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# 思连康联合蒙脱石散治疗小儿急性肠炎的疗效和对血清IgG、IgA、IgM水平的影响*

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**摘要 目的:**探讨思连康联合蒙脱石散治疗小儿急性肠炎的临床疗效和对血清IgG、IgA、IgM水平的影响。**方法:**选择我院2016年8至2017年8月收治的86例小儿急性肠炎患儿,根据随机数字表法将其随机分为观察组及对照组,两组患儿均给予常规治疗,对照组患儿在常规治疗基础上给予蒙脱石散治疗,观察组在对照组基础上给予思连康治疗。观察和比较两组患儿治疗后的疗效、呕吐缓解时间、发热消退时间、大便恢复正常时间、腹痛缓解时间、粪便常规恢复正常的时间及两组治疗前后的血清IgG、IgA、IgM水平的变化情况。**结果:**治疗后,观察组和对照组的总有效率分别为95.2%(40/42)、79.5%(35/44),观察组总有效率显著明显高于对照组(P<0.05);观察组患儿的呕吐缓解时间、发热消退时间、大便恢复正常时间、腹痛缓解时间及粪便常规恢复正常的时间均明显短于对照组(P<0.05)。治疗后,两组患儿的血清IgG、IgA、IgM水平均较治疗前明显升高,且观察组治疗后血清IgG、IgA、IgM水平均明显高于对照组(P<0.05)。**结论:**与单用蒙脱石散治疗相比,思连康联合蒙脱石散治疗小儿急性肠炎可有效提高治疗效果,缩短患儿临床症状改善时间,提高患儿免疫力。

**关键词:**思连康;蒙脱石散;急性肠炎;疗效;免疫功能

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# Efficacy of Si Liankang Combined with Montmorillonite in the Treatment of Children with Pediatric Acute Enteritis and its Effect on the Serum IgG, IgA, IgM Levels*

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**ABSTRACT Objective:** To investigate the clinical efficacy of Si Liankang combined with montmorillonite in the treatment of children with pediatric acute enteritis and its effect on the serum IgG, IgA and IgM levels. **Methods:** 86 cases with pediatric acute enteritis from August 2016 to August 2017 in our hospital were selected and divided into the observation group and control group according to random number table method, both groups were given conventional treatment, the control group was given montmorillonite on the basis of conventional treatment, the observation group was given Si Liankang on the basis of control group. The curative effect, remission time of vomiting, remission time of fever, recovery time of stool, abdominal pain relief time, routine recovery time of stool were observed and compared between the two groups. And the changes of serum IgG, IgA and IgM levels before and after treatment were observed and compared between the two groups. **Results:** After treatment, the total effective rate of observation group and the control group were 95.2% (40/42) and 79.5% (35/44), respectively, which was significantly higher in the observation group than that of the control group (P<0.05). The remission time of vomiting, fever subsidence time, fecal recovery time, abdominal pain relief time and fecal routine recovery time of observation group were significantly shorter than those of the control group (P<0.05). After treatment, the levels of serum IgG, IgA and IgM in both groups were significantly higher than those before treatment, and the levels of serum IgG, IgA and IgM in the observation group were significantly higher than those in the control group (P<0.05). **Conclusion:** Compared with montmorillonite alone, Siliankang combined with montmorillonite can effectively improve the therapeutic effect, shorten the improvement time of clinical symptoms and improve the immunity of children with acute enteritis.

