

# 复方聚乙二醇电解质散用于结肠镜检查前肠道清洁效果观察

李晓波\*, 田传红, 冯 军(重庆市万盛经济技术开发区人民医院消化科, 重庆 400800)

中图分类号 R969.4;R574.62;R472.9\*1 文献标志码 A 文章编号 1001-0408(2013)22-2079-03

DOI 10.6039/j.issn.1001-0408.2013.22.24

**摘要** 目的:观察复方聚乙二醇电解质散用于结肠镜检查前肠道准备的清洁效果。方法:286例结肠镜检查患者随机分为A、B组,A组患者( $n=146$ )口服复方聚乙二醇电解质散1剂,温水3 000 ml溶解,上午9:00—10:00口服,首次口服500 ml,之后1 h内喝完,下午检查;B组患者( $n=142$ )于检查前1天中午口服酚酞片300 mg,晚睡前再次口服酚酞片300 mg,晨起时口服25%甘露醇250 ml,10 min内喝完,之后喝温水2 500 ml,下午检查。比较两组患者肠道清洁度、肠道清洁范围及患者耐受性。结果:A组肠道清洁度I级占71.9%,显著高于B组(50.7%)( $\chi^2=13.676, P=0$ );但A组肠道清洁度III级占10.3%,显著低于B组(23.9%)( $\chi^2=9.527, P=0.002$ )。A组患者肠道清洁范围为1度及2度者占比均低于B组( $\chi^2=4.475, 9.509, P=0.034, 0.002$ ),但肠道清洁范围达4度者占比(76.7%),显著高于B组(54.9%)( $\chi^2=22.199, P=0$ )。A组患者耐受度达I度者占比显著高于B组( $\chi^2=67.075, P=0$ ),而A组患者耐受度为II度或III度者占比均显著低于B组( $\chi^2=15.516, 45.422, P=0, 0$ )。结论:复方聚乙二醇电解质散能达到较好的肠道清洁效果,并且患者耐受性较好。

**关键词** 复方聚乙二醇电解质散;肠道清洁度;肠镜

## Cleanness Efficacy Observation of Compound Polyethylene Glycol-electrolyte Powder for Bowel Cleaning before Colonoscopy

LI Xiao-bo, TIAN Chuan-hong, FENG Jun(Dept. of Gastroenterology, People's Hospital of Economic and Technical Development Zone of Wansheng in Chongqing, Chongqing 400800, China)

**ABSTRACT** OBJECTIVE: To observe the efficacy of Compound polyethylene glycol-electrolyte powder for bowel preparation before colonoscopy. METHODS: 286 patients undergoing colonoscopy were randomized into group A and group B. 146 patients in group A received a dose of Compound polyethylene glycol-electrolyte powder, dissolved in warm water 3 000 ml, taking 500 ml firstly at 9:00—10:00 in the morning and then drinking off within 1 h; they would be checked in the afternoon. 142 patients in group B received Phenolphthalein tablets 300 mg orally at noon a day before examination and took medicine once again before bedtime; drunk off 25% mannitol 250 ml within 10 min early in the morning and then warm water 2 500 ml; they would be checked in the afternoon. The degree and scope of bowel cleanness and tolerance of patients were compared between 2 groups. RESULTS: 71.9% of patients got grade I bowel cleanness in group A, which was obviously higher than 50.7% in group B ( $\chi^2=13.676, P=0$ ); but 10.3% of grade III in group A was significantly lower than 23.9% in group B ( $\chi^2=9.527, P=0.002$ ). The patients with bowel cleanness scope 1 or 2 in group A was less than in group B ( $\chi^2=4.475, 9.509, P=0.034, 0.002$ ), but 76.7% of scope 4 was more than 54.9% in group B ( $\chi^2=22.199, P=0$ ). In group A, the patients with grade I tolerance was significantly higher than in group B ( $\chi^2=67.075, P=0$ ), but the grade II or III was significantly lower than in group B ( $\chi^2=15.516, 45.422, P=0, 0$ ). CONCLUSIONS: Compound polyethylene glycol-electrolyte powder can provide better bowel cleanness and tolerance.

