

doi: 10.13241/j.cnki.pmb.2021.12.029

肺炎 3 号联合金银花治疗儿童肺炎对患儿呼吸功能和炎症反应水平影响 *

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摘要 目的:探讨肺炎 3 号联合金银花治疗儿童肺炎对患儿呼吸功能和炎症反应水平影响。**方法:**选取我院 2017 年 2 月-2019 年 4 月期间收治的 80 例肺炎患儿,随机分成对照组和观察组,每组 40 例,对照组患儿采取阿奇霉素治疗,观察组患儿采取肺炎 3 号联合金银花治疗,对比不同治疗方法对患儿呼吸功能和炎症反应水平影响。**结果:**两组患儿治疗前用力肺活量(forced vital capacity, FVC)、第 1 秒用力呼气容积(forced expiratory volume in 1 second, FEV₁)、用力呼气峰流速(expiratory peak flow rate, PEF)对比无统计学差异($P>0.05$),治疗后,观察组患儿上述肺功能指标均明显高于对照组($P<0.05$)。两组治疗前患儿血清肿瘤坏死因子(tumor necrosis factor- α , TNF- α)、白介素(interleukin, IL)-6、IL-10 对比无统计学差异($P>0.05$),治疗后,观察组患儿 TNF- α 、IL-6 均明显低于对照组,且观察组 IL-10 明显高于对照组($P<0.05$)。患儿啰音消失时间、止咳时间、气促消失时间、热退时间以及住院时间对比发现对照组明显长于观察组($P<0.05$)。在治疗总效率方面,观察组明显更高($P<0.05$)。**结论:**儿童肺炎采取肺炎 3 号联合金银花治疗效果确切,可明显改善患儿呼吸功能,抑制机体炎性细胞因子,有效改善患儿临床症状,具有一定临床意义。

关键词:肺炎 3 号;金银花;儿童肺炎;呼吸功能;炎症反应

中图分类号:R725.6 **文献标识码:**A **文章编号:**1673-6273(2021)12-2331-04

Effect of Pneumonia 3 Combined with Honeysuckle on Children's Pneumonia on Respiratory Function and Inflammation*

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ABSTRACT Objective: To explore the effect of pneumonia 3 combined with honeysuckle in the treatment of childhood pneumonia on the respiratory function and inflammation of children. **Methods:** Eighty children with pneumonia admitted in our hospital from February 2017 to April 2019 were randomly divided into a control group and an observation group. Each group had 40 cases. The control group was treated with azithromycin and the observation group was treated with pneumonia. Combined with honeysuckle treatment, No. 3 compares the effects of different treatment methods on the respiratory function and inflammation of children. **Results:** There was no significant difference between the two groups of children before treatment with forced vital capacity (FVC), forced expiratory volume in 1 second (FEV₁) and forced expiratory peak flow rate (PEF) ($P>0.05$). After treatment, the observation group had The above lung function indexes of the children were significantly higher than the control group ($P<0.05$), serum tumor necrosis factor (TNF- α), IL-6, IL-10 in the two groups before treatment There was no statistical difference in comparison($P>0.05$). After treatment, the TNF- α and IL-6 of the observation group were significantly lower than the control group, and the observation group IL-10 was significantly higher than the control group ($P<0.05$). The disappearance time of rales, coughing time, disappearance of shortness of breath, shortness of heat, and hospitalization time in the observation group were significantly shorter than those in the control group ($P<0.05$). The total effective rate of treatment in the observation group was significantly higher than that in the control group ($P<0.05$). **Conclusion:** Pneumonia No. 3 combined with honeysuckle treatment is effective in children with pneumonia. It can significantly improve the respiratory function of children, suppress the body's inflammatory cytokines, and effectively improve the clinical symptoms of children. It has certain clinical significance.

