

肠外高营养对重症溃疡性结肠炎患者血清胃动素,肽YY, IgG 和糖蛋白含量的影响

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Effects of parenteral hyperalimentation on serum motilin, peptide YY, IgG and glycoproteins in severe ulcerative colitis

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Abstract

AIM: To study the effects and clinical significance of parenteral hyperalimentation on levels of serum motilin, peptide YY, IgG and glycoproteins in patients with severe ulcerative colitis.

METHODS: Eighty-nine patients (males 51, females 38, age 23-57 years) with severe ulcerative colitis were examined with colonoscope, barium enema, the diagnosis was confirmed histologically. Bacterial infection was excluded through twice consecutive stool cultures. And ameba, schistosomiasis, gastroenteritinal cancer and endocrine diseases were also excluded. Ulcerative colitis was found in sigmoid ($n=45$), descending colon ($n=21$), colon splenic flexure ($n=15$) and transverse colon ($n=8$). Its clinical categories included relapse ($n=44$), persistent ($n=30$) and initial ($n=15$). Parenteral hyperalimentation was applied to patients once diagnosis was made; three days later, fasting venous blood was drawn to test serum motilin (MTL), peptide YY (PYY) and IgG by radioimmunoassay, and serum α_1 , α_2 and γ glycoproteins by electrophoresis.

RESULTS: After 4-week period therapy with parental hypernutrition, 27 cases (30%) recovered completely, 48 (54%) improved, and 14 (16%) failed to therapy, the total

effective rate was 84%. Level of serum MTL, PYY, IgG, and α_1 -glycoprotein in colitis patients were significant higher than those in control, α_2 -glycoprotein was lower than that in control ($P < 0.05$). All these abnormal data became normal after treatment. However, no difference of these parameters was observed between patients who were effective to therapy and those who failed to therapy ($P < 0.05$). No obvious change in serum aspartate aminotransferase (AST), alanine aminotransferase (ALT) and γ -glycoprotein was existed in all patients ($P > 0.05$). Level of serum albumin was increased ($P < 0.05$), and the histological change in ulcerative colitis was significantly improved after treatment.

CONCLUSION: The parenteral hyperalimentation therapy improved effectively serum levels of motilin, PYY, IgG and glycoproteins in patients with severe ulcerative colitis.

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摘要

目的: 肠外高营养对重症溃疡性结肠炎患者血清胃动素,肽YY, IgG和糖蛋白含量的影响并讨论其变化的临床意义。

方法: 重症溃疡性结肠炎患者 89 例, 男 51 例, 女 38 例, 年龄 23-57 (平均 38 ± 13) 岁, 均经电子结肠镜检查 and X 线钡灌肠检查, 以及组织学检查确诊, 并连续粪培养 2 次排除细菌感染, 同时排除阿米巴肠病, 血吸虫病, 肠道肿瘤和内分泌疾病。病变部位包括乙状结肠 45 例, 降结肠 21 例, 结肠脾曲 15 例和横结肠 8 例; 临床类型包括复发型 44 例, 持续型 30 例和初发型 15 例。采取肠外静脉补充足够的营养, 完全胃肠道休息。并于确诊后 3 d 内和治疗缓解后的上午 07:00 空腹采血, 用放射免疫法 (RIA) 测定血清胃动素 (MTL), 肽 YY (PYY) 和 IgG, 用血清电泳法测定 α_1 , α_2 和糖蛋白。

结果: 经过 4 wk 治疗后痊愈 27 例 (30%), 好转 48 例 (54%), 无效 14 例 (16%), 总有效率 84%。与对照比较, 重症溃疡性结肠炎患者血清 MTL (ng/L, 311.6 ± 99.8 vs 207.3 ± 98.4 , $P < 0.01$), PYY (pmol/L, 1.6 ± 0.8 vs 1.1 ± 0.6 , $P < 0.05$), IgG (g/L, 23.6 ± 10.2 vs 13.1 ± 6.9 , $P < 0.01$) 和 α_1 球蛋白 (g/L, 2.7 ± 1.2 vs 1.5 ± 0.9 , $P < 0.01$) 明显升高, 而 α_2 球蛋白 (g/L, 4.2 ± 2.6 vs 6.8 ± 2.3 , $P < 0.05$) 则降低, 但经过治疗后可恢复, 治疗有效和无效患者间上述变化无明显差异 ($P > 0.05$)。全部患者血清 AST, ALT 在正

