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小儿肺热咳喘口服液联合三联吸入雾化治疗法对哮喘急性发作的影响*

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摘要 目的:探讨小儿肺热咳喘口服液联合三联吸入雾化治疗方案对哮喘患儿的治疗效果以及对肺功能的影响作用。**方法:**将我院自 2017 年 1 月至 2018 年 11 月间收治的哮喘患儿 210 例作为研究对象,按照随机数字表法分为两组各 105 例,研究组患儿在布地奈德、沙丁胺醇、异丙托溴铵三联吸入雾化治疗的基础上给予小儿肺热咳喘口服液进行治疗,对照组患儿仅给予三联雾化吸入治疗,对比观察两组患儿的疗效和预后。**结果:**研究组临床治疗后总有效率为 95.24%,明显高于对照组 77.14%($P<0.05$);治疗后研究组咳嗽消失时间、呼吸困难消失时间和急性发作随诊时间均明显短于对照组($P<0.05$),两组肺部喘鸣音消失时间比较差异无统计学意义($P>0.05$);治疗前患儿第一秒用力呼气量(forced expiratory volume in one second,FEV1)、最大肺活量(forced vital capacity,FVC)及 FEV1/FVC 值、呼气峰流速值(peak expiratory flowrate,PEF)对比无统计学意义($P>0.05$),治疗后 1 d、3 d、7 d 以上指标水平均明显升高,且在治疗后 7 d,研究组明显高于对照组($P<0.05$)。治疗期间研究组有 1 例出现轻度腹泻,3 例食欲减退,并发症的发生率为 3.81%(4/105),对照组治疗期间 2 例出现轻度腹泻,4 例食欲减退,并发症的发生率为 5.71%(6/105),两组比较无统计学意义($P>0.05$)。**结论:**使用小儿肺热咳喘口服液联合三联吸入雾化法治疗儿童哮喘急性发作,可改善患儿临床症状和肺功能,疗效显著,可推广使用。

关键词:哮喘;布地奈德;沙丁胺醇;异丙托溴铵;小儿肺热咳喘口服液;疗效

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Effect of Xiaoer Feirekechuan Oral Solution Combined with Triple Inhalation Atomization on Acute Attack of Asthma*

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ABSTRACT Objective: To investigate the therapeutic effect of Xiaoer Feirekechuan Oral Solution combined with triple inhalation nebulization on children with asthma and lung function. **Methods:** Twenty-one patients with asthma admitted to our hospital from January 2017 to November 2018 were enrolled in the study. According to the random number table method, 105 patients in each group were included in the study group, budesonide, on the basis of salbutamol and ipratropium bromide triple inhalation and atomization treatment, Xiaoer Feirekechuan Oral Solution was given for treatment. The control group received only triple inhalation therapy, and the two groups of children were compared. The efficacy and prognosis. **Results:** The total effective rate of the study group was 95.24%, which was significantly higher than that of the control group (77.14%). The difference between the two groups was statistically significant ($P<0.05$). After treatment, the disappearance time of cough, the time of disappearance of dyspnea and the time of follow-up of acute attack were significantly shorter in the study group than in the control group ($P<0.05$). There was no significant difference in the disappearance time of pulmonary wheezing between the two groups ($P>0.05$). FEV1, FVC, FEV1/FVC, and PEF was no statistical significance ($P>0.05$). The levels of indicators above 1 d, 3 d, and 7 d after treatment were significantly higher, and the study group was significantly higher than the control group at 7 d after treatment ($P<0.05$). During the treatment period, 1 patient developed mild diarrhea, 3 patients had loss of appetite, and the incidence of complications was 3.81% (4/105). In the control group, 2 patients developed mild diarrhea, 4 patients had loss of appetite, and complications occurred. The incidence rate was 5.71%(6/105), and there was no significant difference between the two groups ($P>0.05$). **Conclusion:** The use of Xiaoer feirekechuan oral Solution combined with triple inhalation nebulization in the treatment of acute asthma attacks in children can improve the clinical symptoms and lung function of children, with remarkable curative effect and can be promoted.