Key words: Pneumonia No. 3; Honeysuckle; Children's pneumonia; Respiratory function; Inflammatory response

Chinese Library Classification(CLC): R725.6 **Document code:** A

Article ID:1673-6273(2021)12-2331-04

* 基金项目:河北省科技计划项目(15277279D)

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(收稿日期:2020-10-26 接受日期:2020-11-22)

前言

儿童身体中呼吸系统、免疫系统等各组织未完全发育成熟,各器官还处于敏感阶段,如果患了肺炎,病情将迅速发展并不断蔓延^[1,2]。换气障碍或肺通气在患儿中较为常见,且易引起患儿低氧症状,从而导致患儿体内分泌物在呼吸气道、小支气管以及肺泡中大量聚集,使患儿肺炎病情不断加重^[3,4]。抗感染、解痉平喘、化痰以及对症支持联合的临床治疗方法是我国现阶段各大医院对于儿童肺炎的治疗方案^[5,6]。患儿病情严重、抗生素耐药日益普遍、患儿对药物剂量要求高等因素,导致常规治疗达不到理想的效果^[7,8]。因此,近年来,临床上关于肺炎患儿的研究重点已转为如何提高小儿重症肺炎的临床疗效。因此,本文选取我院 2017 年 2 月-2019 年 4 月期间收治的 80 例肺炎患儿纳入研究,探究了肺炎 3 号与金银花联合治疗儿童肺炎对患儿呼吸功能和炎症反应水平影响,为儿童肺炎的治疗提供一定的临床参考,同时为加速儿童肺炎的治疗提供一定的理论依据。

1 资料与方法

1.1 一般资料

我院 2017 年 2 月-2019 年 4 月期间收治的 80 例肺炎患儿,临床症状主要为:呼吸急促、咳嗽、肺部有啰音等^[9]。依据《实用儿科学》进行诊断,所有患儿均符合该标准。患儿尚未出现严重症状,如呼吸衰竭、心力衰竭等。80 例患儿平均分成两组:对照组(n=40)和观察组(n=40)。对照组中,男 23 例,女 17 例,年龄 2 个月~5 岁,平均年龄(1.5±0.4)岁,病程 4~16 h;观察组:男 22 例,女 18 例,年龄 2 个月~5 岁,平均年龄(1.5±0.6)岁,病程 5~17 h;患儿资料无统计学意义,可比较(P>0.05)。

1.2 方法

1.2.1 对照组 对照组口服或静点阿奇霉素,阿奇霉素剂量为

10 mg/kg·d,连续口服 5 日,每日 1 次。治疗期间除用布洛芬口服液退热之外不适用其他药物。

1.2.2 治疗组 治疗组口服肺炎 3 号联合金银花颗粒日三分之一包,连续口服 5 日,依据年龄选用。治疗期间除用布洛芬口服液退热之外不适用其他药物。肺炎 3 号联合金银花颗粒具体用量:太子参 25 g、炒白术 12 g、云茯苓 15 g、半夏 12 g、陈皮 12 g、紫苑 15 g、白前 15 g、黄芪 25 g、炙甘草 6 g,本次我们加上金银花 10 g,为改良肺炎 3 号。设定总疗程为 5 d,进行治疗前后呼吸功能和炎症反应水平指标的观察。

1.3 评价指标及评定标准

(1)比较治疗前后 FVC、FEV₁、PEF 等肺功能指标的是否有所改善,采用仪器为肺功能检测仪;(2)比较治疗前后血清 TNF-α、IL-6、IL-10 等炎症因子是否改善,在清晨空腹条件下,采集肘静脉血 6 mL,离心分离处理,转速 1500 r/min,离心 10 min,分离血清后,合适温度的冰箱中保存标本。检测方法采用 ELISA 法,检测试剂均由芬兰某公司提供^[9];(3)将两组止咳、热退、啰音消失、气促消失以及住院时间进行比较;(4)将两组临床疗效进行比较。疗效标准^[10,11]:显效:经治疗咳嗽、发热、气促等症均消失,肺部听诊正常;有效:主要症状改善明显,但肺部听诊仍有少量啰音;无效:临床症状及肺部听诊没有得到改善。

1.4 统计学方法

SPSS23.0 软件分析,计量资料采用($\bar{x} \pm s$)表示,计数资料采用(%)表示,组间分别行 t、 χ^2 检验, P<0.05,则具有统计学意义。

2 结果

2.1 比较两组治疗前后肺功能指标

FVC、FEV₁、PEF 在治疗前进行对比,无统计学差异(P>0.05),治疗后,上述肺功能指标均明显更高,且观察组显著优于对照组(P<0.05),如表 1。

表 1 两组治疗前后肺功能指标对比

Table 1 Comparison of lung function indexes between two groups of children before and after treatment

