

综述

## 中性粒细胞在急性肺损伤中的作用机制研究进展

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**摘要** 急性肺损伤 (ALI) 的本质是多种炎性介质及效应细胞共同参与的肺内过度性、失控性炎症反应。中性粒细胞 (PMN) 在其中发挥了重要的作用, 本文主要从整合素、Ca<sup>2+</sup>-钙调蛋白的信号通路及PMN凋亡延迟等方面综述PMN在ALI中的作用机制。β<sub>2</sub>整合素在PMN向肺内募集和激活的过程中发挥重要作用; Ca<sup>2+</sup>在ALI形成过程中有复杂的信号转导通路, 1-磷酸鞘氨醇、神经垂体腺苷酸环化酶激活蛋白、钙调蛋白都在Ca<sup>2+</sup>介导的信号通路中发挥了重要作用; 抗IL-8: IL-8免疫复合物、PMN跨越内皮-上皮屏障、髓过氧化物酶、NF-κB激活可能都参与了PMN凋亡延迟。

**关键词** [急性肺损伤](#) [中性粒细胞](#) [整合素](#) [Ca<sup>2+</sup>信号通路](#) [细胞凋亡](#)

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## Mechanism of neutrophils in acute lung injury: a research progress

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### Abstract

It is currently believed that the essence of acute lung injury (ALI) is an excessive and uncontrolled inflammatory response involved with kinds of inflammatory mediators and effector cells in which polymorphonuclear leukocyte (PMN) play a key role. The mechanisms on PMN in ALI were reviewed from the signal transduction pathway of integrin and Ca<sup>2+</sup>, and the delay of PMN apoptosis. β<sub>2</sub>-Integrins play an important role in the recruitment of PMN to the lungs and the activation of PMN; Ca<sup>2+</sup> has a complicated signal transduction pathway in the course of ALI formation in which sphingosine-1-phosphate, pituitary adenylate cyclase activating polypeptide (PACAP) and calmodulin play a significant effect. Anti-IL-8: IL-8 immune complexes, endothelium-epithelium bilayer transmigration of PMN, myeloperoxidase and activated NF-κB may involve in the delay of PMN apoptosis.

**Key words** [acute lung injury](#) [neutrophils](#) [integrin](#) [Ca<sup>2+</sup> signal pathway](#) [apoptosis](#)

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