常范围,血清白蛋白治疗后明显好转(g/L, 34.2±9.6 vs 21.4±8.7, $P < 0.05$), 组织学也明显改善。

结论:重症溃疡性结肠炎肠外静脉高营养疗法是一种有效可行的方法,且可以改善血清 MTL, PYY, IgG 和 α_1 , α_2 糖蛋白水平。

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0 引言

溃疡性结肠炎(ulcerative colitis)是炎症性肠病(inflammatory bowel disease, IBD)的一种,其病因不明,是以浅表性、非特异性炎症病变为主的肠道疾病,主要累及乙状结肠,也可累及其他部分或全部结肠^[1-5];少数病变严重者可出现 10 cm 以内的反流性回肠炎.临床症状以黏液脓血便,腹痛,腹泻或里急后重为主;急性危重病例,有全身症状,并常伴有肠道外疾病和肝损害,关节炎,皮肤损害,心肌病变,口腔溃疡,虹膜睫状体炎及内分泌病^[3-8].对溃疡性结肠炎的治疗方法包括激素,磺胺类,免疫抑制等,但效果均欠佳^[4,9-17].我们研究肠外高营养对重症溃疡性结肠炎的治疗效果及其对血清胃动素,肽 YY, IgG, α_1 (1-Gly), α_2 (2-Gly)和糖蛋白(α -Gly)的影响。

1 材料和方法

1.1 材料 1998-01/2001-12 住院溃疡性结肠炎患者 207 例,其中属重症的 89 例,男 51 例,女 38 例,年龄 23-57(平均 38 ± 13)岁.全部患者均经电子结肠镜检查 and X 线钡灌肠检查,以及组织学检查确诊,并连续粪培养 2 次排除细菌感染,同时排除阿米巴肠病,血吸虫病,肠道肿瘤和内分泌疾病.病变部位包括乙状结肠 45 例,降结肠 21 例,结肠脾曲 15 例和横结肠 8 例;临床类型包括复发型 44 例,持续型 30 例和初发型 15 例.另选健康对照 23 例,男 16 名,女 7 名,年龄 22-58(平均 37 ± 12)岁,排除胃肠道和内分泌疾病。

1.2 方法 治疗原则是在发作期间,主要采取对症治疗,纠正营养缺乏,恢复血容量,纠正贫血,控制合并症等处理.我们主要采取肠外高营养,其治疗方案是:静脉补充足够的营养,完全胃肠道休息,待病情缓解后逐步恢复饮食,以保持长久的缓解状态.所用药物为:肠外高营养配方:200 g/L 脂肪乳 250 mL;氨基酸 500 mL;支链氨基酸 250 mL;250 g/L 葡萄糖 250 mL(必要时);100 g/L 葡萄糖 500-1 000 mL;生理盐水 500 mL;100 g/L 氯化钾 30-50 mL;维他得匹特 10 mL;水乐维他 10 mL;胰岛素

20-30 U;安达美 10 mL.上述混入 3 000 mL 袋中深静脉滴注,1 次/d,4 wk.治疗 1 wk 后无效患者则加用少量激素,有发热者(> 38.5)给予抗生素.全部患者都经治疗 4 wk 后进行结果分析:痊愈好转-临床症状减轻,肠镜等检查,肠黏膜检查恢复正常;好转-临床症状减轻,肠镜检查,肠黏膜病变较前明显改善,大便常规检查有少量红,白细胞;无效-治疗后,临床症状和肠镜等检查,无改善或无明显改善.研究对象还于确诊后 3 d 内和静脉高营养治疗缓解后的上午 07-00 空腹采血,用放射免疫法(RIA)测定血清胃动素(MTL),肽 YY(PYY)和 IgG,用血清电泳法测定 α_1 , α_2 和糖蛋白。

