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动态仿真直肠排粪造影对盆底痉挛综合征的诊断价值研究*

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摘要 目的:探讨动态仿真直肠排粪造影在诊断盆底痉挛综合征中的应用价值。**方法:**回顾性选择 2014 年 7 月至 2016 年 3 月在我院确诊的 38 例盆底痉挛综合征患者为研究对象,随机分为研究组和对照组,采用全功能数字胃肠机测量患者静息状态下和力排状态下的肛直角,并计算肛直角差。采用 t 检验进行分析。**结果:**研究组患者 9 例合并直肠前突和粘膜脱垂,3 例合并直肠前突和内脏下垂,1 例合并直肠前突和结肠病,对照组患者 4 例合并直肠前突和粘膜脱垂,1 例合并直肠前突和内脏下垂,1 例合并直肠前突和结肠病,两组患者的合并症检出率比较,差异有统计学意义($P<0.05$)。研究组患者的静息状态下肛直角(103.46 ± 8.15)和力排状态下肛直角(93.12 ± 7.51)明显低于对照组(117.62 ± 11.37)、(135.14 ± 12.13),且研究组的肛直角差(10.34 ± 7.25)明显低于对照组(17.52 ± 9.14),差异有统计学意义($P<0.01$)。**结论:**动态仿真直肠排粪造影动态观察盆底形态的变化,可为盆底痉挛综合征诊断提供可靠依据。

关键词:盆底痉挛综合征;直肠排粪造影;肛直角;临床诊断

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Research the Diagnostic Value of Dynamic Simulation of Rectal Defecography for Spastic Pelvic Floor Syndrome*

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ABSTRACT Objective: To study the diagnostic value of dynamic simulation of rectal defecography for spastic pelvic floor syndrome. **Methods:** 38 patients with spastic pelvic floor syndrome were retrospectively selected as the research object in July 2014 to March 2016 in our hospital. They were divided into the research group and control group. The resting state and force state of anal right angle were measured by fully functional digital gastrointestinal machine, and the anal right angle was calculated. The test was analyzed. **Results:** There were 9 patients with rectocele and anterior mucosal prolapse, 3 patients with rectocele and splanchnic prolapse, 1 patient with rectocele and sigmoid hernia in the research group. And there were 4 patients with rectocele and anterior mucosal prolapse, 1 patient with rectocele and splanchnic prolapse, 1 patient with rectocele and sigmoid hernia in the control group. The rate of complications of two groups was statistically significant ($P<0.05$). The resting state of anorectal angle (103.46 ± 8.15) and force state of anorectal angle (93.12 ± 7.51) in the research group were significantly lower than the control group (117.62 ± 11.37), (135.14 ± 12.13), and the anorectal angle (10.34 ± 7.25) in the research group was significantly lower than the control group (17.52 ± 9.14), the difference was statistically significant ($P<0.01$), but there was no statistically significant difference between the control group A and control group B ($P>0.05$). **Conclusion:** Dynamic simulation of rectal defecography can observe of changes in the form of spastic pelvic floor syndrome, can provide reliable basis for diagnosis of spastic pelvic floor syndrome.

Key words: Spastic pelvic floor syndrome; Rectal defecography; Anorectal angle; Clinical diagnosis

Chinese Library Classification(CLC): R816; R657.1; R574.8 **Document code:** A

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前言

盆底痉挛综合征指耻骨直肠肌和肛门外括约肌在排便时反常收缩的排空障碍性便秘,排便时肌肉不松弛反而过度收缩,粪便排出困难的痉挛性疾病,属于肌肉肛门紊乱功能性疾病,随着膳食结构的改变和生活工作压力增强,盆底痉挛综合征发病率逐年上升,对患者的生活和工作带来严重影响^[1-3]。盆

底痉挛综合征病因尚不清楚,可能与盆内神经损伤、神经传导异常、精神因素、感染与创伤及先天因素等有关,临床诊断较困难^[4]。动态直肠排粪造影比传统钡餐、肛门镜检查、肛门指诊敏感的检查技术,是一种简单有效、经济的检查方法,可为临床肛肠疾病的诊断提供依据,对盆底痉挛综合征的诊断有重要价值^[5,6]。本文回顾分析 38 例在我院确诊的盆底痉挛综合征患者为对象,通过和健康志愿者的静息状态下和力排状态下的肛直