Key words: Asthma; Budesonide; Salbutamol; Ipratropium bromide; Xiaoer Feirekechuan Oral Solution; Efficacy

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前言

哮喘(asthma)是儿科临床上常见的与气道高反应性相关的慢性炎症性疾病,常伴随气道反应性增高,导致反复发作的喘息、气促、胸闷、咳嗽等症状,近年来发病率具有升高的趋势[1,2]。使用支气管扩张剂来解除呼吸道平滑肌痉挛和缓解憋喘是目前治疗儿童哮喘的常用手段,如氨茶碱、阿托品等药物,但是其缓解症状和改善体征方面获得的效果存在差异,同时会产生一些不良反应,随着现代医学的不断进步,雾化吸入治疗可有效的改善患儿肺功能各项指标[3,4],但是停药后有复发高的缺陷。中医认为哮喘与痰有直接的关系,小儿肺热咳喘口服液具有清热解毒、宣肺止咳、化痰平喘的作用,可以用于治疗哮喘,但是与雾化的联合治疗,临床上还没有相关的研究,因此,本次研究以我科诊治的哮喘急性发作的患儿为研究对象,在控制发作同时联合给予小儿肺热咳喘口服液口服,现报告如下。

1 资料与方法

1.1 一般资料

将我院自 2017 年 1 月至 2018 年 11 月间就诊于门急诊和哮喘门诊的哮喘急性发作的患儿 210 例,按照随机数字表法分为两组,各 105 例,研究组男 56 例,女 49 例,年龄 5~15 岁,平均年龄 9.81± 2.21 岁;对照组男 55 例,女 50 例,年龄 5~14 岁,平均年龄 9.23± 2.36 岁,两组一般资料无统计学意义(P>0.05)。

1.2 纳入和排除标准

纳入标准:均符合全球哮喘防治创意(GINA2017)及儿童支气管哮喘诊断和防治指南(2016 版);中医辩证标准符合《中医儿科学》(汪受传主编)中的相关标准[5]。

排除标准:将合并有其他感染性呼吸道疾病,心、肝、肾等多脏器功能障碍或凝血系统、免疫系统损伤的患儿,在入组前已经使用过激素、茶碱类、支气管扩张剂等全身给药治疗的患儿,先天性呼吸道功能发育不全、合并有精神疾病的患儿排除。

1.3 方法

对照组:患儿入院后经发作严重程度评估,给予吸氧(重度发作)、监护、安抚及适当镇静等,在此基础上给予 1 mg 布地奈德混悬液(商品名:普米克令舒;AstraZeneca Pty Ltd;批准文号:H20140475;生产批号:Lot313461、Lot313523;规格:2 mL:1 mg/支)、2.5 mg(体重<20 kg)或 5 mg(体重≥ 20 kg)硫酸沙丁胺醇(商品名:万托林;GlaxoSmithKline Australia Pty Ltd;批准文号:H20160660;生产批号:C180037、C0100301;规格:25mL:5mg/支)、250 μg 异丙托溴铵(商品名:爱全乐;Laboratoire Unither;批准文号:H20150158;生产批号:2013589、3982071;规格:2 mL:250 μg/ 支)三联吸入雾化治疗,经氧气驱动喷射雾化吸入。每 4~6 h 吸入 1 次至喘鸣音消失,改为 2 次 / 日,总共 1 周。之后按儿童哮喘分级给予缓解期治疗。

研究组:在对照组治疗的基础上联合使用小儿肺热咳喘口服液(生产企业:黑龙江葵花药业股份有限公司;国药准字 Z10950080;生产批号:201602153、201702153;规格:10 mL/支),使用剂量:1-3 岁每次一支,一日 3 次;4-7 岁每次 1 支,一日 4 次;8-12 岁每次 2 支,一日 3 次。两组均治疗 1 周,期间无病例脱落。

