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Induction of eosinophil apoptosis and expression suppression of IL-5 and GM-CSF mRNA in allergic asthma with tripholide in guinea pigs*

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Abstract Objective: To study the effects of tripholide on eosinophil apoptosis and suppression of expression of interleukin-5 (IL-5) and granulocyte/macrophage colong-stimulating factor (GM-CSF) in the airway of guinea pigs with allergic asthma. Methods: Guinea pigs were randomized into asthmatic, tripholide-treated and control groups. Eosinophil apoptosis in BALF was observed with TUNEL method and the expression of IL-5 GM-CSF mRNA with ISH. Results: The rate of eosinophil apoptosis was significantly lower in the asthmatic group than in the tripholide-treated and control groups ($P < 0.01$). The intenaity of expression of IL-5 and GM-CSF mRNA in the pulmonary tissues was far higher in the asthmatic group than in the tripholide-treated and control groups ($P < 0.01$). In the asthmatic group, the rate of eosinophil apoptosis was negatively correlated to the expression intensity of IL-5 and GM-CSF mRNA in the pulmonary tissues. Conclusion: Tripholide may play a role to suppress the allergic manifestations in the airways during asthma.

Key words asthma; eosinophil; tripholide; apoptosis; interleukin-5; granulocyte/macrophage colong-stimulating factor; guinea pig

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十二指肠胰肾联合移植 1例营养治疗

Nutritional therapy for a case of duodenum, pancreas and renal united-transplantation

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1 临床资料

患者女,52岁,住院号 162742,患I 型糖尿病 19年,因慢性肾功能衰竭,糖尿病眼底改变,于 1998年 11月 13日入我院肾内科行十二指肠胰肾联合移植术前准备。入院时一般情况差,身高 140 cm,体重 40.5 kg,左上臂围 21 cm皮褶厚度 11 mm,血糖 16.1 mmol/L,尿糖卌,尿蛋白卄,血常规 WBC 10.6 × 10^9/L, RBC 2.42× 10^{10}/L, HB 74 g/L, PLT 175× 10^9/L,血肌酐 939.2μmol/L,血尿素氮 26.3 mmol/L,肝功能 TP 66 g/L, Alb 33 g/L, Glb 33 g/L, A/G= 1,转氨酶正常。入院后给予高热能,高蛋白饮食治疗,体重增加至 45 kg,于 1998年 12月 15日行十二指肠胰肾联合移植术。术后营养支持分阶段进行,第一阶段为外周静脉营养,于术后第 2天至术后第 4天,因此期肾功能尚未恢复同时合并有创伤性胰腺炎,故要求低脂低蛋白。静脉营养组成包括脂肪乳、氨基酸, 5%葡萄糖,林格氏液,总热能 2.5~ 3.3 MJ/d,蛋白质 34 g/d,氮∶热= 1∶(110~ 150)。第二阶段静脉营养为主,肠内营养为辅,于术后第 4天开始,先用米汤试餐,试餐

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the PC12 cells. Observation was performed at the 10th min, 4th h and 12th h respectively. **Results**: The supernatants of the two types of glial cells had no significant effects on the neurites of PC12 cells. However, the oligodendrocyte and its debris had strong inhibitory effects on them at the 10th min, 4th h and 12th h as compared with the control group. The neurites of PC12 cells collapsed and became shorter as soon as the oligodendrocyte and its debris were added. In the primary culture, the neurons next to oligodendrocytes showed no neurites and outgrwoth. On the other hand, it was rarely found that the neurites of neurons could not extend but have no retract and collapse when the neurons reached the astrocytes. **Conclusion**: Some inhibiting substance may attach to the membrane of oligodendrocytes and it can inhibit the growth of neurites but can not be released into the supernatant. The astrocytes can only mechanically prevent the elongation of neurites.