**KEY WORDS** Compound polyethylene glycol-electrolyte powder; Degree of bowel cleanness; Colonoscopy

- 重庆医学,2009,38(9):1 090.
- [3] 耿辉,王兵,南虹.恶性肿瘤患者留置中心静脉导管穿刺点感染的因素及预防对策[J].护士进修杂志,2007,22(18):1 705.
- [4] 谢巧玲,王文龙.两种不同敷料对股静脉临时导管感染影响的疗效观察[J].中国现代医生,2011,49(35):98.
- [5] 陈涛,刘宇.皮肤创面无机诱导活性敷料在晚期肿瘤患者压疮护理中的应用[J].中国医药导报,2010,7(23):77.
- [6] 高秀芳,贾爱华.皮肤创面无机诱导活性敷料在深度烧伤残留小创面的应用观察[J].中国医药科学,2011,1(11):82.
- [7] 陈华,施广德,黄文龙,等.德莫林在糖尿病足溃疡治疗中的应用[J].现代中西医结合杂志,2011,20(30):3 822.
- [8] 刘莉,秦亚辉.百多邦软膏治疗静脉置管穿刺点感染60例分析[J].中国误诊学杂志,2009,9(20):1 569.
- [9] 王翔轶,黄玉荣,石健.160例老年患者预防中心静脉导管感染的护理管理[J].中华医院感染学杂志,2006,16(6):67.
- [10] 郑妍,晏丽.红霉素软膏治疗深静脉置管穿刺点周围皮肤感染95例[J].解放军护理杂志,2009,26(12B):19.
- [11] 施冰芳,周玲丽,郑漫艳.银离子抗菌敷料治疗PICC置管穿刺点感染的疗效[J].解放军护理杂志,2010,27(4A):528.

\* 主治医师。研究方向:消化内镜临床。电话:023-48261552。

E-mail:wxw2010889@126.com

(收稿日期:2013-01-05 修回日期:2013-01-18)

结肠镜检查时肠道的清洁度直接影响着肠道黏膜的观察,肠道清洁度差是造成结肠镜检查漏诊或误诊的主要原因<sup>[1-2]</sup>。传统的肠道清洁方法主要包括口服酚酞片、甘露醇、硫酸镁等,但这些方法副作用多、耗时长,增加了患者的痛苦<sup>[2]</sup>。复方聚乙二醇电解质散专门用于手术前或肠镜检查前肠道的清洁。本研究对比分析了口服复方聚乙二醇电解质散与口服酚酞片联合甘露醇对肠道的清洁效果。

## 1 资料与方法

### 1.1 临床资料

我院消化内镜中心长期开展电子结肠镜检查及肠镜下治疗,每年肠镜检查例数在3 000例次以上。本研究对我中心2012年1—10月行电子结肠镜检查的患者286例,按照随机数字表法分为A、B组。A组146例患者中,男性86例,女性60例,年龄21~78岁,平均(47.3±15.7)岁;B组142例患者中,男性84例,女性58例,年龄22~76岁,平均(47.6±14.4)岁。所有患者均无结肠镜检查禁忌证,采用相同型号电子结肠镜检查。两组患者的年龄、性别比较差异无统计学意义,具有可比性。

### 1.2 方法

A组患者于检查前4 h口服复方聚乙二醇电解质散(江西恒康药业有限公司生产,国药准字H20020031,为复方制剂,每袋由A、B、C各1包组成,A包含氯化钾0.74 g、碳酸氢钠1.68 g;B包含氯化钠1.46 g、硫酸钠5.68 g;C包含聚乙二醇4000 60 g)1剂,温水3 000 ml溶解,上午9:00—10:00口服,首次口服500 ml,之后1 h内喝完,下午检查;B组患者于检查前1天中午口服酚酞片300 mg,晚睡前再次口服酚酞片300 mg,晨起时口服25%甘露醇250 ml,10 min内喝完,之后喝温水2 500 ml,下午检查。两组患者检查前一天早、中、晚餐进食少渣半流食,检查当日早餐禁食。