统计学处理 测定结果用 $\bar{x} \pm s$ 表示,与对照组比较用非配对学生 t 检验。

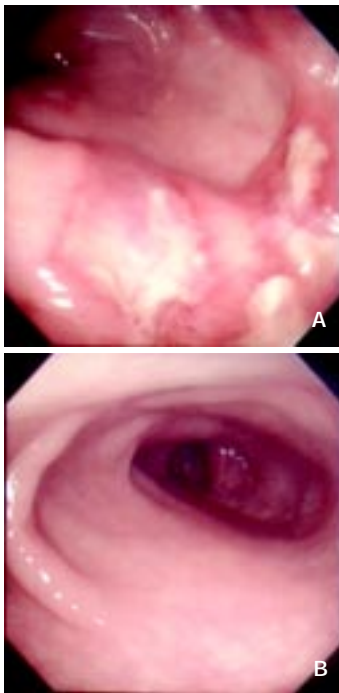
2 结果

经过 4 wk 治疗后痊愈 27 例(30%),好转 48 例(54%),无效 14 例(16%),总有效率 84%.重症溃疡性结肠炎患者血清 MTL, PYY, IgG 和 α_1 糖蛋白明显高于对照组,但经过治疗后可恢复(表 1),治疗有效和无效患者间上述变化无明显差异($P > 0.05$).全部患者血清 AST, ALT 在正常范围,糖蛋白变化不明显(g/L, 9.7±4.6),血清白蛋白明显好转(g/L, 34.2±9.6 vs 21.4±8.7, $P < 0.05$).治疗无效的 14 例上述各指标治疗前后无明显改变($P > 0.05$).所有患者均为急性期重症,其黏膜充血,水肿更显著,镜下病变部位基本无正常黏膜(图 1A),与治愈后形成明显对比(图 1B)黏膜呈粗细不等的颗粒状.或溃疡明显增多并融合成片,有黏膜桥形成.极易接触出血或黏膜糜烂结肠自发出血,有假膜或黏液脓血性渗出物覆盖,有时见岛状或类假息肉样黏膜再生.重症溃疡性结肠炎治疗前病理组织可见中性细胞浸润,淋巴细胞,浆细胞也较多及假性息肉(图 2A);腺上皮间中性炎细胞浸润,杯状细胞减少;隐窝炎症或脓肿形成和他固有膜血管的炎症(图 2B).经治疗病情缓解后病变明显改善,取代上述的是肠腺细胞排列不规则,隐窝数减少,既有瘢痕组织又有基底膜增厚;杯状细胞增多,黏膜下层纤维化加重,可见淋巴管扩张;固有膜层圆细胞浸润明显或大淋巴滤泡出现。

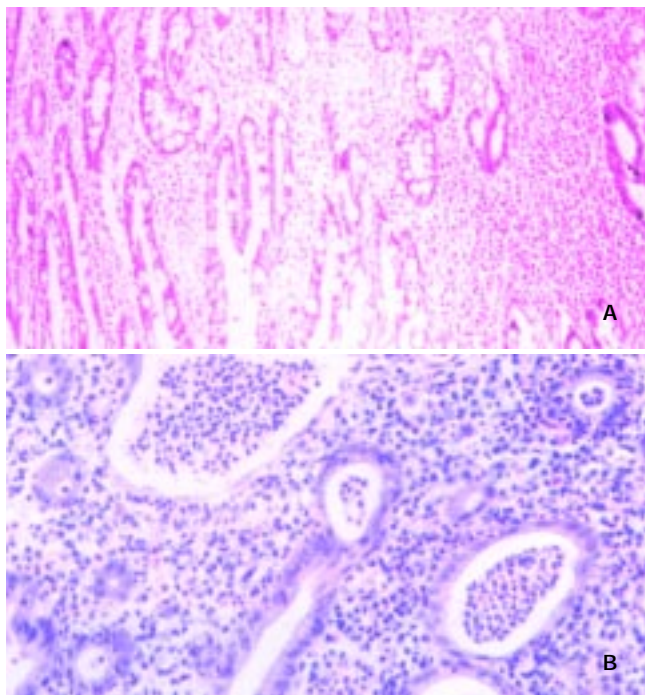
表 1 重症溃疡性结肠炎患者治疗前后 MTL, PYY, IgG, α_1 和 α_2 糖蛋白变化 ($\bar{x} \pm s$)

分组	n	MTL(ng/L)	PYY(pmol/L)	IgG(g/L)	1-Gly(g/L)	2-Gly(g/L)
对照	26	207.3 ± 98.4	1.1 ± 0.6	13.1 ± 6.9	1.5 ± 0.9	6.8 ± 2.3
治疗前	89	311.6 ± 99.8 ^b	1.6 ± 0.8 ^a	23.6 ± 10.2 ^b	2.7 ± 1.2 ^b	4.2 ± 2.6 ^a
治疗后	75	225.2 ± 89.4	1.2 ± 0.7	15.3 ± 8.2	1.8 ± 1.1	7.5 ± 3.4

^a $P < 0.05$, ^b $P < 0.01$ vs 对照.



A:治疗前 B:治愈后
图1 镜下溃疡性结肠炎.



A:结肠炎息肉 B:隐窝脓肿形成
图2 溃疡性结肠炎病理学改变.

3 讨论

溃疡性结肠炎为一病程经历甚为悬殊而又无特异治疗的疾病.在发作期间,主要采取对症治疗,纠正营养缺乏,恢复血容量,纠正贫血,控制合并症等处理,并应鼓励患者增强治病信心,坚持合理必要的治疗,多数患者可达到完全缓解^[5-7,10-15,18-25].缓解期治疗则基于力争和保持缓解状态.减少发作次数,减轻发作程度和缩短发作期限.我们主要采取肠外静脉补充足够的营养,完全休

息胃肠道,待病情缓解后逐步恢复饮食,以保持长久的缓解状态,结果收到满意的效果,且患者血清胃动素,肽YY, IgG, 1和 2糖蛋白含量基本恢复^[22-28].溃疡性结肠炎初起病情较轻或疾病较平稳恢复期,可采用中医辨证治疗,可口服或直肠给药.当暴发型,危重病证以及较为严重的并发症,宜采用西药治疗以及激素治疗,待病情平稳时,可结合中医药治疗^[29-35].

