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高渗盐水联合沙丁胺醇雾化治疗小儿毛细支气管炎的疗效比较*

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摘要 目的: 观察高渗盐水联合沙丁胺醇雾化吸入治疗小儿毛细支气管炎疗效。方法: 选取 2012 年 1 月~2013 年 2 月在我院接受治疗的毛细支气管炎患儿 78 例, 随机分为治疗组和对照组, 每组各 39 例。两组均采用综合性治疗及对症处理, 在此基础上, 对照组给予生理盐水联合沙丁胺醇雾化吸入, 治疗组给予 3.6% 高渗盐水联合沙丁胺醇雾化吸入。观察两组痰液炎性细胞计数差值及临床疗效。结果: 治疗组总有效率 94.87%(37/39), 对照组总有效率 82.05%(32/39), 显著差异有统计意义($P < 0.05$)。治疗组患儿雾化吸入前和治疗 5 d 后痰液细胞总数、淋巴细胞数和中性淋巴细胞数均低于对照组($P < 0.01$)。结论: 联合使用 3.6% 的高渗盐水和雾化吸入沙丁胺醇, 可有效减少炎症细胞数量, 缓解气道水肿与阻塞, 缓解临床症状, 缩短病程, 值得推广。

关键词: 高渗盐水; 生理盐水; 沙丁胺醇

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Comparison of Clinical Effects of Hypertonic Solubility Saline Combined with the Salbutamol on the Treatment of the Bronchiolitis*

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ABSTRACT Objective: To analyze the clinical effects of the different hypertonic saline(3.6%) combined with the salbutamol on the treatment of the bronchiolitis for children. **Methods:** 78 children with bronchiolitis who were treated in our hospital from January 2012 to February 2013 were selected and randomly divided into the treatment group and the control group with 39 cases in each one. Besides of the basic treatment, the patients in the control group were treated by the normal saline combined with salbutamol atomization inhalation, while the patients in the treatment group was given 3.6% hypertonic saline combined with salbutamol atomization inhalation. Then the sputum inflammatory of cells and the clinical efficacy were observed and compared. **Results:** The cure rate of the treatment group was 94.87%(37/39) which was higher than 82.05%(32/39) of the control group with statistically significant differences ($P < 0.05$). After the treatment for 5 days, the total sputum inflammatory cells was lower than that of the control group ($P < 0.01$). **Conclusion:** It is suggested that the combination of 3.6% hypertonic saline and nebulizer salbutamol on the treatment of the bronchiolitis for children could be well promoted to the clinical with the advantages of reducing the inflammatory cells as well as improving the clinical symptoms.

Key words: Hypertonic saline; Physiological saline bronchiolitis; Salbutamol

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前言

毛细支气管炎(bronchiolitis)是一种多发于婴幼儿的下呼吸道感染疾病,以 1-6 个月的婴儿尤为常见。毛细支气管炎常累及肺泡与肺泡间壁,国内将其视为特殊类型的肺炎,并称之为喘憋性肺炎^[1]。呼吸道合胞病毒(RSV)是引发该病的主要病原体,此外,副流感病毒、人类偏肺病毒、某些腺病毒和肺炎支原体也可引起毛细支气管炎。该病的主要临床症状为喘憋、气促和三凹征^[2]。本研究选取 2012 年 1 月~2013 年 2 月毛细支气管炎疾病患儿 78 例,进行治疗,并观察两组雾化吸入前和治疗 5 d 后痰液炎性细胞变化情况,现报告如下。

1 资料及方法

1.1 一般资料

选取 2012 年 1 月~2013 年 2 月毛细支气管炎疾病患儿 78 例,所有毛细支气管炎患儿诊断符合毛细支气管炎的标准。随机分成两组,每组各 39 例,其中治疗组 39 例包括男 28 例,女 11 例,年龄 6.0-20.5 个月,平均年龄 12.4 ± 1.6 个月;对照组 39 例包括男 27 例,女 12 例,年龄 6.5-20.5 个月,平均年龄 12.3 ± 1.6 个月,两组病例数量、性别比例、年龄差异及病情程度等一般资料没有显著差异($P > 0.05$),具有可比性。

1.2 方法

治疗组和对照组都采取相同的抗感染措施,纠正电解质失衡、脱水,吸痰保持气道通畅,吸氧纠正低氧血症等综合治疗,通过微型雾化器以氧驱动雾化吸入。治疗组用 3.6% 渗盐水联

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合沙丁胺醇 2.5 mg 雾化吸入;对照组仅改为生理盐水,其他相同。入院后 6 小时,患儿统一采取内雾化治疗,根据病情采取不同的治疗方案,病情较重者每日 4 次,每次持续时间约 10~15 min,症状较轻者可每日 2 次,康复为止。记录实验中两组的雾化吸入前和治疗 5 d 后痰液炎性细胞变化情况。

1.3 统计分析

两组患儿的结果采用数理统计分析软件 SPSS15.0 进行数据搜集与整理,进行卡方检验, $P<0.05$ 显著差异有统计意义。

2 结果

通过盐水联合沙丁胺醇雾化治疗,39 例治疗组治愈率 94.87%(37/39)、39 例对照组治愈率 82.05%(32/39),显著差异有统计意义($P<0.05$),见表 1。治疗组和对照组在治疗前痰液炎性细胞数差异无显著性差异,治疗组患儿肺患儿雾化吸入治疗 5 d 后痰液炎性细胞变化比较均优于对照组($P<0.01$),见表 2、3。