### 1.3 分析指标及判定标准

对比两组患者肠道清洁度、肠道清洁范围、患者耐受度。肠道清洁度分级参考文献<sup>[3]</sup>进行,其中I级是指无固体排泄物存留,视野清晰,可见少量清亮液体,不妨碍观察;II级是指无固体排泄物,有少量残渣,但视野清晰,不妨碍观察;III级是指有粪便及污浊液体,经过冲洗后还能进行满意观察。肠道清洁范围分度标准<sup>[4]</sup>:0度是指直肠、乙状结肠及以上肠段有粪渣;1度是指乙状结肠以下无粪渣;2度是指降结肠以下无粪渣;3度是指横结肠以下无粪渣;4度是指全结肠无粪渣。患者耐受度<sup>[4]</sup>:I度是指完全可以耐受,愿意接受第2次检查;II度是指饥饿感及大便次数多,但仍可以接受;III度是指无法耐受,拒绝再次接受此类检查。

### 1.4 统计学处理

采用SPSS 16.0软件进行统计分析,计数资料比较采用 $\chi^2$ 检验, $P<0.05$ 表示差异有统计学意义。

## 2 结果

### 2.1 肠道清洁度比较

A组肠道清洁度I级占71.9%,显著高于B组(50.7%)( $\chi^2=13.676, P=0$ );而A组肠道清洁度III级占10.3%,显著低于B组(23.9%)( $\chi^2=9.527, P=0.002$ ),见表1。

### 2.2 肠道清洁范围比较

A组肠道清洁范围为1度及2度者占比均低于B组( $\chi^2=4.475, 9.509, P=0.034, 0.002$ );A组有76.7%的患者肠道清洁范围达4度,而B组仅为54.9%,A组显著高于B组( $\chi^2=22.199, P=0$ ),见表2。

表1 两组患者肠道清洁度比较[例(%)]

Tab 1 Comparison of degree of bowel cleanness between 2 groups [case(%)]

组别	例数	I级	II级	III级
A组	146	105(71.9*)	26(17.8)	15(10.3*)
B组	142	72(50.7)	36(25.4)	34(23.9)

与B组比较: \* $P<0.01$

vs. group B: \* $P<0.01$

表2 两组患者肠道清洁范围比较[例(%)]

Tab 2 Comparison of bowel cleanness scope between 2 groups [case(%)]

组别	例数	1度	2度	3度	4度
A组	146	4(2.7 <sup>△</sup> )	8(5.5*)	22(15.1)	112(76.7*)
B组	142	12(8.5)	24(16.9)	28(19.7)	78(54.9)

与B组比较: \* $P<0.01, \Delta P<0.05$

vs. group B: \* $P<0.01, \Delta P<0.05$

### 2.3 患者耐受度比较

A组患者耐受度达I度者占比显著高于B组患者( $\chi^2=67.075, P=0$ );而A组患者耐受度为II度或III度者占比均显著低于B组患者( $\chi^2=15.516, 45.422, P=0, 0$ ),见表3。

表3 两组患者耐受度比较[例(%)]

Tab 3 Comparison of the tolerance between 2 groups [case(%)]

组别	例数	I度	II度	III度
A组	146	126(86.3*)	16(11.0*)	4(2.7*)
B组	142	56(39.4)	42(29.6)	44(31.0)