血清蛋白电泳 1糖蛋白升高是溃疡性结肠炎活动期的可靠指标,我们研究结果也说明这一点. 2糖蛋白升高则反应病情缓解, 球蛋白下降为预后不良的征兆,低蛋白血症说明病变范围广,通常已越过乙状结肠^[17-21].

溃疡性结肠患者发病的解剖和生理基础可能是肠黏膜屏障或他的通透性存在某些缺陷,细胞因子是炎症反应的必需中介物(如白介素,肿瘤坏死因子和干扰素等),这些细胞因子具有类似激素对全身的作用,同时伴有严重的和潜在的危险作用^[21-25,36-42].我们的研究中患者血清 MTL, PYY, IgG 和 1糖蛋白均有改变,且临床治愈或好转后血清 IgG 和 1糖蛋白下降,提示溃疡性结肠炎的发生可能与细胞因子的作用有关,这一结果与以往研究类似^[23,29-34].我们采用肠外高营养疗法,使患者的胃肠道得以完全休息,这样可能通过减少对肠道刺激从而改善体内炎症反应,以达到治疗目的.胃动素是 22 个氨基酸残基组成的多肽,正常情况影响血中胃动素水平与进餐和进餐的种类,胃肠道的消化过程和消化期间,胃容量的扩大,小肠活动状态和十二指肠内酸度,其他消化道激素的作用等因素有关^[24-28,43-46].溃疡性结肠炎患者血清 MTL 升高可能由于结肠黏膜炎症作用使下消化道蠕动增快,机体为调节内外平衡,胃小肠以适应结肠运动,故血清 MTL 分泌和释放增加. PYY 的主要作用为收缩血管,抑制胰腺外分泌,抑制胃肠蠕动及胃酸分泌.我们研究中血清 PYY 升高可能系结肠炎症刺激所致. IgG 主要作用是参与免疫,溃疡性结肠炎作为一种与免疫相关的疾病,必然有体内 IgG 的改变,本文结果也证实这一点.

治疗重症溃疡性结肠炎通常用柳氮磺胺吡啶类药物,如 5-氨基水杨酸(5-aminosalicylic acid)^[26],利多格雷(ridogrel)^[29]等,但有时效果不理想.严重患者在内科多次治疗无效时可考虑外科治疗^[11].溃疡结肠炎原因不明,尚无具体的预防措施,对于反复发作或持续的患者,保持心情舒畅恬静,注意饮食有节,起居有常,避免劳累,预防肠道感染,对阻止复发或病情进一步发展有一定作用^[40-47].此外还应注意心理调节和注意控制饮食,对腹痛腹泻者,宜食少渣,易消化,低脂肪,高蛋白饮食,对有或可疑不耐受的食物,如虾,蝎,蟹,牛奶,花生等应尽量避免食用,应忌食辣椒,冰冻,生冷食品,戒除烟酒.

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《中华影像医学·消化分册》出版发行

本刊讯 我国著名胃肠放射学家尚克中教授主编的《中华影像医学·消化分册》已于今年6月由人民卫生出版社出版。该书是《中华影像医学》系列丛书中的消化部分，也是总结我国消化影像医学成果，反映当今国际消化影像医学发展最新动态的一本高级参考书。

该书由全国22位著名的老专家、知名中青年专家共同编写，主要反映当代消化影像学发展的新水平，对于已经或即将用于临床的各种成像技术、检查方法、新征象、新理论以及新治疗方法，则以我国学者自己的资料为主加以较为详尽的介绍。在叙述消化疾病的影像学表现时，考虑疾病的共性和个性的关系，以使读者能正确地把握疾病的影像学一般规律。该书在介绍常见病、多发病的基础上，对罕见、少见病也作简要介绍。全书25万字，近400幅图；文字简明、扼要、通顺，叙述层次结构合理，具有逻辑性、连贯性；名词术语规范统一，具有较强的可读性。该书的内容具有科学性、先进性、权威性和实用性的特点，是一本高层次、高品位和高水平的消化影像医学重点参考书。特此推荐给消化内科、消化外科、胃肠专科、放射科等临床各级医师，同时也适合实习同学、进修医师、研究生等各类人员作为学习用的教科书或参考书。需要该书者请到全国各大新华书店购买（程英升 2002-11-08）