed and organs including kidney, liver, lung and heart were collected for making microscopic sections. The biochemical indexes of hepatic and renal functions and myocardial enzyme in serum were determined before and after experiment. RESULTS: After two-hit, the serum contents of AST, ALT, TBA, BUN, Cr and LDH-1 in both non-ligation group and ligation group, and UA content in non-ligation group were obviously increased than those in pre-experiment and sham group ( $P<0.01$ ). The serum contents of ALT, TBA, BUN, Cr and UA in ligation group were obviously lower than those in non-ligation group ( $P<0.01$ ,  $P<0.05$ ). The tissue structures in kidney, lung, liver and heart in sham group were normal. However, congestion, degeneration and necrosis were found in organs in non-ligation group, and only mild lesions were found in ligation group. CONCLUSION: The results demonstrate that the ligation of mesenteric lymph duct improves the disturbance of organ function and pathomorphological variation in MODS rats subjected to two-hit by hemorrhage and LPS. The lymphatic mechanism in MODS should be worth to pay attention in further study.</FONT>

**Key words** [Multiple organ failure](#) [Lymphatic system](#) [Ligation](#)

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