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mice. **Methods**: One LD_{50} dose of LPS was injected to challenge mice, and different dose of BPI modeling peptides was injected within 20 s after the challenging and then 5 mg·kg^{-1}/10 mg·kg^{-1} dose of BPI modeling peptides was injected pre/post the challenging respectively, to observe the protective or preventive effects of BPI modeling peptides on the LPS challenged mice. **Results**: It was found that BPI modeling peptides had a significant protective effect on endotoxin (20 mg/kg) challenged mice and when the peptides administered with LPS at the same time or after that of LPS within 10 s, it had a significant protective effects, and when administered 30 min after that of LPS, it had no significant protective effect; when administered 60 min to 10 s before LPS challenging, it still had a significant protective effect. **Conclusion**: BPI modeling peptides seems had a much longer half-life time and the protective effect on LPS challenged mice could be better than that of BPI.

Key words BPI; modeling; peptide

鼠用连续输液装置的设计和应用

Development and appliance of continous rat infusion device

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体液支持、静脉营养支持、静脉内持续给药在临床上心肺复苏、严重创伤、多脏器功能障碍等病人救治中是非常重要和有效的措施[1,2],但尚难以在大鼠等小动物顺利开展有关此领域的系列研究,原因是缺乏能确保鼠在自由活动情况下能给鼠持续输液或给药的途径和输液设备,国外虽有类似的设备,但价格太昂贵。为此设计出一套鼠用连续输液装置,现介绍如下。

输液装置的设计:(1)设计思路:实验结束后,随着麻醉药作用的消失,鼠开始苏醒、增加活动,就难以给鼠进行持续输液和给药,如何解决鼠既能自由活动,又不影响持续输液,就必须解决两个问题:① 近鼠端输液单元与远离鼠输液单元既相互独立又相互联系,既要确保近鼠端输液单元与远离鼠输液单元的活动是独立的、毫不联系的,但它们相互之间又是连续的、不能中断输液的;② 近鼠端输液单元必须随着鼠的活动而随意活动、又不被鼠咬断、扭转、折断,而远离鼠输液单元又必须保持相对固定、不能随意转动。换句话说,两个输液单元之间的连接必须既是连续的又是可随意转动的。(2)设计原理:我们选用了尖利的输液针和软性、耐刺的高质量橡胶材料,利用输液针在刺透较薄的橡胶层后可任意转动、阻力小的特性和原理,以达到两个输液单元之间既是连续的又是可随意转动的目的。(3)材料和组成:分为近鼠端输液单元和远鼠端输液单元,见图 1。(4)主要特性:① 设计合理;② 简便实用、易学;③ 价格低廉;④ 既可自行设计,也可成套购置;⑤ 在实验观察期间,既能保证鼠能自由活动、自由进水、自由进食,又可减少因限制笼限制实验动物活动而引起的直接或间接影响实验动物观察结果的各种应激反应。

应用情况:该输液装置已被部分科研单位和多个研究所所采用,已完成 ω-3脂肪酸、1,6-二磷酸果糖和谷胺酰胺对移植小肠的营养作用等多项研究课题。

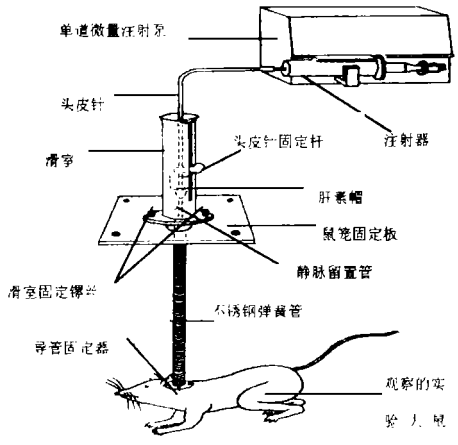


图 1 鼠用连续输液装置结构示意图

关键词 鼠;输液装置
中图法分类号 R197.39

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