doi: 10.13241/j.cnki.pmb.2014.11.039

阿奇霉素口服治疗小儿呼吸道肺炎支原体感染的临床研究

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摘要 目的:探讨阿奇霉素口服治疗小儿呼吸道肺炎支原体感染的临床效果及安全性。**方法:**选取 2012 年 5 月至 2013 年 10 月在我院就诊的 144 例呼吸道肺炎支原体感染患儿,随机分为观察组和对照组,每组各 72 例。对照组加用注射用乳糖酸红霉素静滴治疗,观察组加用阿奇霉素口服治疗。对比两组患者的治疗效果及不良反应的发生情况。**结果:**观察组的总有效率为 94.45%,明显高于对照组的 83.33%；观察组患儿各临床症状及体征的消失时间均明显短于对照组；观察组患儿不良反应的总发生率为 6.95%,显著低于对照组的 16.67%,差异均有统计学意义(P<0.05)。**结论:**相比于注射用乳糖酸红霉素静滴治疗,阿奇霉素口服治疗小儿呼吸道肺炎支原体感染疗效更佳,且具有不良反应小,用药安全,患儿的配合度高的优势。

关键词:阿奇霉素;红霉素;小儿呼吸道肺炎;支原体感染

中图分类号:R725.6 **文献标识码:**A **文章编号:**1673-6273(2014)11-2156-03

Clinical Studies of Oral Azithromycin in the Treatment of Children With Respiratory Tract Infection of Mycoplasma Pneumonia

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ABSTRACT Objective: To investigate the clinical efficacy and safety of oral Azithromycin on the treatment of the respiratory tract infection of mycoplasma pneumonia for children. **Methods:** 144 children with the respiratory tract infection of mycoplasma pneumonia who were treated in our hospital from May 2012 to October 2013 were selected and randomly divided into the observation group and the control group with 72 cases in each one. The patients in the control group were treated by the injection of the intravenous drip Erythromycin Lactobionate, while the patients in the observation group were treated by oral Azithromycin. Then the clinical efficacy and adverse reactions of patients in the two groups were compared and analyzed. **Results:** The total effective rate of children in the observation group was 94.45% which was significantly higher than the 83.33% in the control group(P<0.05). The various clinical symptoms and signs of disappearing time in the observation group were significantly shorter than those of the patients in the control group. The overall incidence of adverse reactions in the observation group was 6.95% which was significantly lower than 16.67% in the control group with statistically differences(P<0.05). **Conclusion:** It is indicated that the efficacy of oral Azithromycin on the treatment of respiratory tract infection of mycoplasma pneumonia for children could be better than the injection of the intravenous drip Erythromycin Lactobionate with the advantages of lower incidence of the adverse reactions and more safety for children who were in the high matching degree.

Key words: Azithromycin; Erythromycin lactobionate; Children with respiratory infection; Mycoplasma infection

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

Article ID:1673-6273(2014)11-2156-03

前言

支原体肺炎是儿童肺炎中的常见病,是肺炎支原体引起的急性呼吸道感染伴肺炎，其其发病率占社区获得性肺炎的10%～40%。肺炎支原体(mycoplasma pneumoniae,MP)[1,2]被认为是导致小儿呼吸道感染的一种常见的病原体。近年来随着生存环境的恶化以及抗生素的滥用乱用,小儿呼吸道肺炎支原体感染的发病率居高不下。肺炎支原体感染的临床主要表现主要为发热、顽固性咳嗽、剧咳、肺部体征以及肺外表现,严重威胁儿童的身体健康。因此,对肺炎支原体感染采取及时有效地治疗显得至关重要。我院采取希舒美治疗小儿呼吸道肺炎支原体感染疗效显著,现将研究的具体情况报道如下。

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(收稿日期:2014-01-12 接受日期:2014-02-10)

