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难治性便秘患儿症状与生活质量的相关性分析*

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摘要 目的:探讨难治性便秘患儿症状与生活质量的相关性。**方法:**选取 2018 年 12 月~2020 年 8 月就诊于南京医科大学附属儿童医院消化科的 450 例功能性便秘患儿为研究对象,分为难治性便秘组(150 例)及非难治性便秘组(300 例),采用儿童生存质量测定量表(PedsQL4.0)评估其生活质量,并与 150 例健康体检儿童(健康对照组)比较。采用便秘症状评估表对难治性便秘患儿症状进行调查统计,分析难治性便秘患儿的症状与生活质量评分的相关性。**结果:**150 例难治性便秘患儿出现较多的症状为:硬便 148 例(98.67%)、排便困难 144 例(96.00%)、排便频率减少(>3 d/次)117 例(78.00%)。与非难治性便秘组比较,难治性便秘组的便秘症状 6 个条目得分与总分均明显增加($P<0.05$)。与健康对照组比较,难治性便秘组和非难治性便秘组的生理功能、情感功能、社交功能、学校表现评分及总分均明显降低($P<0.05$);与非难治性便秘组比较,难治性便秘组的生理功能、情感功能、社交功能、学校表现评分及总分均明显降低($P<0.05$)。难治性便秘患儿便秘症状总分与情感功能、学校表现和生活质量总分呈负相关($P<0.05$)。**结论:**难治性便秘患儿的生活质量下降,患儿便秘相关症状与生活质量密切相关。提示难治性便秘患儿治疗过程中,重视生理功能恢复的同时,还应当重视社会心理健康的恢复,从而改善患儿的生活质量。

关键词: 难治性便秘; 儿童; 症状; 生活质量

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Correlation Analysis between Symptoms and Quality of Life in Children with Refractory Constipation*

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ABSTRACT Objective: To investigate the correlation between symptoms and quality of life in children with refractory constipation.

Methods: A total of 450 children with functional constipation who were admitted to the gastroenterology department of Children's Hospital Affiliated to Nanjing Medical University from December 2018 to August 2020 were selected as the research subjects, they were divided into the refractory constipation group (150 cases) and the non-refractory constipation group (300 cases), the pediatric quality of life inventory 4.0 (PedsQL4.0) was used to assess their quality of life, and compared with 150 healthy children (healthy control group). The constipation symptom assessment questionnaire was used to investigate and count the symptoms of children with refractory constipation, and the correlation between the symptoms of children with refractory constipation and the quality of life score was analyzed. **Results:** 150 children with refractory constipation had more symptoms: 148 cases with hard stools (98.67%), 144 cases with difficulty defecation (96.00%), and 117 cases with reduced defecation frequency(> 3 d/ time) (78.00%). Compared with the non-refractory constipation group, the scores of 6 items and total scores of constipation symptoms of the refractory constipation group were significantly higher ($P<0.05$). Compared with the healthy control group, the physiological function, emotional function, social function, school performance score and total score of the refractory constipation group and the non-refractory constipation group were significantly decreased ($P<0.05$). Compared with the non-refractory constipation group, the physiological function, emotional function, social function, school performance and total score of the refractory constipation group were significantly decreased ($P<0.05$). The total score of constipation symptoms in children with refractory constipation was negatively correlated with the total score of emotional function, school performance and quality of life($P<0.05$). **Conclusion:** The quality of life of children with refractory constipation is decreased, and constipation-related symptoms are closely related to quality of life. It is suggested that in the treatment process of children with refractory constipation, attention should be paid not only to the recovery of physiological function, but also to the recovery of social and psychological health, so as to improve the quality of life of children.