**Key words:** Si Liankang; Montmorillonite; Pediatric acute enteritis; Efficacy; Immune function

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## 前言

腹泻与机体内菌群失调、免疫功能低下、感染等因素均有关,患儿临床症状表现为大便性质、次数发生改变,且多伴有呕

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吐，严重者可影响患儿的营养吸收及生长发育，甚至导致水电解质紊乱，威胁患儿生命健康[1-3]。我国小儿每年约有 3 亿人次发生腹泻，平均每年 2.5 次 / 小儿发病[4]，其好发于 6 个月至 2 岁的人群，发病率仅低于急性呼吸道感染疾病，是由于小儿消化系统发育不够完善、消化功能偏低、菌群失调、免疫功能低下等因素造成[5,6]。一般患儿会出现急性水样便腹泻，对患儿的小肠上皮细胞造成损害，使得肠黏膜脱落，对患儿正常吸收功能造成破坏，导致病情更加严重[7]；同时，当患儿肠道菌群发生失调时，会使肠道中的条件致病菌大量繁殖，从而加重腹泻症状[8]。

蒙脱石散是一种肠道的黏膜保护剂；思连康由婴儿嗜酸乳杆菌、双歧杆菌、蜡样芽胞杆菌、粪肠球菌组成，是一种复合的微生态制剂[9-11]。目前，临床常用肠道黏膜保护剂及肠道微生态制剂治疗小儿急性肠炎，有一定疗效，但关于二者对小儿免疫功能的研究报道较少[12]。因此，本研究主要探讨了思连康配合蒙脱石散治疗小儿急性肠炎患儿的临床疗效及对患儿血清 IgG、IgA、IgM 水平的影响，以期为小儿急性肠炎的治疗提供更多的参考依据。

## 1 资料与方法

### 1.1 一般资料

选择 2016 年 8 月 ~2017 年 8 月我院收治的小儿急性肠炎患儿 86 例，患儿经临床诊断均符合《实用儿科学》中有关急性肠炎的标准，细菌培养呈阴性，粪便常规检查中白细胞数量 <3 个 /HP，排除对对蒙脱石散或思连康过敏者及严重肝、肾功能障碍者。其中，男 49 例，女 37 例，年龄范围为 6 个月至 3 岁，平均年龄为 1.5± 0.3 岁，腹泻次数 5~13 次 /d，平均 7.0± 1.8 次/d。根据随机数字表法将所有患儿分为观察组及对照组，两组一般资料具有可比性。本研究所有患儿家属均知情同意，且经我院医院伦理委员会的批准同意。

表 1 两组患儿的一般资料对比

Table 1 Comparison of the general information between two groups of children

| Groups | n | Male / female | Average age (years) | Frequency of diarrhea (times/d) |
|---|---|---|---|---|
| Observation group | 42 | 25/17 | 1.4± 0.3 | 6.9± 1.5 |
| Control group | 44 | 24/20 | 1.6± 0.4 | 7.3± 2.0 |
| $x^2$/t | - | 0.217 | -2.631# | -1.052 |
| P | - | 0.641 | 0.010 | 0.296 |

### 1.2 治疗方法

两组均给予降温、纠正水电解质失衡、同时补充维生素等常规治疗。在常规治疗基础上，对照组给予蒙脱石散(博福 - 益普生(天津)制药有限公司生产，批准文号：国药准字H20000690)，具体剂量为≥ 1 岁患儿剂量为 3.0~6.0 g/d，3 次 /d；<1 岁患儿剂量为 3.0 g/d，3 次 /d。观察组给予思连康(购自杭州远大生物制药有限公司，批准文号：国药准字 S20060010)，剂量为≥ 1 岁患儿剂量为 2.0 g/ 次，3 次 /d；<1 岁患儿剂量为 1.0 g/ 次，3 次 /d。两组疗程均为 3 天。

### 1.3 观察指标

观察两组患儿治疗后的治疗效果[13]：患儿临床症状消失，大便常规、性状、次数恢复正常为治愈；患儿临床症状有所好转，大便常规、性状、次数较前有所改善为有效；患儿临床症状无改善或加重，大便常规、性状、次数无改善或加重为无效；两组患儿临床症状(呕吐缓解、发热消退、大便恢复正常、腹痛缓解及粪便常规恢复正常)恢复时间；两组患儿治疗前后 1 天的 IgG、IgA、IgM 水平，治疗前后 1 天，于清晨空腹取所有患儿的静脉血 3 mL，用全自动生化分析仪(日立 7600)检测血清 IgG、IgA、IgM 水平，试剂盒购自北京中生，所有操作严格按照试剂盒要求进行。