表 1 两组临床疗效比较(N=78)

Table 1 Comparison of the clinical effects between two groups

组别 Group	n	治愈 Cure	显效 Excellent	有效 Effective	无效 Invalid	总有效率 Total efficacy
对照组 Control group	39	21(53.85%)	6(15.38%)	5(12.82%)	7(17.95%)	82.05%
治疗组 Treatment group	39	9(23.08%)	12(30.77%)	16(41.02%)	2(5.13%)	94.87%
P 值		<0.05	<0.05	<0.05	<0.05	<0.05

注:与对照组相比, $P<0.05$ 。

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

表 2 两组患儿治疗前炎性细胞数比较(N=78)

Table 2 Comparison of the inflammatory cells between the two groups before the treatment

组别 Group	n	细胞总数 In total	淋巴细胞 Lymphocyte	中性粒细胞 Neutrophil	嗜酸性粒细胞 Eosnophils	上皮细胞 Epithelial
对照组 Control group	39	9.23± 0.22	4.53± 0.12	3.91± 0.12	0.12± 0.11	1.99± 0.23
治疗组 Treatment group	39	9.53± 0.24	4.65± 0.21	4.02± 0.32	0.14± 0.12	1.98± 0.25
P value		>0.05	>0.05	>0.05	>0.05	>0.05

表 3 两组患儿治疗 5 d 后炎性细胞数比较(N=78)

Table 3 Comparison of the inflammatory cells between the two groups after the treatment for five days

组别 Group	n	细胞总数 In total	淋巴细胞 Lymphocyte	中性粒细胞 Neutrophil	嗜酸性粒细胞 Eosnophils	上皮细胞 Epithelial
对照组 Control group	39	6.23± 0.61	2.78± 0.54	1.91± 0.37	0.06± 0.01	1.83± 0.41
治疗组 Treatment group	39	6.16± 0.68	2.82± 0.58	1.76± 0.33	0.07± 0.02	1.83± 0.43
P value		<0.01	<0.01	<0.01	>0.05	>0.05

注:与对照组相比, $P<0.01$ 。

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

3 讨论

3.1 临床表现

本病多发于新生儿,且多是初次发作,多表现为喘憋和肺

部哮鸣音,下呼吸道呼吸不畅,呼气延长伴哮鸣,阵发性呼吸困难,间歇期症状减轻及呼气性哮鸣消失^[3]。病情严重者可见面无血色,心情烦躁,口唇发绀。病情轻者则全身中毒症状较轻,发热现象不明显,鲜有高热^[4,5]。体格检查可见呼吸表浅,心率加

快,60-80次/分,甚者高达100次/分,伴有鼻翼扇动和三凹征;肺部体征表现为呼气相哮鸣音同时伴有、细湿罗音,叩诊为鼓音。肺气肿导致肝脾下沉至肋缘下,触诊可触及肝脾^[67]。重度喘憋患者 PaO_2 降低, PaCO_2 升高^[89]。呼吸困难发生后48-72小时达到高峰期,病程1-2周。婴幼儿时期有一种特殊类型的支气管炎,称为哮喘性支气管炎,其特点为^[10-12]:①多见于3岁以下,有湿疹或其他过敏史;②有呼气性呼吸困难,体检可闻哮鸣音;③有反复发作倾向,但多数随年龄增长发作逐渐减少。实际上按目前婴幼儿哮喘诊断标准,多数哮喘性支气管炎应可能为婴幼儿哮喘的首次发作^[13,14]。

3.2 高渗盐水与 β_2 激动剂药物治疗机制

高渗盐水可以改变支气管血管通透性,增加患儿呼吸道内局部渗透压,造成一种气道内湿化,使呼吸道内分泌物增加,杀死支气管内病原微生物的作用^[18-20]。 β_2 激动剂这类药物以气雾剂的形式吸入体内可以比较快的得到相应的效果,它的作用时间可以维持4-6小时,所以在运动前15-30分钟先吸入沙丁胺醇(舒喘灵)或特布他林(喘康速)(2-3),可以使病人在运动过程中支气管处于舒张状态,可以更加自由的运动,不需要担心疾病的影响,满足了病人的需求。如果运动前没有使用相应药物,在运动过程中一旦发生运动性哮喘,吸入上述剂量也能很快缓解哮喘症状^[15-17]。

3.3 肺通气功能改善

本研究显示,治疗组治愈率94.87%(37/39)、对照组治愈率82.05%(32/39), $P<0.05$ 显著差异有统计意义。治疗组患儿肺雾化吸入前和治疗5d后痰液炎性细胞变化比较均优于对照组($P<0.01$)。

综上所述,联合使用3.6%的高渗盐水和雾化吸入沙丁胺醇,可有效减少中性粒细胞、淋巴细胞等气道浸润的炎症细胞数量,缓解气道水肿与阻塞,使气道痉挛症状解除,从而使气道高反应性降低,达到显著缓解儿童毛细支气管炎的临床症状,使病程缩短的疗效。因此,运用此法治疗儿童毛细支气管炎值得临床推广。

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