Groups	n	FVC(L)		FEV ₁ (L)		PEF(L/s)	
		Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment
Observation group	40	2.23±0.15	3.09±0.15**	1.57±0.49	2.98±0.52**	2.02±0.35	3.98±0.95**
Control group	40	2.21±0.17	2.76±0.53*	1.55±0.50	2.51±0.50*	2.05±0.37	3.11±0.83*

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

2.2 比较两组治疗前后炎症因子水平

治疗前,两组 TNF-α、IL-6、IL-10 对比无统计学差异(P>

0.05),治疗后,观察组 TNF-α、IL-6 均明显低于对照组,且观察组 IL-10 明显高于对照组(P<0.05),如表 2。

表 2 两组治疗前后炎症因子水平对比($\bar{x} \pm s$, ng/L)

Table 2 Comparison of inflammatory factor levels between two groups of children before and after treatment($\bar{x} \pm s$, ng/L)

Groups	n	TNF-α		IL-6		IL-10	
		Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment
Observation group	40	53.41±12.31	34.12±10.03**	72.09±17.53	25.13±9.02**	23.97±5.93	26.14±5.09**
Control group	40	53.40±12.29	43.20±11.14*	72.11±17.60	38.25±10.12*	24.03±6.03	18.97±4.13*

2.3 比较临床症状消失和住院时间

观察组患儿止咳、热退、啰音消失、气促消失以及住院时间

均明显短于对照组(P<0.05),如表 3 所示。

表 3 两组临床症状消失及住院时间对比($\bar{x} \pm s, d$)Table 3 Comparison of the disappearance of clinical symptoms and hospital stay in the two groups($\bar{x} \pm s, d$)

Groups	n	Rabble disappearing time	Cough time	Shortness of breath	Heat back time	Length of hospitalization
Observation group	40	3.21 $\pm$ 1.03*	5.26 $\pm$ 1.09*	4.63 $\pm$ 1.51*	2.73 $\pm$ 0.81*	5.83 $\pm$ 0.71*
Control group	40	5.71 $\pm$ 1.46	8.75 $\pm$ 1.13	5.72 $\pm$ 1.63	4.74 $\pm$ 1.41	7.30 $\pm$ 0.82

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

2.4 比较两组临床疗效

于后者($P < 0.05$),见表 4。

观察组和对照组治疗总有效率比较结果显示,前者显著高

表 4 临床疗效对比

Table 4 Comparison of clinical efficacy between two groups of children

Groups	n	Marked effect	Effective	Invalid	Total efficiency
Observation group	40	22	16	2	38(95)*
Control group	40	17	12	11	29(72.5)

3 讨论

小儿肺炎是一种常见、多发疾病,具有病情重,进展快的特点。患儿患病后,在较短时间内,患儿呼吸功能和循环功能出现障碍甚者衰竭,极大地威胁患儿身体健康,也是近年来小儿肺炎死亡的重要原因之一^[12,13]。鉴于此原因,对小儿重症肺炎患儿采取早诊断、早治疗、及时发现并进行相应治疗,在临床上是十分重要的。

3.1 肺炎 3 号联合金银花对小儿肺炎治疗效果的影响

我们为明确肺炎 3 号联合金银花治疗与阿奇霉素对小儿肺炎治疗效果差异,共选取我院近期收治的 80 例小儿肺炎患者开展随机分组对比,结果显示,在肺炎 3 号联合金银花治疗的情况下,患儿的临床治疗有效率显著优于对照组(单独阿奇霉素治疗),与陈立^[14]学者的研究类似,该学者观察肺炎 3 号联合阿奇霉素治疗支原体肺炎的临床疗效,结果显示联合组的总有效率 92.68%,显著高于对照组的 75.61%。分析其原因为肺炎 3 号药物配方为:太子参、黄芪、茯苓、白前、半夏、紫苑、白术、陈皮、川芎、炙甘草^[15,16]。其药物治疗功能归根结底主要是健脾益气、燥湿化痰,其中,太子参、茯苓、白术等能够联合增强健脾益气功效,生津润肺,增强健脾止咳功效^[17]。有研究显示:巨噬细胞的吞噬指数及吞噬率、免疫器官功能可以通过服用太子参提高和增强,同时也在不同程度上提高了 CD3⁺、CD4⁺、CD4⁺/CD8⁺ 等,同时降低 CD8⁺^[18,19];除此之外,太子参还能提升网状内皮系统的吞噬功能^[20]。白术能增强白细胞吞噬金黄色葡萄球菌的能力,有助于淋巴细胞的增殖恢复,机体免疫功能加强^[21,22]。T 淋巴细胞的细胞毒性可通过服用茯苓多糖来增强,加强细胞免疫反应,黄芪亦具有上述功效。上述药物综合作用,同时联合金银花,进而提高治疗有效率^[23,24]。