与B组比较: \* $P<0.01$

vs. group B: \* $P<0.01$

## 3 讨论

肠道准备是肠镜检查的重要一环,直接影响着肠镜下的观察,决定着肠镜检查能否顺利进行。对于大部分行肠镜检查的患者来讲,肠道准备的过程是比较痛苦的,因为在服用药物的同时还需摄入大量液体,不仅给患者带来不适,还可能导致患者水、电解质紊乱<sup>[5]</sup>。口服酚酞片及甘露醇是我院传统的肠道清洁方法,但这种方法耗时长,口服甘露醇后需短时间内摄入大量水分,给患者带来较大的痛苦和不便;又由于电解质丢失过多,容易造成水、电解质平衡紊乱,往往致使肠道清洁度差而影响肠镜的检查,容易造成漏诊或误诊。理想的肠道准备要求清除肠内所有有形成分和大部分液体,对肠镜下观察无影响;同时要求在相对短的时间内摄入液体引起的腹泻,不会造成患者不适,不会造成明显的水、电解质紊乱<sup>[1,6]</sup>。

本研究对比分析了口服复方聚乙二醇电解质散与酚酞片联合甘露醇对肠道的清洁效果,结果表明复方聚乙二醇电解质散的肠道清洁度及清洁范围均优于酚酞片联合甘露醇,并且其耐受性更好。复方聚乙二醇电解质散含适量聚乙二醇4000及电解质的等渗液,能够固定肠腔内的水分子,增加粪便的含水量并降低肠腔内粪水的渗透压,同时又促进肠蠕动,引起水样便,达到清洁肠道的目的,同时维持了电解质的平衡。聚乙二醇4000不被吸收,也不被分解代谢,消化耐受性好,目前已广泛应用于肠镜检查前或手术前肠道的准备,并且所需时间短、起效快、副作用小、效果满意<sup>[7-9]</sup>,与传统的肠道准备药物如硫酸镁、番泻叶、甘露醇等相比具有更好的效果和安全性<sup>[9-10]</sup>。本组资料在肠镜检查前4 h口服复方聚乙二醇电解质散,既能达到较理想的肠道清洁度,还能缩短肠道准备时间,患者更容易接受<sup>[4]</sup>。

# 我院113例新的药品不良反应报告分析

唐咏梅\*, 彭 婕<sup>#</sup>(南京大学医学院附属鼓楼医院急诊药房, 南京 210008)

中图分类号 R969.3 文献标志码 C 文章编号 1001-0408(2013)22-2081-04

DOI 10.6039/j.issn.1001-0408.2013.22.25

**摘要** 目的:了解我院新的药品不良反应(ADR)的发生特点,提高ADR监测水平。方法:通过回顾性研究我院2012年发生的新的ADR报告,进行分类统计分析。结果:113例新的ADR报告中,新的严重的ADR 3例(占2.65%),新的一般的ADR 110例(占97.35%);患者年龄≥60岁者51例(占45.13%),为各年龄段之首;性别无明显差异;静脉给药者89例,占78.76%;合并用药者仅2例。按药物类别分,113例新的ADR涉及12类67种药物,引发ADR药物以中药12种32例居首位,其中痰热清注射液11例,生脉注射液6例;其次为维生素营养药7种17例。累及器官或系统以皮肤及其附件31例(25.62%)为主;转归中好转93例,痊愈17例,各占82.30%和15.04%。结论:新的ADR以新的一般ADR为主,主要由静脉给药引起,年龄≥60岁者近一半,中药是引发新的ADR的主要药品。应加强老年人的用药监护,加强对中药的生产以及上市后监测,新的和严重ADR是监测重点。

**关键词** 新的药品不良反应;静脉途径;中成药;上市后药物监测

## Analysis of 113 Cases of Unexpected Adverse Drug Reaction Reports in Our Hospital

TANG Yong-mei, PENG Jie (Emergency Pharmacy, The Affiliated Drum Tower Hospital, Medical College of Nanjing University, Nanjing 210008, China)

