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(收稿日期:2013-01-14)

(本文编辑:贾津津)

· 科技快讯 ·

连续输注 β 内酰胺类抗菌药物治疗严重脓毒症的多中心临床试验

β 内酰胺类抗菌药物是治疗严重脓毒症的常用药物, 尽管该类药物具有充足的药物效应动力学理论依据, 支持连续性给药方式, 但目前常规仍然采用间歇性给药。本前瞻性双盲随机对照试验将澳大利亚和中国香港地区 5 家 ICU 共 60 例脓毒症患者分为连续性给药组和间歇性给药组, 给予的抗菌药物为哌拉西林/他唑巴坦、美罗培南和替卡西林/克拉维酸, 探讨不同给药方式在药代动力学及临床疗效方面的区别。结果显示: 用药第 3、4 天时, 连续性给药组 82% (18/22) 的患者血药浓度高于最低有效浓度, 而间歇性给药组仅 29% (6/21) 的患者血药浓度高于最低有效浓度, 差异具有统计学意义 ($P = 0.001$); 连续性给药组患者的临床治愈率 (70%) 也明显高于间歇性给药组 (43%, $P = 0.037$)。连续性给药组、间隙性给药组患者出院时的存活率分别为 90%、80%, 组间比较差异无统计学意义 ($P = 0.470$)。28 d 内非 ICU 住院时间的统计中, 连续性给药组为 19.5 d、间歇性给药组为 17.0 d, 组间比较差异无统计学意义 ($P = 0.140$)。该试验初步证明: 与间歇性给药相比, 连续性给药的血药浓度更高, 临床疗效也更好, 但尚需进一步大规模多中心临床研究验证。

祝筱梅, 编译自《Clin Infect Dis》, 2013, 56(2):236-244; 姚咏明, 审校

应用稳定释放一氧化氮的纳米颗粒治疗烧伤后小鼠白色念珠菌感染

白色念珠菌是烧伤真菌感染最常见的致病菌, 病死率高。已有研究证实, NO 具有抗真菌、调控免疫、促进修复的多重效应。本研究采用最近开发的一种价格适中且可稳定释放 NO 的纳米颗粒 (NO-np), 将其体外作用于白色念珠菌培养体系和用于治疗烧伤复合白色念珠菌感染模型的小鼠。研究结果显示, 体内外实验中 NO-np 均可抑制白色念珠菌生长以及芽管、假菌丝形成, 呈现出有效的酵母相和菌丝相的双相抗真菌性。同时 NO-np 还能显著促进烧伤感染创面愈合, 减少局部白细胞浸润、真菌负荷和胶原蛋白降解。本研究结果提示, NO-np 有可能成为治疗烧(创)伤感染创面的新型抗真菌药。

祝筱梅, 编译自《Front Microbiol》, 2012, 3:193; 姚咏明, 审校