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论著

人芽囊原虫对实验感染昆明小鼠肠黏膜超微结构的影响

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摘要

目的 观察昆明小鼠感染人芽囊原虫后肠黏膜超微结构的改变，探讨人芽囊原虫的致病机制。 方法 20只昆明小鼠随机分为4组：A和D组为接受免疫抑制剂（地塞米松）处理，B组不用地塞米松处理，C组为正常对照组。A组和B组经口感染20^4人芽囊原虫包囊等，C组和D组灌注等量Locke氏液作为对照。感染6 d后，剖杀各组小鼠取回盲部肠黏膜处理后，扫描和透射电镜下观察其超微结构。 结果 扫描电镜下见A、B两组人芽囊原虫寄生在小鼠回盲部肠腔和肠黏膜表面，个别虫体入侵肠黏膜及肠黏膜皱襞，部分肠黏膜微绒毛呈局灶性破坏；透射电镜下见部分吸收细胞表面微绒毛数目减少，吸收细胞和杯状细胞线粒体水肿，粗面内质网扩张、脱颗粒，间质内淋巴细胞浸润及嗜酸粒细胞增多。A组病变程度比B组重，C组和D组未见异常。 结论 感染人芽囊原虫的昆明小鼠回盲部肠黏膜超微结构有严重的损害，肠黏膜损伤程度受机体免疫状态的影响。

关键词 人芽囊原虫 小鼠 肠黏膜 透射电镜 扫描电镜 超微结构

分类号

Impact of Blastocystis hominis Infection on Ultrastructure of Intestinal Mucosa in Mice

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Abstract

Objective To observe the ultrastructural change of intestinal mucosa in mice infected with *Blastocystis hominis*, and to study the pathogenic mechanism of *B.hominis* infection. Methods 20 Kunming mice were randomly divided into 4 groups： group A treated with immunosuppressant （dexamethasone）, group B without immunosuppressant, group C as normal control and group D as immunosuppressant control. Groups A and B were then orally infected with 20^4 cysts of *B. hominis*. Groups C and D were treated as control by infusing same volume of Locke's solution. Six days after inoculation, mice in each group were killed and mucosa of ileocecum was observed by transmission electron microscope （TEM） and scanning electron microscope （SEM）. Results Under SEM, *B. hominis* located in enteric cavity and on the surface of ileocecum mucosa. Individual parasites also invaded into mucosa and its fold. Partial destruction of microvilli on the mucosa was observed. TEM observation indicated a reduction of microvilli on the surface of absorptive cells. Mitochondrial edema, rough endoplasmic reticulum dilatation and degranulation were found on absorptive cells and goblet cells. Lymphocyte infiltration and eosinophilia were found in intercellular stroma. Pathological changes in group A were more serious than that of group B. No abnormal change on the mucosal ultrastructure was found in groups C and D. Conclusions *B. hominis* infection causes significant ultrastructural lesion on the ileocecal mucosa in mice. Immune status of the mice can affect the degree of the lesion due to infection.

Key words *Blastocystis hominis* Mice Intestinal mucosa Transmission electron microscope (TEM) Scanning electron microscope (SEM) Ultrastructure

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