**ABSTRACT** OBJECTIVE: To understand the characteristics of unexpected adverse drug reactions (ADR), and to further improve ADR monitoring. METHODS: By analyzing unexpected ADRs in 2012 retrospectively, those ADR cases were analyzed statistically. RESULTS: Among 113 cases, 3 cases were unexpected serious (2.65%) and 110 cases were unexpected general (97.35%); 51 patients aged over 60 years old took up the first place(45.13%); no differences were shown about gender; 89 cases were induced by i.v. administration (78.76%); drug combination was found in 2 cases. Drug were classified according to drug type: 113 cases of unexpected ADR included 12 categories 67 kinds of drugs, among which there were 12 kinds of TCM in 32 cases, including 11 cases of Tanreqing injection and 6 cases of Shengmai injection; followed by 7 kinds of vitamin nutraceutical in 17 cases. Organs or systems involved were skin and its appendants in 31 cases (25.62%); 93 cases were relieved (82.30%) and 17 cases were cured (15.04%). CONCLUSIONS: The majority of unexpected ADR are unexpected general ADR and by intravenous administration. Nearly half of ADR patients are over 60 years old, and ADR are mainly caused by TCM. It is important to strengthen surveillance of drug use in the elderly patients, manufacture, preparation and surveillance of TCM, unexpected and serious ADR monitoring.

**KEY WORDS** Unexpected ADR; Intravenous administration; Chinese patent medicine; Post-market drug monitoring

总之,复方聚乙二醇电解质散是较理想的肠道准备剂,其所致肠道清洁度及患者耐受性均优于口服酚酞片联合甘露醇。但其价格较昂贵,且在儿童等特殊人群的应用目前仍缺乏相关研究。

### 参考文献

[1] Sherer EA, Imler TD, Imperiale TF. The effect of colonoscopy preparation quality on adenoma detection rates [J]. *Gastrointest Endosc*, 2012, 75(3):545.

[2] Lawrance IC, Willert RP, Murray K. Bowel cleansing for colonoscopy: prospective randomized assessment of efficacy and of induced mucosal abnormality with three preparation agents[J]. *Endoscopy*, 2011, 43(5):412.

[3] 张宏博,丁杰,樊代明,等.结肠镜检查前肠道准备清洁效果的临床对比研究[J]. *中华消化内镜杂志*, 2003, 20(1):

37.

[4] 崔向真,王蓓.比较不同时间口服复方聚乙二醇电解质散观察肠道清洁度[J]. *中国内镜杂志*, 2006, 12(9):991.

[5] Van Dongen M. Enhancing bowel preparation for colonoscopy: an integrative review[J]. *Gastroenterol Nurs*, 2012, 35(1):36.

[6] Hadjivasiliou A. Good preparation shown to be highly significant in screening colonoscopy[J]. *Expert Rev Gastroenterol Hepatol*, 2012, 6(3):264.

[7] 杨林,姚珊珊,刘希双,等.复方聚乙二醇电解质散在结肠镜术前肠道准备中的应用[J]. *中国药房*, 2007, 18(8):605.

[8] 唐慧琳,应莲琴,周小花.复方聚乙二醇电解质散在术前肠道准备中的应用[J]. *中国基层医药*, 2009, 16(2):368.

[9] 厉挺,陈月红,徐春娥,等.复方聚乙二醇电解质散与硫酸镁在结肠镜检查前肠道准备中的效果比较[J]. *实用医学杂志*, 2009, 25(5):781.

[10] 王家兰,鹿安琴.聚乙二醇电解质散在电子结肠镜检查前肠道准备中的应用[J]. *重庆医学*, 2011, 40(30):3 116.

(收稿日期:2013-02-04 修回日期:2013-03-14)

\*药师。研究方向:临床药理学。电话:025-83304616-60127。E-mail:yongmei@126.com

<sup>#</sup>通信作者:副主任药师,硕士。研究方向:临床药理学。电话:025-83304616-60127。E-mail:njrenkai@sina.com