



防黏连材料预防术后盆腔黏连的动物模型的构建

任常¹, 朱兰¹, 孙继超^{2*}

¹中国医学科学院 北京协和医学院 北京协和医院妇产科, 北京 100730; ²中国医学科学院 北京协和医学院 医学实验动物研究所新药安全评价研究中心, 北京 100032

Creation of An Animal Model for Post-operative Adhesion Prevention

REN Chang¹, ZHU Lan¹, SUN Ji-chao^{2*}

1Department of Obstetrics & Gynecology, PUMC Hospital, CAMS and PUMC, Beijing 100730, China; 2Centre of Drug Safety Evaluation and Research, Institute of Laboratory Animal Sciences, CAMS and PUMC, Beijing 100032, China

摘要

参考文献

相关文章

Download: PDF (4555KB) HTML 1KB Export: BibTeX or EndNote (RIS) Supporting Info

摘要 目的 在实验动物大耳白兔体内构建子宫术后盆腔黏连的动物模型, 并观察黏连情况, 以进一步评价防黏连材料对防止子宫创伤术后盆腔黏连的效果, 探讨其可能的机制。方法 制备大耳白兔双子宫角创伤术后盆腔黏连模型, 对其围手术期及术后黏连情况进行观察。分别于术后3、7、14、28、42 d处死并观察实验动物盆腔黏连情况并评分。结果 手术建模过程顺利, 大耳白兔双子宫角模型可在三维状态下评价其盆腔黏连形成情况; 纱布磨损、针持夹伤和直接损伤缝合均可引起大耳白兔子宫术后盆腔黏连, 其中直接损伤大耳白兔子宫更能模拟妇科术后盆腔情况。术后3 d是纤维蛋白吸收的关键时期, 7 d是腹膜间皮修复所需要的时间, 而胶原在术后14 d左右达峰值。术后28 d防黏连材料应已吸收, 此时观察可以证实防黏连效果以及防黏连材料的吸收。术后42 d能帮助了解防黏连材料消失后其防黏连效果是否能持续存在。结论 直接损伤大耳白兔双子宫角模型是理想的妇科术后黏连实验动物模型。术后3、7、14、28及42 d 5个观察时间点可以帮助全面了解盆腔黏连的形成过程。

关键词: 子宫 兔 动物模型 手术 盆腔黏连 防黏连材料

Abstract: Objective To establish a rabbit double uterine horn model for assessing the time-course of pelvic adhesions and evaluating the effectiveness of different anti-adhesive materials in reducing adhesions. Methods A total of 330 Japanese white rabbits underwent laparotomy, followed by uterine horn incision. Animals were euthanized after 3, 7, 14, 28, and 42 days, respectively. Results The surgical procedure was smooth. Rabbit double uterine horn model was applied for the evaluation of pelvic adhesions in a three-dimension fashion. Each of the three means-gauze abrasion, needle holder clamping, and direct uterine incision induced postoperative pelvic adhesions, among which direct uterine incision was the best to mimic conditions after gynecological operations. Under normal circumstances, degradation of filmy fibrinous adhesions by locally released proteases of the fibrinolytic system occurred within 3 days of injury. The regeneration of the mesothelium was completed within 7 days. Collagen reached its peak by day 14. Anti-adhesive materials were supposed to be completely absorbed by day 28, and their effectiveness in preventing pelvic adhesions was confirmed at this time point. Whether their effect can be maintained after the absorption of the anti-adhesive materials was investigated in 42 days. Conclusions The animal model was successfully established. It well mimics the postoperative pelvic adhesions after direct uterine horn injury and thus is a suitable model for studying site-specific adhesions. Observations on the 3rd, 7th, 14th, 28th, and 42nd post-operative days provided a full picture of the adhesion formation process.

Keywords: uterus rabbit animal model surgery pelvic adhesion anti-adhesive barrier

Received 2011-06-30;

Corresponding Authors: 朱兰 电话010-65295647, 传真010-65295284 Email: zhu_julie@vip.sina.com

引用本文:

任常, 朱兰, 孙继超. 防黏连材料预防术后盆腔黏连的动物模型的构建[J] 中国医学科学院学报, 2012, V34(2): 109-115

REN Chang, ZHU Lan, SUN Ji-chao. Creation of An Animal Model for Post-operative Adhesion Prevention[J] CAMS, 2012, V34(2): 109-115

链接本文:

http://www.actacams.com/Jwk_yxkxy/CN/10.3881/j.issn.1000-503X.2012.02.003 或
http://www.actacams.com/Jwk_yxkxy/CN/Y2012/V34/I2/109

Service

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ Email Alert
- ▶ RSS

作者相关文章

- ▶ 任常
- ▶ 朱兰
- ▶ 孙继超