Key words: Refractory constipation; Children; Symptoms; Quality of life

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前言

功能性便秘是儿童常见的胃肠道疾病之一,全球患病率约为 9.5%^[1],我国儿童的便秘患病率约为 4.73%^[2]。通过膳食纤维、排便训练、缓泻剂等治疗方式,可以缓解多数患儿症状,但在部分患儿中无效,患儿仍持续存在便秘症状,即难治性便秘,对患儿生活质量产生严重影响^[3-5]。目前关于难治性便秘的定义尚存在争论,Staller K 等人提出^[6],难治性便秘患者应与功能性便秘的诊断标准相符,且经高纤维素饮食和缓泻剂治疗无效。儿童生存质量测定量表(PedsQL4.0)是测评儿童青少年生活质量的系统性量表^[7]。本文旨在探讨难治性便秘患儿症状与生活质量的关联性,了解难治性便秘患儿的生活质量,为难治性便秘患儿治疗过程中生活质量的改善提供科学依据。

1 资料与方法

1.1 一般资料

选取 2018 年 12 月~2020 年 8 月就诊于南京医科大学附属儿童医院消化科并根据 2016 年国际罗马 IV 诊断标准^[8]确诊的功能性便秘患儿 450 例。其中 150 例便秘病程 ≥ 2 年,且经各种保守治疗无效的患儿纳入难治性便秘组,男 65 例,女 85 例,年龄 2~12 岁,平均(5.35 $\pm$ 2.71)岁,体重指数为 13.32-20.65 kg/m²,平均(16.23 $\pm$ 2.13) kg/m²。其余 300 例患儿纳入非难治性便秘组,男 130 例,女 170 例,年龄 2~14 岁,平均(5.24 $\pm$ 2.36)岁,体重指数为 12.55-19.89 kg/m²,平均(16.35 $\pm$ 2.40) kg/m²。另选取 150 例健康体检儿童为健康对照组,男 59 例,女 91 例,年龄 2~12 岁,平均 (5.43 $\pm$ 2.85) 岁, 体重指数为 12.84-20.22 kg/m²,平均(16.15 $\pm$ 2.61) kg/m²。三组受试儿童性别、年龄和体重指数比较差异无统计学意义($P>0.05$)。所有受试儿童的监护人均了解本研究的过程及意义并签署知情同意书,本研究经本院伦理委员会批准。

1.2 症状评估

采用 "便秘症状评估表"^[9]评估所有便秘患儿症状。问卷共 6 个条目:① 排便困难(无、偶尔、时有、经常);② 粪便性状(Bristol 粪便性状分级: 4~7 型、3 型、2 型、1 型);③ 排便时间(<10 min/

次、10-15 min/ 次、15~25 min/ 次、>25 min/ 次);④ 下坠、不尽、胀感(无、偶尔、时有、经常);⑤ 排便频率(1~2 d/ 次、3 d/ 次、4~5 d/ 次、>5 d/ 次);⑥ 腹胀(无、偶尔、时有、经常)。所有条目采用 4 级评分,根据不同程度分别记 0~3 分,分值越高则症状越重,便秘症状总分为 6 个条目得分之和。

1.3 生活质量

中文版 PedsQL4.0^[10]是测评儿童青少年生活质量的系统性量表,分为情感功能、生理功能、学校表现和社交功能 4 个维度,条目共有 23 个,后 3 个维度称为社会心理健康。该量表主要适用于 2~18 岁儿童青少年,分数越高,生活质量越好。

1.4 便秘症状和生活质量调查

调查小组向受试儿童的监护人和 / 或受试儿童解释本研究的意义,告知其所填写内容完全保密,本次调查可随时退出。资料由现场收集,监护人和 / 或受试儿童根据实际情况填写便秘症状评估表及 PedsQL4.0 量表。填写人在调查过程中遇到的疑问,调查小组予以解释,问卷需在 30 min 内完成。此外,在调查问卷填写完成后,调查小组仔细检查所有条目,如有信息缺失,将通过电话联系补充。

1.5 统计学处理

采用 SPSS21.0 行统计分析,计量资料用($\bar{x} \pm s$)表示,采用 t 检验或单因素方差分析;计数资料以%表示,采用 χ^2 检验。相关性分析采用 Pearson 相关分析,检验水准为 $\alpha=0.05$ 。