### 1.4 统计学方法

采用 SPSS19.0 软件进行数据分析，计量资料以 $\bar{x}\pm s$ 表示，组间比较采用 t 检验，计数资料用 n 或百分比表示，组间比较采用卡方检验，以 P<0.05 为差异有统计学意义。

## 2 结果

### 2.1 两组患儿临床疗效的对比

治疗后，观察组的总有效率为 95.2%(40/42)，对照组的总有效率为 79.5%(35/44)，观察组明显高于对照组(P<0.05)。

表 2 两组患儿的临床疗效对比[例(%)]

Table 2 Comparison of the clinical efficacy between two groups of children [n(%)]

| Groups | n | Cure | Effective | Ineffective | Effective rate |
|---|---|---|---|---|---|
| Observation group | 42 | 25(59.5) | 15(35.7) | 2(4.8) | 40(95.2) |
| Control group | 44 | 17(38.6) | 18(40.9) | 9(20.5) | 35(79.5) |
| $x^2$ | - | | | | 7.153 |
| P | - | | | | 0.010 |

### 2.2 两组患儿的临床症状恢复时间对比

观察组呕吐缓解时间、发热消退时间、大便恢复正常时间、腹痛缓解时间及粪便常规恢复正常的时间均明显短于对照组(P<0.05)。

表 3 两组患儿的临床症状恢复时间对比(d)

Table 3 Comparison of the clinical symptom recovery time between the two groups (d)

| Groups | n | Fever subsided | Emesis remission | Abdominal pain relief | Bowel movement returned to normal | Stool routine returned to normal |
|---|---|---|---|---|---|---|
| Observation group | 42 | 1.4± 0.3 | 1.5± 0.4 | 1.6± 0.4 | 2.3± 0.6 | 2.6± 0.6 |
| Control group | 44 | 2.5± 0.6 | 2.8± 0.6 | 2.7± 0.5 | 4.3± 1.0 | 4.7± 1.2 |
| t | - | -10.826 | -11.872 | -11.233 | -11.305 | -10.334 |
| P | - | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |

### 2.3 两组患儿治疗前后的血清 IgG、IgA、IgM 水平对比

治疗前，两组患儿的血清 IgG、IgA、IgM 水平对比差异无统计学意义(P>0.05)；治疗后，两组患儿的血清 IgG、IgA、IgM 水平均明显高于治疗前，且治疗后观察组的血清 IgG、IgA、IgM 水平明显高于对照组(P<0.05)。

表 4 两组治疗前后血清 IgG、IgA、IgM 水平对比(g/L，$\bar{x}$± s)

Table 4 Comparison of the serum IgG, IgA and IgM levels between the two groups before and after treatment

| Groups | n | IgG | | IgA | | IgM | |
|---|---|---|---|---|---|---|---|
| | | Before treatment | After treatment | Before treatment | After treatment | Before treatment | After treatment |
| Observation group | 42 | 8.5± 2.2 | 15.9± 3.1* | 0.9± 0.2 | 1.8± 0.4* | 1.3± 0.3 | 2.1± 0.5* |
| Control group | 44 | 8.3± 2.1 | 10.9± 2.4* | 1.0± 0.3 | 1.4± 0.3* | 1.4± 0.4 | 1.7± 0.4* |
| t | - | 1.078 | 8.337 | -1.826 | 5.228 | -1.315 | 4.106 |
| P | - | 0.284 | <0.001 | 0.072 | <0.001 | 0.192 | <0.001 |

Note: compared with before treatment, *P<0.05.