1 资料与方法

1.1 临床资料

选取 2012 年 5 月至 2013 年 10 月在我院就诊的 144 例呼吸道肺炎支原体感染患儿，所有患者均存在不同程度的发热、刺激性咳嗽、咳痰、喘息等临床症状,肺部听诊能够闻及干湿性啰音,胸部 X 线片检查结果提示肺部发生炎症改变。患儿单份 MP-IgM 抗体为 1∶80,或者双份血清 MP-IgM 抗体 7～10d 后转为阳性,或者双份血清抗体升高大于 4 倍。诊断均严格遵照小儿呼吸道肺炎支原体感染的相关诊断标准进行。男性 85 例,女性 59 例，年龄最小为 5 个月，最大为 9 岁，平均年龄为 5.07± 1.24 岁。除外病毒感染患者。将患者随机分为观察组和对照组两组,每组各 72 例,两组患者在性别、年龄、临床表现及体征等方面比较,差异无统计学意义(P＞0.05),具有可比性。与患儿家属签署知情同意书。

1.2 方法

所有患儿均常规给予退热、止咳、祛痰、平喘解痉等对症治疗。在此基础上，对照组加用乳糖酸红霉素静脉滴注治疗，(20~30)mg/(kgod)，每日 3 次；观察组加用阿奇霉素口服治疗，10 mg/(kgod)，每日 1 次，连服 3 天后停药 4 天。两组均以 1 周为一疗程。

1.3 观察指标

观察记录两组患儿临床表现、体征发生好转或者消失的时间、用药后不良反应的发生等情况。遵照卫生部制定的《抗菌药物临床研究指导原则》中的相关标准对患儿的治疗效果进行评定。痊愈：治疗 3d 患儿的体温降至正常水平，症状、肺部体征明显好转，3 周后，临床症状及肺部体征全部消失，血常规及 X 线胸片结果均完全恢复；显效：治疗 3d，患儿体温降至正常，临床症状显著好转，但湿性啰音好转相对较慢，3 周后，临床症状及肺部体征基本消失，血常规及 X 线胸片结果明显恢复；有效：治疗 1 周，患儿体温降至正常，临床症状及湿性啰音均明显好转，但 3 周后，仍然残留部分临床症状及肺部体征；无效：治疗 1 周后患者的体温、咳嗽等症状无任何改善，甚至有加重的趋势。总有效率 = 痊愈率 + 显效率 + 有效率。

1.4 统计学处理

统计资料以平均值± 标准差($\bar{x}\pm s$)表示，计数资料以例和率表示。将所得数据导入 SPSS15.0 软件进行分析，计量资料采用 t 检验，计数资料采用 x^2 检验，以 $P<0.05$ 作为有统计学差异的标准。

2 结果

2.1 临床治疗效果比较

经分析可知，观察组的总有效率为 94.45%，相比于对照组的 83.33%，显著提高，差异有统计学意义(P<0.05)。详见表 1。

表 1 两组患儿临床治疗效果比较 [n(%)]

Table 1 Comparison of the clinical efficacy of children in the two groups[n(%)]

组别 Groups	痊愈 Recure	显效 Excellent	有效 Effective	无效 Invalid	总有效率 Total effective rate
观察组(n=72) Observation(n=72)	51(70.83)	13(18.06)	4(5.56)	4(5.56)	94.45*
对照组(n=72) Control (n=72)	38(52.78)	16(22.22)	6(8.33)	12(16.67)	83.33

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

2.2 各临床症状及肺部体征的消失时间比较

据分析可知，观察组患儿各临床症状及肺部体征的消失时间均明显短于对照组，差异有统计学意义(P<0.05)。详见表 2。

表 2 两组患儿各临床症状及肺部体征的消失时间比较($\bar{x}\pm s$)

Table 2 Comparison of the disappearance of clinical symptoms and the physical signs of the lungs of children in the two groups($\bar{x}\pm s$)

组别 Groups	发热(天) Fever(day)	咳嗽(天) Cough(day)	咳痰(天) Expectoration(day)	气喘(天) Asthma(day)	干湿性啰音(天) Dry and wet rales(day)
观察组(n=72) Observation group(n=72)	2.46± 1.23	2.37± 1.38	2.33± 1.31	2.46± 1.34	3.59± 1.57
对照组(n=72) Control group (n=72)	3.67± 1.28	3.84± 1.41	3.92± 1.32	4.01± 1.47	4.41± 1.62
t	7.572	9.035	11.484	12.012	6.354
P	0.000	0.000	0.000	0.000	0.001

2.3 不良反应的发生情况比较

观察组患儿不良反应的总发生率为 6.95%，显著低于对照组的 16.67%，差异有统计学意义(P<0.05)。详见表 3。

表 3 两组患儿不良反应的发生情况比较[n(%)]