1.4 观察指标

疗效评价[6,7]:治疗后患儿症状、体征以及辅助检查指标均恢复正常,肺功能指标恢复至发作前判为治愈,治疗后患儿症状、体征明显好转,肺功能恢复至发作前 50 %水平以上判为显效;治疗后患儿病情有所改善,肺功能恢复至发作前 20 %以上判为有效;治疗 3 d 后患儿病情无任何好转甚至加重者判为无效,临床总有效率为治愈率 + 显效率 + 有效率。

症状缓解时间:两组咳嗽、呼吸困难、肺部喘鸣音消失时间和急性发作随诊时间。

肺功能:分别于治疗前、治疗后 1 d、3 d、7 d 对比观察两组第一秒用力呼气量(forced expiratory volume in one second,FEV1)、最大肺活量(forced vital capacity,FVC)及 FEV1/FVC值、呼气峰流速值(peak expiratory flowrate,PEF)等肺功能指标。

并发症的发生情况:比较两组治疗期患儿出现间腹泻和食欲减退的情况。

1.5 统计学方法

选用 SPSS21.0,计数资料用(%)示,行 x^2 检验,计量资料用($\bar{x}\pm s$)表示,行 t 检验,P<0.05 有统计学意义。

2 结果

2.1 疗效比较

研究组治疗总有效率高于对照组(P<0.05),见表 1。

表 1 疗效比较(例,%)

Table 1 Comparison of clinical effects(n,%)

Groups	n	Cure	Markedly effective	Effective	Invalid	Total effective rate
Research Group	105	58(55.24)	30(28.57)	12(11.43)	5(4.76)	100(95.24)*
Control group	105	46(43.81)	25(23.81)	10(9.52)	24(22.86)	81(77.14)

Note: Compared with the control group, *P<0.05.

2.2 症状恢复时间和急性发作随诊时间比较

治疗后研究组咳嗽消失时间、呼吸困难消失时间和急性发作随诊时间均明显短于对照组(P<0.05),两组肺部喘鸣音消失时间无差异(P>0.05),见表 2。

2.3 两组肺功能指标改善情况比较

治疗后 1 d、3 d 和 7 d,两组 FEV1、FEV1/FVC、FVC 和 PEF 等明显升高,且在治疗后 7 d,研究组高于对照组(P<0.05),见表 3。

2.4 两组治疗期间并发症的发生情况

治疗期间研究组有 1 例出现轻度腹泻,3 例食欲减退,并发症的发生率为 3.81%(4/105),对照组治疗期间 2 例出现轻度腹泻,4 例食欲减退,并发症的发生率为 5.71%(6/105),两组比较无统计学意义(P>0.05)。

表 2 两组症状恢复时间和急性发作随诊时间比较(d)

Table 2 Comparison of symptoms recovery time and acute attack follow-up time between two groups (d)

Groups	Cases	Cough disappearance time	Time of disappearance of dyspnea	Time of disappearance of pulmonary wheeze	Acute attack follow-up time
Research Group	105	5.38± 1.75*	1.82± 0.77*	4.22± 0.71	6.95± 2.64*
Control group	105	7.24± 1.46	2.39± 0.69	4.43± 0.84	8.47± 2.87

Note: Compared with the control group, *P<0.05.

表 3 两组肺功能指标改善情况比较(n=105)

Table 3 Comparison of improvement of pulmonary function in two groups (n=105)

