

论著

部分液体通气对急性肺损伤小猪肺组织结构及气体交换的影响

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摘要 目的: 探讨以perfluorocarbon (PFC)为媒介的部分液体通气(PLV)对灌洗后急性肺损伤小猪肺组织病理变化及气体交换的影响。方法: 采用肺灌洗诱导小猪急性肺损伤(ALI)后, 将动物分为两组: PLV组和传统机械通气(CV)组。分别在ALI前、ALI及ALI后1、2、3、4 h 6个时间点观察动脉血气指标的变化, 实验结束后取8个不同部位的肺组织做病理切片。结果: PLV组灌注PFC后PaO₂高于CV组、AaDO₂显著低于CV组; 病理切片比较: PLV组病变轻于CV组, 两组上部肺叶病变均轻于下部肺叶, 具有统计学差异(P<0.05), CV组前部肺叶病变轻于后部肺叶, 具有统计学差异(P<0.05), PLV组肺组织炎症细胞浸润程度明显轻于CV组肺组织。结论: 急性肺损伤后, 以PFC为媒介的部分液体通气能明显提高肺氧合能力, 升高PaO₂。

关键词 [部分液体通气](#); [氟碳](#); [急性肺损伤](#); [病理](#)

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Effect of partial liquid ventilation with PFC on gas exchange and lung histopathology in piglets with acute lung injury

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Abstract

AIM: To observe the effect of partial liquid ventilation on gas exchange and histopathological changes of lung in acute lung injury. METHODS: After acute lung injury (ALI) was induced by saline lavage, twenty piglets were assigned randomly to 2 groups: partial liquid ventilation with perfluorocarbon (PFC) group (PLV) and conventional gas ventilation group (CV). The changes of gas exchange were examined before ALI, during ALI and at 1,2,3,4 h after ALI, and histological sections taken from 8 different parts of lung were stained by H & E. RESULTS: The PaO₂ significantly increased and alveolar-arterial oxygen gradient (AaDO₂) markedly decreased in PLV group compare with CV group (P<0.05); the histopathological lesions of lung were less severe in PLV group than CV group, and less severe in upside,foreside of lung than downside, backside of lung in two groups (P<0.05). Moreover, the inflammation of lung was inhibited in PLV group compared with CV group. CONCLUSION: Partial liquid ventilation with PFC can inhibit inflammation in the lung, improve the oxygenation of lung and increase the PaO₂ during acute lung injury.

Key words [Partial liquid ventilation](#); [Perfluorocarbon](#); [Acute lung injury](#) [Pathology](#)

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