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角及肛直角差的比较,旨在探讨动态仿真直肠排粪造影在诊断盆底痉挛综合征中的应用价值,为临床诊断提供依据。

1 资料与方法

1.1 临床资料

选回顾性选择 2014 年 7 月至 2016 年 3 月在我院确诊的 38 例盆底痉挛综合征患者为研究对象,所有患者均有排便困难、长期便秘、肛门下坠感及排便不尽感等临床症状,患者灌钡

后肠检查为阴性,肛门指诊检查无器质性病变,患者精神正常^[7]。并排除分泌、代谢性疾病及药物引起的便秘患者,外慢传输型便秘患者,精神异常患者,严重心、肺、肾、肝等功能损害者及妊娠期或哺乳期妇女。随机分为研究组和对照组,两组患者的性别、年龄、BMI 等资料比较,差异无统计学意义($P>0.05$),具有可比性。见表 1。本研究方案经医院伦理委员会审批并经患者或家属签字同意。

表 1 两组患者一般资料比较

Table 1 Comparison of general data of two groups

Groups	Gender(Male/Female)	Age(years)	Course of disease(years)
Control group(n=19)	7/12	42.03± 4.81	24.54± 2.79
Research group(n=19)	5/14	41.76± 4.62	24.29± 2.51
T/ χ^2	0.487	0.176	0.290
P	0.485	0.430	0.387

1.2 检查方法

采用全功能数字胃肠机对研究组和对照组患者进行直肠排粪造影检查。患者配 X 线透过性特制座便桶,座便桶高度可调且可旋转,保证患者坐姿正确并获得符合诊断要求的图像。检查时患者模拟日常排便,根据患者身高调整座便桶的高度,患者躯干与下肢的夹角约 101~105 度,侧坐在便桶上,保证耻骨不被双侧股骨遮挡住,利于患者排出钡剂。检查前做好解释说明,避免患者的紧张情绪,详细说明检查步骤及需要配合的动作,确保检查顺利进行。研究组采用我们的仿真模拟造影剂做排粪造影检测,对照组患者采用钡灌肠的造影剂做排粪造影检测。检查前要清空肠道,检查前天午后 2 h、4 h 及晚 8 h 给予患者番泻叶冲泡代茶饮,每次 500 mL。检查时患者 300~400 mL 160%硫酸钡混悬液灌肠,硫酸钡混悬液临时配制,不易久放,避免干结成块不能使用。一次性无菌灌肠包灌肠,50%肛管插入即可,使直肠及部分乙状结肠充分充盈。患者坐在侧坐在便桶上,直立上半身,耻骨联合下缘清晰显示。首先取静息状态下直肠侧位像,嘱患者用力排便,取提肛、强忍、力排各状态下直

肠侧位像。取的图像应前至耻骨联合上缘,后至骶骨尾椎后缘,图像质量要求清晰度高,符合诊断要求。诊断数据的测量依据长海医院卢任华教授制定的测量标准。盆底痉挛综合征患者在力排状态下肛直角不增大,肛直角后缘半弧形直肠肌痉挛压迹,随排便继续,耻骨直肠肌持续痉挛,并逐步加深。

1.3 数据分析

采用 SPSS19.0 进行统计数据分析,计数资料以 n (%) 表示,应用 χ^2 检验;计量资料以 $(\bar{x} \pm s)$ 表示,采用 t 检验比较组内和组间差异, $P<0.05$ 为具有统计学意义的检验标准。

2 结果

2.1 研究组患者合并症

研究组 9 例合并直肠前突和粘膜脱垂,3 例合并直肠前突和内脏下垂,1 例合并直肠前突和结肠疝,对照组患者 4 例合并直肠前突和粘膜脱垂,1 例合并直肠前突和内脏下垂,1 例合并直肠前突和结肠疝。研究组合并症检出率 68.42% 高于对照组 31.58%,差异有统计学意义($P<0.05$)。见表 2。