Groups	Time	FEV1(%)	FEV1/FVC(%)	FVC(%)	PEF(%)
Research Group	Before treatment	60.11± 7.43	76.58± 10.05	75.35± 10.88	55.56± 9.70
	1 day after treatment	72.01± 6.58	84.98± 9.07	85.94± 9.98	75.79± 8.85
	3 day after treatment	87.12± 7.09	88.93± 7.58	92.35± 10.05	86.93± 9.70
	7 day after treatment	96.73± 9.87*#	96.44± 7.39*#	98.75± 11.05*#	90.38± 8.81*#
Control group	Before treatment	59.48± 5.41	77.63± 8.95	76.40± 9.85	57.04± 8.85
	1 day after treatment	72.35± 4.80	84.35± 8.75	85.33± 8.58	77.03± 8.02
	3 day after treatment	85.32± 6.52	88.58± 9.07	90.05± 9.18	80.97± 6.14
	7 day after treatment	92.84± 8.25	93.52± 11.11	94.87± 12.81	86.51± 8.73

Note: Compared with before treatment, *P<0.05, compared with the control group after treatment, #P<0.05.

3 讨论

哮喘是儿科临床最常见的疾病,对于小儿来说,体质差,免疫功能低下[8,9],容易受到外界环境和炎症反应的刺激而发作,患儿哮喘发作后会出现反复的气促、喘息和咳嗽等,严重者会出现氧供障碍,造成患儿死亡[10,11]。我国流行病学调查资料显示,小儿哮喘的患病率呈逐年上升的趋势,严重威胁患儿的健康[12,13]。现代医学研究哮喘的病理学基础为气道慢性炎症,因此治疗多用糖皮质激素和支气管扩张剂, 而且需要长期使用,虽然能够暂时缓解临床症状,改善炎症反应,但是长期使用糖皮质激素会造成骨质疏松、胃肠道反应等[14,15]。

本次研究中,对照组患儿使用布地奈德、沙丁胺醇、异丙托溴铵三联雾化吸入治疗,雾化吸入后药物能够直接与呼吸道粘膜接触,在氧气的驱动下将雾化的药物颗粒送入气道,并不会进入血液循环,可快速高效的发挥其抗感染、平喘、祛痰的功效,已经逐渐成为临床治疗小儿哮喘的主要方案[16,17]。从中医角度来看,肺属于娇弱的脏器,小儿肺不足容易感触风邪,造成呼吸道反复感染,哮喘会久治不愈,这种病情从机理来讲会涉及脾、肾等其他脏器,因此治疗也应该调理三个脏器为主[18-20]。本次研究中研究组在对照组治疗的基础上联合使用小儿肺热咳喘口服液进行治疗,小儿肺热咳喘口服液由麻黄、苦杏仁、金银花、甘草、连翘、黄芩、之母、板蓝根、麦冬、鱼腥草组成,方中麻黄性温,味辛、微苦,有发汗散寒、宣肺平喘、利水消肿的功效,其中麻黄碱和伪麻黄碱均有缓解支气管平滑肌痉挛的作用[21,22];苦杏仁具有降气止咳平喘,润肠通便的功效;金银花具有清热解毒、抗炎、补虚疗风的功效[23,24];甘草具有清热解毒、镇咳祛痰抗炎的作用,主要发挥作用的是其中的甘草酸、甘草黄酮和甘草浸膏;连翘味苦性寒,具有清热解毒、疏散风热的功效[25,26];黄芩性寒味苦,具有泻实火,除湿热的功效;知母性寒味甘、苦,具有清热泻火,滋阴润燥功效,现代药理学证实知母浸膏具有抗病原微生物感染的作用;板蓝根具有清热解毒、凉血消斑、利咽止痛的功效;麦冬具有润肺清心、消炎抗菌的作用;鱼腥草具有清热解毒,利尿消肿的功效[27,28];上述诸药合奏清热解毒,宣肺化痰,止咳平喘的作用,现代药理学研究,该药物中大部分成分都有缓解支气管平滑肌高反应性的作用[29,30]。研究结果显示,研究组患儿临床疗效、症状缓解时间、急性发作随诊时间和肺功能各项指标改善程度均明显优于对照组,且不会增加并发症的发生。

综上所述,使用小儿肺热咳喘口服液联合三联吸入雾化法治疗儿童哮喘急性发作,可改善患儿临床症状和肺功能,疗效显著,可推广使用。

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