Table 3 Comparison of the incidence of adverse reactions of children in the two groups[n(%)]

组别 Groups	恶心 Nausea	呕吐 Vomit	腹泻 Diarrhea	不良反应发生率 The incidence of adversereaction
观察组(n=72) Observation group(n=72)	6(8.33)	4(5.56)	2(2.78)	16.67
对照组(n=72) Control group (n=72)	2(2.78)	2(2.78)	1(1.39)	6.95*

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

3 讨论

肺炎支原体被认为是大小介于细菌与病毒之间[3-5]能够直接导致小儿呼吸道肺炎支原体感染并能够独立生存的一种病原微生物，其含有 DNA 以及 RNA 但不存在细胞壁的结构特点[6-9],使得通过对细胞壁的合成进行干扰而发挥治疗作用的青霉素类以及头孢菌素类抗菌药物难以发挥治疗作用。因此,临床主要采取喹诺酮类、大环内酯类、四环素类或者氨基糖苷类等抗菌药物治疗，主要通过将蛋白质合成阻断而发挥治疗作用。但四环素类抗菌药物能够导致牙釉质发育不全、龋齿或者牙齿黄染等不良反应;喹诺酮类抗生素可影响未成年人软骨的正常发育；氨基糖苷类抗生素具有较强的耳毒性或肾毒性,不宜应用于不足 18 周岁的未成年人。故治疗小儿呼吸道肺炎支原体感染主要采取大环内酯类抗菌药物。大环内酯类抗菌药物能够与 50S 亚基 23SrRNA 的特殊靶位相结合[10,11],阻止肽酰基 tRNA 自 mRNA 的 "A" 位向 "P" 位的移动,进而对细菌蛋白质的合成进行选择性抑制;或结合细菌核糖体 50S 亚基的 L22 蛋白质[12,13],破坏核糖体的结构[14,15],使肽键延长阶段肽酰 tRNA 与核糖体较早发生解离。

乳糖酸红霉素属于大环内酯类抗生素,为水溶性的红霉素乳糖醛酸酯,对葡萄球菌属、各组链球菌和革兰阳性杆菌均具抗菌活性[16],曾被视为治疗小儿呼吸道肺炎支原体感染的首选药物,在本研究中,对照组的总有效率为 83.33%,说明乳糖酸红霉素治疗小儿呼吸道肺炎支原体感染疗效显著,但对其不良反应的发生情况进行统计发现,对照组患者不良反应的总发生率为 16.67%,主要表现为胃肠道症状如恶心、呕吐、腹泻等,并且,由于乳糖酸红霉素具备能够发生分子内环化的特点,导致静脉滴注时输液部位经常发生疼痛，加之存在一定的肝毒性[17,18],能够加重患者痛苦,使患儿的配合度降低,限制了临床应用。而阿奇霉素作为新大环内酯类抗生素,是在红霉素结构上进行修饰后得到的一种广谱抗菌药物 [19]，其代谢过程中不需要 P450 参与,对肝肾的损害相对较小,有研究表明[20],口服给予阿奇霉素后,其在肺组织的浓度明显高于血药浓度,并且半衰期长,药效消退缓慢。故我院在治疗小儿呼吸道肺炎支原体感染时观察组连续给药 3 天后选择停药 4 天,且以 1 周为一疗程,即是考虑到阿奇霉素具有 2~3 天的半衰期的缘故。在本研究中,观察组的总有效率为 94.45%,明显高于对照组的 83.33%;观察组患儿各临床症状及体征的消失时间均明显短于对照组,差异有统计学意义(P<0.05)。说明阿奇霉素治疗小儿呼吸道肺炎支原体感染的疗效更佳。并且,观察组患儿不良反应的总发生率为 6.95%，显著低于对照组的 16.67%，差异有统计学意义(P<0.05)。说明阿奇霉素的不良反应相对较小,临床应用相比于乳糖酸红霉素更加安全,且治疗方法简单,可操作性强,患儿的配合度较高。

综上所述,相比于乳糖酸红霉素静滴治疗,阿奇霉素治疗小儿呼吸道肺炎支原体感染疗效更佳，且具有不良反应小,用药安全,患儿的配合度高的优势。

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