表 2 两组患者合并症检出情况

Table 2 Detection of complications in two groups

Groups	Rectocele and mucosal prolapse	Rectocele and visceral prolapse	Rectocele and colon hernia	Totals
Control group(n=19)	4(21.05%)	1(5.26%)	1(5.26%)	6(31.58%)
Research group(n=19)	9(47.37%)	3(15.79%)	1(5.26%)	13(68.42%)
χ^2				5.158
P				0.023

2.2 直肠排粪造影结果

研究组患者的静息状态下肛直角和力排状态下肛直角明显低于对照组,且研究组的肛直角差明显低于对照组,差异有统计学意义($P<0.01$)。见表 3。

3 讨论

便秘病因复杂,临床多见,我国成年人便秘发病率高达

7%,尤其是中老年女性,极大影响患者生活质量^[8-10]。随着膳食结构改变和生活压力增大,便秘患病率有逐年上升的趋势。盆底痉挛综合征为临床常见慢性功能型便秘,肛门指诊和内窥镜等常规检查较难发现盆底痉挛综合征^[11-14]。直肠排粪造影通过造影剂充盈和分布,判断解剖形态异常和功能障碍,以钡剂为对比剂,检测安全,诊断价值可靠,诊断疾病,临床广泛采用^[15]。动态仿真直肠排粪造影由于检查方法不复杂,影像学资料较典

型,对于合并其他症状的便秘有较好的诊断价值,为盆底痉挛综合征的诊断提供可靠依据^[16]。本研究通过肛直角及肛直角差

的对比研究,探讨动态仿真直肠排粪造影在诊断盆底痉挛综合征中的应用价值,为临床诊断提供依据。

表 3 两组患者的肛直角比较

Table 3 Comparison anal right angle in two groups

Groups	Anal right angle in resting state (°)	Anal right angle in force row state(°)	D-value of anal right angle(°)
Control group(n=19)	117.62± 11.37	135.14± 12.13	17.52± 9.14
Research group(n=19)	103.46± 8.15	93.12± 7.51	10.34± 7.25
t	4.412	12.838	2.683
P	0.000	0.000	0.005

直肠位于盆腔下的消化道,沿骶骨的前面下行,以盆膈分为直肠壶腹和直肠会阴部,直肠壶腹较宽是直肠前突的好发部位。乙状结肠由乙状结肠系膜固定左下腹部盆腔壁,系膜较长,活动度比较大,易发生肠扭转及乙状结肠疝。排便复杂生理运动过程,先由外周神经兴奋,将排便冲动传到排便中枢,引起直肠、结肠及盆底肌群运动,完成排便,任一环节出现问题,均会引起便秘^[17]。排便进程中肛直角变化可反映盆底肌群活动度和耻骨直肠肌的收缩与舒张,肛直角的形成与维持与会阴体的固定与耻骨直肠肌牵拉密切相关,耻骨直肠肌作为形成与维持肛直角肌肉,在控制排便中具有决定性作用^[18]。动态直肠排粪造影可模拟排便中盆底器官及肌群形态学,并进行实时观察,安全可靠,诊断价值较高。盆底痉挛综合征患者的排粪造影具有典型性,表现为盆底肌群痉挛,耻骨直肠肌痉挛,排粪造影表现为力排状态下肛直角较静息状态下变化不显著,肛直角差较小^[19,20]。本研究发现研究组患者的静息状态下肛直角和力排状态下肛直角明显低于对照组,且研究组的肛直角差明显低于对照组,差异有统计学意义。盆底痉挛综合征患者肛直角后方耻骨肌出现痉挛压迹,随着排便延续患者耻骨肌痉挛压迹逐渐加深,甚至增宽和盆底颤抖。排粪造影可发现盆底痉挛综合征并其他引发便秘的异常症状,并明确诊断,还可确诊常规检查难以发现的症状。本研究研究组合并症检出率高于对照组,差异有统计学意义。说明在直肠排粪造影时采用仿真模拟造影剂,有助于合并症的检出。

综上所述,动态仿真直肠排粪造影检查盆底痉挛综合征患者,具有典型的直肠排粪造影表现,检查方法简单经济、安全可靠,较传统检查方法易于发现导致便秘的合并疾病。动态仿真直肠排粪造影通过肛直角大小及盆底形态改变检查,可为盆底痉挛综合征诊断提供可靠依据。

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