

论著

小鼠胚胎发育中期肠细胞增殖与凋亡的研究

谢永芳;舒坤贤;梁亦龙;袁 帅;张继承

重庆邮电学院生物信息学院,重庆 400065

收稿日期 2004-3-15 修回日期 2004-5-10 网络版发布日期:

摘要 背景与目的: 探讨小鼠胚胎中期肠发育过程细胞增殖与凋亡的变化规律及相关基因P21、Ki-ras在肠发育中的表达意义。材料与方法: 对胚胎中期的小鼠肠组织,采用免疫组织化学及切口末端标记法(TUNEL),观察小鼠肠发育过程中的细胞增殖与凋亡。用原位杂交的方法检测P21、Ki-ras在胚胎肠发育中期的表达。结果: 肠组织在E12d有一个较大的增长,而到E13d、E14d的生长趋于稳定。P21、Ki-ras基因的表达主要在肠上皮细胞,随胎龄增长而表达颜色加深。结论: 胚胎发育中期细胞增殖与凋亡相伴存在。P21、Ki-ras基因在胚胎肠发育中期有表达,说明这两个细胞周期调控基因在胚胎肠发育中期起一定的作用。

关键词 [细胞增殖](#); [细胞凋亡](#); [P21](#); [Ki-ras](#); [肠](#)

Cell Proliferation and Apoptosis in the Developing Intestine of Mouse

XIE Yong-fang; SHU Kun-xi an; LIANG Yi -long; et al

Biology College, Chongqing University of Posts and Communications, Chongqing 400065, China

Abstract **BACKGROUND & AIM:** This study is to explore the dynamic trends of cell proliferation, apoptosis and the expression significance of involved genes as P21 and Ki-ras in developing intestines of mouse. **MATERIAL & METHODS:** Intestine tissues were taken from different developmental phases of kunming mouse. Immunohistochemistry and TUNEL techniques were adopted to observe the variation of cell proliferation and apoptosis and the expression characteristics of P21 and Ki-ras were detected by in situ hybridization. **RESULTS:** We discovered that cell proliferation increased greatly in the 12th day while from the 13th to the 14th the proliferation maintained stead raise. With the development of embryo, the expressions of P21 and Ki-ras have a darker colour in the epidermic cell of intestines. **CONCLUSION:** Cell proliferation was accompanied by apoptosis during the development of mouse intestine. The dynamic changes of both ratios might be correlated to the different structures appearing in different developmental process. The possible function of P21 and Ki-ras might be correlated to the developmental process of middle embryo intestine.

Keywords [cell proliferation](#) [apoptosis](#) [P21](#) [Ki-ras](#) [fetal intestine](#)

DOI

通讯作者 舒坤贤 kxshu@163.com

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [\[PDF全文\]\(503k\)](#)
- ▶ [\[HTML全文\]\(42k\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [Email Alert](#)

相关信息

- ▶ [本刊中 包含“\[细胞增殖\]\(#\); \[细胞凋亡\]\(#\); \[P21\]\(#\); \[Ki-ras\]\(#\); \[肠\]\(#\)”的 相关文章](#)
- ▶ [本文作者相关文章](#)
- ▶ [谢永芳;舒坤贤;梁亦龙;袁帅;张继承](#)