3.2 肺炎 3 号联合金银花对小儿肺炎呼吸功能的影响

呼吸功能指标主要用于评估新生儿肺炎疾病严重程度,经过药物治疗后,观察组患儿 FVC、FEV₁、PEF 均明显高于对照组,与桂红^[25]等学者的研究类似,观察黄芪注射液联合阿奇霉素治疗小儿支原体肺炎对肺功能及临床症状的影响,FVC、FEV₁、PEF 的改善优于阿奇霉素单独治疗组,即联合用药后,观察组患儿呼吸功能健康程度要明显优于对照组,该结果与韩

飞^[26]研究所述结果基本一致,推测原因主要是单独应用阿奇霉素虽然能起到较好杀菌作用,但是对肺部损伤没有较好改善作用。肺炎 3 号与金银花的联合应用,可有效改善患儿呼吸症状,有助于肺部活性物质分泌以及合成,促进肺泡稳定,进而改善肺功能,进而改善呼吸功能^[27,28]。

3.3 肺炎 3 号联合金银花对小儿肺炎临床症状改善的影响

观察组患儿止咳、热退、啰音消失、气促消失以及住院时间均明显短于对照组,同时桂红^[25]等学者的研究类似,结果也显示联合组的临床症状及体征缓解时间,住院时间均短于阿奇霉素单独治疗组。由此提示,肺炎 3 号联合金银花治疗小儿肺炎,可充分发挥协同作用,促进患者各项临床症状改善,改善相关指标,促进患者机体康复,缩短患儿各项临床症状消失时间,缩短住院时间^[29,30]。

3.4 肺炎 3 号联合金银花对小儿肺炎炎症因子的影响

TNF- α 是通过活化单核巨噬细胞合成、分泌而来,从而激活单核巨噬细胞生长,炎性介质大量分泌,引起炎症连锁反应,使病情加重。中性粒细胞和内皮细胞也可产生 TNF- α ,使得 IL-10 细胞因子释放。IL-10 是一种内源性抗炎细胞因子,抑制炎症细胞迁移、激活,抑制炎性因子释放及合成^[31]。两组治疗前患儿 TNF- α 、IL-6、IL-10 对比无统计学差异,治疗后,观察组患儿 TNF- α 、IL-6 明显降低,IL-10 明显升高,刘学龙^[32]等的研究类似,探究羚羊清肺丸联合阿奇霉素治疗小儿肺炎喘嗽痰热闭肺证的效果,显示治疗后联合组的血清 IL-6、TNF- α 水平明显低于阿奇霉素治疗组。分析其原因在西药治疗的基础上给予中医肺炎 3 号联合金银花治疗,通过增强健脾益气功效,生津润肺,减轻患者的炎症反应,从而改善肺炎的症状。本研究创新性的采用肺炎 3 号联合金银花治疗儿童肺炎,取得了一定的疗效,但是本研究也存在一定的不足,患者的样本量少,结果可能存在一定偏倚,也没有对肺炎 3 号联合金银花治疗儿童肺炎的机制深入探究,后续研究需要扩大样本量,深入探究,寻找治疗的新方法和思路。

综上所述,儿童肺炎采取肺炎 3 号联合金银花治疗效果确切,可明显改善患儿呼吸功能,抑制机体炎性细胞因子,有效改善患儿临床症状,疗效确切。对此,肺炎 3 号联合金银花的用药方案合理制定对改善患儿预后具有重要意义,值得临床上推广

应用。

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