## 3 讨论

小儿急性肠炎是儿科的一种常见胃肠道疾病，以呕吐、腹痛、发热、腹泻为主要症状，好发于夏秋季节，多由病毒及细菌感染所致，发病原因较为复杂。婴幼儿的消化系统发育不完善，消化酶活力差、分泌量少，导致患儿对食物的耐受力较差，容易出现消化道紊乱，造成消化道疾病。同时，由于 3 岁以下患儿的免疫系统尚不完善，易发生感染性疾病，尤其以消化道疾病最为常见，而消化道系统中以肠道感染的发病几率最高。肠道感染后，在吸收、消化障碍发生的同时，常伴有急性腹泻的发生，对患儿健康造成严重影响[14-18]。腹泻发生会导致患儿肠道的微生物环境失去平衡，造成菌群失调，患儿出现水 / 电解质紊乱，从而出现全身症状，临床中单纯应用抗生素治疗对患儿肠道微环境改善作用不显著，甚至在患儿症状有所好转时，免疫功能会进一步减弱[19-21]。因此，临床在改善患儿的临床症状的同时，需考虑提高患儿的免疫功能。有研究结果显示思连康有可提高高胆红素血症新生儿的免疫功能[22,23]。因此，本研究主要探讨了思连康配合蒙脱石散治疗小儿急性肠炎疗效及免疫功能的影响，旨在为小儿急性肠炎的治疗提供参考依据。

本研究结果表明相较于单用蒙脱石散，思连康联合蒙脱石散可提高急性肠炎患儿的疗效，患儿的呕吐缓解时间、发热消退时间、大便恢复正常时间、腹痛缓解时间及粪便常规恢复正常的时间均明显缩短，且思连康联合蒙脱石散较单用蒙脱石散可进一步提高患儿血清 IgG、IgA、IgM 水平，表明思连康联合蒙脱石散可显著提高急性肠炎患儿的免疫功能。分析其原因主要是由于蒙脱石散具有极高的定位能力，可在肠腔表面均匀覆盖，避免肠道细胞损伤病原体；同时蒙脱石散可作用于阿片受体，阻止乙酰胆碱的释放，解除内脏平滑肌痉挛，从而恢复胃肠蠕动的正常节律。此外，双八面体蒙脱石制剂具有非均匀性电荷分布及层纹状结构，可固定、吸附患儿消化道内的病毒、病菌，使其随大便及时排出，且能在患儿的消化道黏膜表面形成保护膜，覆盖消化道黏膜，同时通过结合黏液糖蛋白，提高患儿粘膜屏障对供给因子的防御作用，平衡机体内的正常菌群，促进患儿机体的康复[24-26]。

思连康的主要组成成分都属于正常人体肠道中的正常球菌群，通过直接补充可抑制肠道中的某些致病菌，维持人体正常的肠道蠕动，并调整肠道菌群的平衡。其中，蜡样芽胞杆菌可在肠道中进行定植生长，对大肠埃希菌、轮状病毒的繁殖造成抑制作用，同时可有效降低细胞的炎性水平，从而有效治疗患儿的腹泻症状，而嗜酸乳杆菌可有效抑制患儿肠道内的大肠埃希菌、志贺菌的生长繁殖，消耗机体中的氧气，以便为双歧杆菌等厌氧菌营造一种厌氧环境，同时也可促进双歧杆菌、乳酸杆菌等厌氧杆菌的生长、繁殖，以促进其生长，从而在服用后在患儿肠道内建立其生物性屏障，同时乳酸杆菌在生长中会产生一些列醋酸、乳酸等物质，将患儿肠道内的 pH 值迅速降低，以抑制致病菌的繁殖[27,28]，其在扶正正常菌群的同时，可进一步促进肠道的蠕动，平衡肠道菌群，从而激发机体对疾病的免疫力。思连康可联合多种菌群，对患儿的肠道菌群失调，小儿急性腹泻、肠道功能紊乱、腹痛、小儿消化不良、腹胀等有一定疗效[29,30]。

综上所述，思连康联合蒙脱石散治疗小儿急性肠炎，可提高治疗效果，缩短患儿临床症状改善时间，提高患儿免疫力。

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