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发者,实验组动物血浆内 LPS浓度的降低,提示机体炎症反应的减轻,血清 TNF-α 浓度的降低也说明这点。在本实验模型中,除绿脓杆菌的 LPS引起 TNF-α 升高外,烧伤的其它因素也可使 TNF-α 浓度的升高。但猪源 BPI可显著降低 TNF-α 峰值浓度,说明可能由 LPS引起的 TNF-α 分泌在其中占主要地位。猪源 BPI在改善葡萄糖代谢方面的作用主要表现在 1 h后维持葡萄糖浓度在一较高水平,而对 1 h葡萄糖浓度的增加,推测可能与动物对双重打击的应激有关[3~4]。

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Therapeutic effects of pig bactericidal/permeability increasing protein on septicemia after burns in rats*

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Abstract Objective: To investigate the therapeutic effects of pig bactericidal/permeability increasing (BPI) protein on septicemia after burns in rats. Methods: After 84 rats were randomized into two groups of burned septicemia and BPI protein treatment, the levels of whole blood bacteria count, plasma endotoxin, serum TNF-α, glucose and lactate were determined. Results: After treatment with BPI protein, the whole blood bacteria count and the levels of plasma endotoxin, serum TNF-α, glucose and lactate were significantly decreased. Conclusion: BPI protein can exert marked therapeutic effects on septicemia after burns.

Key words pig bactericidal/permeability increasing protein; burned sepsis; endotoxin; rat

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溴环胺己醇对头孢克肟肺内渗透作用的影响

Influence of ambroxol on the lung tissue penetration of cefixime

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溴环胺己醇(Ambroxol,安普索)是新一代粘液溶解剂及肺表面活性物质合成激活剂。1981年 Wiemeyer等[1]报告溴环胺己醇能提高鼠肺羟氨苄青霉素(Amoxieillin)的浓度。1987年 Gene等[2,3]在人体肺组织中也得出与 Wiemeyer报告相同的结论,并认为溴环胺己醇可以提高 β-内酰胺类抗生素对肺组织的穿透能力。本文采用观察支气管肺泡灌洗液(BALF)中头孢克肟(Cefixime,世福素)的含量,评价溴环胺己醇对头孢克肟肺组织穿透力的影响。

1 观察对象及方法

1.1 观察对象

选择20例住院需作纤维支气管镜检查的住院病人。随机分为两组,对照组 8例,实验组 12例。对照组男性 6例,女性 2例,除 1例为肺结核外均为肺癌病人,平均年龄(56.4± 9.29)岁。实验组男性 10例,女性 2例,其中肺癌 9例,肺中叶不张 2例,支气管扩张 1例,平均年龄(55± 6.09)岁。

1.2 药物及给药方法

溴环胺己醇由美国加利福尼亚大药厂生产,深圳协和医药实业有限公司提供。头孢克肟由广州白云山制药总厂生产提供。两组病例均口服头孢克肟 0.1 g,每日 2次,连服 3 d实验组加服溴环胺己醇 60 mg,每日 3次,同样连服 3 d两组病例均在行纤维支气管镜检查前 3 h最后 1次服药。

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Changes of extracellular martix in human proliferative glomerulonephritis and its significance

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Abstract Objcetive: To measure the contents of Hyaluronic (HA), Laminin (LN) and Procollagen type-3 (PC-3) in the extracellular matrix and to explore its effects in the mechanism of glomerulus cirrhosis. Methods: Thirty two proliferative glomerulonephritis patients and 15 cases of normal renal tissues were mesaured with radioimmunoassay. Results: HA, LN and PC_3 significantly increased. Conclusion: HA, LN and PC-3 play important roles in the mechanism of glomerulus cirrhosis.

Key words proliferative glomerulonephritis; extracellular martrix; radioimmunoassay

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1.3 标本收集与测定

按常规方法,行纤维支气管镜肺泡灌洗(BAL)。灌洗选择病人右肺中叶或左肺舌叶,需避开肺部病变区域。用消毒生理盐水 40 ml~ 60 ml,分 2~ 3次行肺泡灌洗。同时,抽取受检者静脉血 2 ml(不抗凝)送检。

把上述血液和 BALF标本,用 Weters810高压液相色谱仪分别测出每个标本中头孢克肟的含量;同时,用常规方法测定 BALF中蛋白含量,整个过程采用双盲法,数据经计算机处理。

2 结果

两组 BALF中头孢克肟和蛋白含量和两组病例血浆头孢克肟水平,见附表。以上数据应用 SPLM软件进行统计学分析。结果 BALF中头孢克肟含量两组差异显著($P < 0.05$),其蛋白含量和头孢克肟血浆浓度两组差别不显著($P > 0.05$);BALF中单位蛋白头孢克肟含量,两组差异显著($P < 0.05$)。说明实验组 BALF的单位蛋白头孢克肟含量较对照组高,且增高达 72.79%。BALF中蛋白含量对此结果无影响,实验组 BALF中单位蛋白头孢克肟含量,两组差异显著($P < 0.05$)。说明实验组 BALF的单位蛋白头孢克肟含量较对照高。

附表　**BALF**和血浆中头孢克肟和蛋白水平及其比值 ($\bar{x} \pm s$)

组别	n	支气管肺泡灌洗液			血浆
		头孢克肟	蛋白含量	头孢克肟/蛋白	头孢克肟
对照组	8	0.086± 0.045	0.54± 0.220	0.225± 0.246	0.908± 0.676
实验组	12	0.148± 0.055*	0.370± 0.321	1.882± 0.205*	0.686± 0.389

*: $P < 0.05$ 与对照组比较

3 讨论

抗生素的治疗效果,取决于抗生素在感染局部的浓度和病原菌对抗生素的敏感性。本研究观察发现,溴环胺己醇与头孢克肟联合用药,可提高 BALF中头孢克肟水平,而对头孢克肟的血浆浓度无影响。其机制,可能与以下因素有关:① 由于本两组血浆头孢克肟水平差异不大,不能用抗生素的主动扩散解释。而两组 BALF中单位蛋白头孢克肟含量,仍是实验组的比值高于对照组 8.3倍。Braude[4]认为这种单位蛋白含量更能反应药物在肺组织中的实际浓度。由此 BALF中头孢克肟水平与 BALF中蛋白含量无关,而与溴环胺己醇有较密切的关系。② 溴环胺己醇是一种粘液溶解剂,它可以改变肺泡膜的结构和功能,增加Ⅱ型肺泡细胞和表面活性物质的合成[2,5,6]。同时,它还能使肺泡膜变薄,肺泡毛细血管扩张,血流速度加快,有利于头孢克肟向肺泡内渗透。

此外,有人认为[7,8]溴环胺己醇可以:① 抑制支气管粘膜腺体及杯状细胞中酸性粘多糖的合成,裂解痰液中的酸性粘多糖纤维,以此降低痰液粘稠度,有利于痰液排出体外;② 提高支气管粘膜上微纤毛运动及排送能力,加强了呼吸道的廓清作用。综上所述,我们认为溴环胺己醇与头孢克肟联合应用,可以提高头孢克肟穿过血-肺屏障的能力,从而增加肺组织局部头孢克肟的浓度,有利于肺部的抗感染治疗。

关键词　溴环胺已醇;头孢克肟;支气管肺泡;灌洗液
中图法分类号　R563.1

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