2 结果

2.1 难治性便秘患儿症状统计

对 150 例难治性便秘患儿各症状进行统计:硬便(Bristol 粪便分型 1、2、3 型)148 例 (98.67%)、排便困难 144 例 (96.00%)、排便频率减少(>3 d/ 次)117 例(78.00%)、排便时间延长(>15 min/ 次)113 例(75.33%)、腹胀 72 例(48.00%)和排便不尽 70 例(46.67%)。

2.2 两组便秘症状评分比较

与非难治性便秘组比较,难治性便秘组的便秘症状 6 个条目得分与总分均明显增加,差异有统计学意义($P<0.05$),见表 1。

表 1 难治性便秘组和非难治性便秘组便秘症状评分比较($\bar{x} \pm s$, 分)

Table 1 Comparison of constipation symptom score between refractory constipation group and non-refractory constipation group ($\bar{x} \pm s$, scores)

Constipation symptom score	Refractory constipation group (n=150)	Non-refractory constipation group (n=300)	t value	P value
Difficulty defecation	2.08 $\pm$ 0.50	1.49 $\pm$ 0.89	7.597	0.000
Stool traits	2.28 $\pm$ 0.59	1.68 $\pm$ 0.69	8.977	0.000
Defecation time	1.88 $\pm$ 0.79	1.49 $\pm$ 0.69	5.444	0.000
Falling, endless, swelling	1.39 $\pm$ 0.50	0.99 $\pm$ 0.59	7.034	0.000
Defecation frequency	1.98 $\pm$ 0.69	1.49 $\pm$ 0.59	7.874	0.000
Abdominal distension	1.49 $\pm$ 0.59	0.99 $\pm$ 0.50	9.340	0.000
Constipation symptoms total score	11.88 $\pm$ 0.66	8.12 $\pm$ 0.57	49.344	0.000

2.3 三组受试儿童的生活质量比较

与健康对照组比较,难治性便秘组和非难治性便秘组的生

理功能、学校表现、社交功能、情感功能评分及总分均降低,差异有统计学意义($P<0.05$);与非难治性便秘组比较,难治性便秘

秘组的生理功能、学校表现、社交功能、情感功能及总分均降低,差异有统计学意义($P<0.05$),见表2。

2.4 难治性便秘患儿症状与生活质量相关性分析

排便困难评分与情感功能和生活质量总分呈负相关($P<0.05$);粪便性状评分与情感功能、学校表现和生活质量总分呈

负相关($P<0.05$);排便频率评分与情感功能、学校表现和生活质量总分呈负相关($P<0.05$);腹胀评分与生理功能、情感功能、学校表现和生活质量总分呈负相关($P<0.05$);便秘症状总分与情感功能、学校表现和生活质量总分呈负相关($P<0.05$),见表3。

表2 三组受试儿童的生活质量量表评分($\bar{x}\pm s$,分)

Table 2 Quality of life scale score of three groups of children ($\bar{x}\pm s$, scores)

Groups	n	Physiological function	Emotional function	Social function	School performance	Total score
Refractory constipation group	150	73.98 $\pm$ 9.50	73.87 $\pm$ 12.94	85.17 $\pm$ 7.82	69.62 $\pm$ 11.14	75.84 $\pm$ 5.13
Non-refractory constipation group	300	79.57 $\pm$ 8.76*	81.68 $\pm$ 11.70*	90.13 $\pm$ 7.43*	74.43 $\pm$ 9.03*	82.34 $\pm$ 4.42*
Healthy control group	150	87.50 $\pm$ 8.09* [#]	88.10 $\pm$ 11.42* [#]	92.83 $\pm$ 7.15* [#]	86.30 $\pm$ 10.63* [#]	88.71 $\pm$ 4.07* [#]
F value		90.013	53.391	41.245	113.664	303.201
P value		0.000	0.000	0.000	0.000	0.000

Note: Compared with the refractory constipation group, * $P<0.05$, compared with the non-refractory constipation group, [#] $P<0.05$.