Key words　rat; glial cell; pheochromocytoma cell; culture

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后出现腹痛,腹胀,血、尿淀粉酶升高故未增加其它食物,仍以浓米汤 50 ml 3次 /d口服,以维持肠道正常消化吸收功能。术后第 8天患者腹痛症状减轻后开始进食低脂半流质饮食。所用食物为菜稀饭、烂面条、肉松为主,此期通过肠道供热约 1.3 MJ/d静脉供热 2.3 MJ/d,总热能约 3.3~ 3.8 MJ 蛋白质约 40 g/d 第三阶段,从术后 14d开始以肠内营养支持为主,静脉营养为辅,营养原则为低脂、高蛋白、高维生素,所给食物为软米饭、嫩菜、清炖鸡、鸭汤,排骨汤等,肠内供热 5.0 MJ/d,静脉供热减少至 0.8 MJ/d 第四阶段,术后 1个月为恢复期,此期完全由肠道供给营养,饮食原则为低脂、低胆固醇、高蛋白为主,总热能 5.9 MJ/d,蛋白质 70~ 80 g/d 经以上营养治疗,于术后 1月切口缝线全部拆除,体重增加至 46 kg,左上臂围 23.5 cm,皮褶厚度 31 mm,未出现胰漏等并发症,在术后完全不用胰岛素的情况下,血、尿糖控制正常,肝、肾功能正常,血淀粉酶正常,于术后 3月痊愈出院。

2 讨论

十二指肠胰肾联合移植术是多器官联合移植术中难度较大的手术。由于患者长期患病及腹膜透析,营养状况较差。加之手术打击、术后创伤性胰腺炎需要较长时间的禁食,加重了营养不良的程度。术后要渡过肾功能恢复期,创伤性胰腺炎期,在大剂量应用免疫抑制剂的情况下,在新移植的胰腺胰岛功能对血糖的反馈抑制未建立时,在不用胰岛素的情况下完全靠限制热能的摄入来控血、尿糖的浓度这些都增加了营养支持的复杂性和难度。胰腺移植后病人在大剂量应用免疫抑制剂抑制排斥反应的情况下,如果热能及营养素供给不足,可发生胰漏、切口不长等并发症。通过本例营养治疗,我们体会到:① 病情允许应及早进食,以利于维持消化道正常消化吸收功能,预防因长期禁食所致的肠内细菌及毒素引起的败血症[1]。胰肾联合移植术后进食时间的早晚取决于移植胰腺过程中胰腺受损伤的程度,在严密观察下,如果无明显胰腺炎的症状,应及早用低脂无糖流质试餐,进食后无腹痛、腹胀症状,血、尿淀粉酶无明显增加可改用低脂高蛋白高维生素半流汁。恢复期宜进食低胆固醇、低盐、高纤维素食物,限制钾盐饮食,长期口服酵母片促进消化功能[2]。② 关于脂肪乳的使用问题。脏器移植术后对于脂肪乳的使用尚有争论,主张使用的人认为,脂肪乳产热高,并可补充必需脂肪酸,对身体代谢有益,利于达到正氮平衡[3]。不主张使用的人认为,脏器移植后慢性排斥发生发展的原因较多,除免疫抑制不足,HLA配型急性排斥的发生,反应性抗体,凝血时间等因素外,还同受者血中低密度脂蛋白水平及其同总胆固醇的比值升高有关系[4]。脏器移植后都常规使用了激素及环胞素 A等免疫抑制剂,这些药物都可以引起体内代谢紊乱,使血糖、血脂增高,具有潜在的移植物动脉粥样硬化作用[5]。另外肝肾功能不全,胰腺炎时使用脂肪乳也可以出现高甘油三酯血症。所以在胰肾联合移植术后脂肪乳宜慎用。③ 恢复期中要适当控制能量摄入,以保持理想体重,体重憎加过快将影响体内环胞素 A的浓度而增加环胞素 A的用量。

关键词　十二指肠;胰肾联合移植;营养
中图法分类号　R657.505

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