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60% TBSA full-thickness burns) were cannulated with Swan-Ganz tubes before operation. Under close monitoring of hemodynamics and blood gases, the burn eschar was extensively excised and the wound was thoroughly covered with homo- and/or auto-grafts. **Results:** In one operation, the largest area of eschar excision was 60% and the maximal operating area including excised eschars and donor sites was 71% TBSA. The parameters of hemodynamics and tissue oxygenation were transiently decreased during the operation and quickly restored and returned to the normal in 24 hours postoperatively. None of the 10 patients sustained organ complications. All the patients were cured and discharged after an average hospitalization of 45.9 days. **Conclusion:** Under close supervision, extensive eschar excision in one operation not only is feasible but also can shorten the course of treatment, reduce the incidence of complications and increase the healing rate. However, proper indications should be considered.

Key words major burns; extensive escharectomy

烟雾吸入伤大鼠肺内部分磷脂酶 A_2变化特征与氟碳溶液部分液体通气影响的实验研究

Experimental studies on the changes of certain pulmonary phospholipases A_2, and on the effect of partial liquid ventilation with fluorocarbon after smoke inhalation injury in rats

杨天德 杨宗城 黎 鳌 (第三军医大学附属西南医院烧伤研究所) 重庆, 630038

吸入性损伤是当前严重烧伤病人的主要死亡原因之一,是肺源性脓毒血症的重要来源及引起全身性感染与多器官功能障碍的重要诱因。研究吸入伤的发生机理,寻求新的治疗措施具有重要的临床实用价值。在大鼠烟雾吸入伤模型上,我们着重观察了烟雾吸入伤后肺内部分磷脂酶 A_2(PLA_2)的变化特征以及氟碳溶液部分液体通气对烟雾吸入伤的影响。

结果与结论: (1)烟雾吸入伤后肺内 PLA_2呈现特征性变化: PLA_2-I mRNA表达持续降低,直到伤后 24 h才有所恢复; PLA_2-II mRNA表达从伤后 3 h开始进行性增强,伤后 24 h仍维持高水平的表达,激活的中性粒细胞和肺泡巨噬细胞可能是 PLA_2-II mRNA表达的重要来源; 85×10^3 u PLA_2的变化出现早,持续时间长,从伤后 1 h开始增加,伤后 6 h达峰值,伤后 24 h仍高于正常对照组动物。在肺组织匀浆和细胞膜上的 PLA_2活性的变化有一定差别,伤后肺组织匀浆 PLA_2活性进行性增加,而膜上 PLA_2活性仅伤后 3~6 h有明显增加,其中 85×10^3 u PLA_2, PLA_2-II 增加可能是烟雾吸入伤肺内 PLA_2变化的主要根源。

(2)烟雾吸入伤后 PLA_2酶蛋白合成与激活参与了烟雾吸入伤高通透性肺水肿形成、肺细胞膜破坏与膜功能的损害过程,引起肺水含量增加,膜磷脂及组份含量下降,膜流动性与膜 ATPases活性降低以及 PAF TXB_2、6K-$PGF_{1\alpha}$大量产生。

(3)缺氧、中毒和脂质过氧化反应增强等引起的细胞钙浓度增加、中性粒细胞扣押和肺泡巨噬细胞活化以及 TNF_α、IL-6、IFN_α释放参与了 PLA_2的合成与激活,并共同参与烟雾吸入伤失控性炎症反应的发生、发展过程。

(4) PLA_2抑制剂氯喹、地塞米松(特别是氯喹)可以降低烟雾吸入伤肺毛细胞血管的通透性,减轻 PLA_2对肺细胞膜的破坏作用,维护膜功能,对烟雾吸入性肺损伤具有一定的保护作用。

(5) PLV和 MV对烟雾吸入伤大鼠血气、肺水含量、毛细血管通透性、血乳酸、丙酮酸、肺 PLA_2活性及 TXB_2、6K-$PGF_{1\alpha}$无明显改善作用,但 PLV明显增加烟雾吸入伤大鼠肺静态顺应性,减轻支气管、小支气管周围水肿套的形成与严重程度,而 MV无任何改善作用,说明 PLV对烟雾吸入伤的治疗具有潜在的应用价值。

关键词 烟雾吸及伤; I-组磷脂酶 A_2; II-组磷脂酶 A_2; 磷脂酶 A_2; 氟碳; 部分液体通气; 烟雾吸入; 大鼠

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