表3 难治性便秘患儿便秘症状评分与生活质量量表评分的相关性

Table 3 Correlation between constipation symptom score and quality of life score in children with refractory constipation

Constipation symptom score	Physiological function	Emotional function	Social function	School performance	Total score
Difficulty defecation	-0.129	-0.181*	-0.009	-0.162	-0.248*
Stool traits	-0.051	-0.268*	-0.069	-0.235*	-0.318*
Defecation time	-0.046	-0.145	0.098	-0.148	-0.141
Falling, endless, swelling	-0.030	-0.117	-0.016	-0.066	-0.111
Defecation frequency	0.026	-0.225*	-0.096	-0.209*	-0.239*
Abdominal distension	-0.164*	-0.347*	-0.039	-0.456*	-0.487*
Constipation symptoms total score	-0.091	-0.296*	-0.031	-0.304*	-0.359*

Note: The values in the table are correlation coefficients, * $P<0.05$.

3 讨论

作为一种慢性疾病,难治性便秘的临床表现为排便质硬、排便费时及1周排便次数减少^[11]。因胃肠道功能发育不完善,儿童成为难治性便秘的高发人群。难治性便秘的症状持续且严重,严重影响患儿健康和生活,对患儿家庭造成极大的负担^[12,13]。本研究显示,难治性便秘患儿均出现不同程度的便秘症状,硬便、排便困难、排便次数减少及排便时间延长是最常见的临床症状,其中硬便的发生率超过98%,与便秘症状谱研究相类似^[14]。该结果提示治疗难治性便秘患儿时,急需改善患儿的硬便症状。从生活质量的角度看,本研究结果显示,与健康对照组比,功能性便秘组的生理功能、情感功能、社交功能、学校表现等生活质量量表评分均明显降低,难治性便秘组生活质量量表评分低于非难治性便秘组,提示,随着便秘严重程度的增加,患儿的生活质量也显著降低,类似的研究如Vriesman MH^[15]等人系统地收集了2344名难治性便秘患儿的临床资料,结果显示,与同龄健康儿童相比,难治性便秘患儿的生活质量得分均明显降低;Erdur B^[16]等人研究了42例4~17岁难治性便秘患儿接受6周常规治疗前后的生活质量,结果显示,与治疗前相比,治疗后患儿的各项生活质量评分及总评分均明显改善。由此可见,

难治性便秘患儿一旦确诊应积极进行治疗,有助于改善患儿的便秘症状及生活质量^[17-19]。

PedsQL4.0量表除了评估功能性便秘患儿的生理功能,还可以评估患儿的社会心理健康,即情感功能、社交功能和学校表现等方面^[20-22]。本研究结果显示,便秘症状总分与情感功能、学校表现和生活质量总分呈负相关($P<0.05$),可能原因在于:1)不合理的饮食结构、过低的纤维素摄入、不足的水摄入等多种因素造成大便干结,引起排便次数减少、排便困难、腹胀等症状^[23-25]。这些症状引起的身体不适会直接影响患儿的生理功能,并影响和阻碍学习和人际关系;患儿可能会受到孤立、排挤、欺凌,出现消极情绪,从而加重心理负担并进一步影响生理状态,便秘和心理因素之间通过脑肠轴而相互影响^[26-28]。2)脑-肠轴整合了中枢神经系统与肠神经系统的联系,可双向反馈调节胃肠道功能,因此,负性生活事件或抑郁、焦虑不良情绪均可导致机体条件反射障碍的发生,增强高级中枢对副交感神经的抑制,进一步加强肠壁交感神经活动,便秘加重。同时,便秘通过脑-肠轴的调节又可反作用于中枢的情绪和行为,造成便秘患儿社会心理功能障碍,生活质量也随之下降^[29-31]。类似的研究如Rajindrajith S^[32]等人在斯里兰卡进行的一项学校横断面调查,结果显示,超过6%的青少年存在难治性便秘困扰,与同龄人相

比,患有难治性便秘的青少年患有严重的行为和情感问题,表现出明显的焦虑、抑郁,对生活和学习产生明显的负面影响。本研究提示,难治性便秘患儿进行治疗过程中,不能只重视生理功能的恢复,还应当重视社会心理健康的恢复。

综上所述,难治性便秘患儿的生活质量较低,患儿便秘相关症状与生活质量密切相关。

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