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上海市 Omicron 毒株感染患儿在家庭亲子病房中的睡眠状态

李妙晨, 吴志敏, 张金萍

(上海交通大学附属第六人民医院儿科, 上海 200233)

[摘要] **目的:** 探讨以家庭聚集性发病为特点的家庭亲子病房内2~12岁新型冠状病毒Omicron毒株感染儿童及疫情期居家儿童的睡眠质量现状及差异。**方法:** 选取于2022年4月15日至2022年5月14日期间在上海市第六人民医院临港区定点医院儿科住院部的67例感染儿童作为阳性组, 92例疫情期居家儿童作为对照组。采用儿童睡眠习惯调查问卷(Children's Sleep Habits Questionnaire, CSHQ)对两组儿童睡眠时间、问题进行比较分析。**结果:** 阳性组中幼儿期就寝时间晚于对照组, 学龄前期早于对照组; 各年龄段阳性组晨起时间均早于对照组; 阳性组幼儿期夜间睡眠持续时间少于对照组($P<0.05$)。阳性组各年龄段22:00后就寝率占比为35.82%, 高于对照组($P<0.05$)。CSHQ睡眠问题总评分高于临界总分(>41)且高于对照组, 就寝习惯评分大于临界分(10.84), 睡眠持续时间问题评分高于对照组($P<0.05$)。阳性组入睡潜伏期、睡眠持续时间的阳性率分别为22.38%、26.86%, 均高于对照组(均 $P<0.05$); 阳性组睡眠呼吸障碍、白天嗜睡发生率分别为14.93%、11.94%, 均低于对照组(均 $P>0.05$)。阳性组男女性别CSHQ睡眠问题总评分及各分量项评分比较, 差异均无统计学意义(均 $P>0.05$); 阳性组3年龄段的睡眠问题, 如就寝习惯、入睡潜伏期、睡眠焦虑、夜醒、异态睡眠评分比较, 差异均有统计学意义(均 $P<0.05$)。**结论:** 新型冠状病毒Omicron毒株感染使住院患儿睡眠时间改变, 睡眠问题阳性发生率升高, 且不同年龄段都存在睡眠问题阳性现象, 但亲子病房模式把以上影响降到最低, 提示应及时以亲子病房模式进行干预, 促进患儿身心健康。

[关键词] Omicron; 阳性住院儿童; 儿童睡眠习惯调查问卷; 睡眠问题; 家庭亲子病房

Sleep status of children infected with familial aggregation Omicron variant in Shanghai in parent-child ward

LI Miaochen, WU Zhimin, ZHANG Jinping

(Department of Pediatrics, Shanghai Jiaotong University Affiliated Sixth People's Hospital, Shanghai 200233, China)

Abstract **Objective:** To investigate the current sleeping situation and differences in sleep quality between the hospitalized children aged 2–12 years old who were infected with familial aggregation Omicron variants under a parent-child ward treatment mode and the children at home during the epidemic period. **Methods:** From April 15, 2022 to May 14, 2022, 67 hospitalized children were selected in the Pediatric Inpatient Department of Lingang District

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通信作者 (Corresponding author): 张金萍, Email: zhang-jin-ping@163.com

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Designated Hospital of Shanghai Sixth People's Hospital as a positive group, and 92 children at home were selected as a control group. The sleep duration, sleep problems, and sleep status differences between the 2 groups were compared and analyzed with the Children's Sleep Habits Questionnaire (CSHQ). **Results:** The bedtime of the early childhood children in the positive group was later than that in the control group, while the preschool-aged children were earlier than that in the control group; the morning wake-up time in the positive group was earlier than that in the control group from all ages; the nighttime sleep duration of early childhood children in positive group was less than that in the control group ($P<0.05$). The total rate of bedtime after 22:00 in the positive group from all ages was 35.82%, which was higher than that in the control group ($P<0.05$). The total score of CSHQ sleep problems in the positive group was higher than the critical score (>41) and higher than that in the control group, and the bedtime habit score was higher than the critical score (10.84), and the sleep duration problem score was higher than that in the control group ($P<0.05$). The positive rate of sleep latency and sleep duration in the positive group was 22.38% and 26.86%, respectively, which were higher than those in the control group (both $P<0.05$), and the incidence rate of sleep-disordered breathing and daytime hypersomnia was 14.93% and 11.94%, which were lower than those in the control group (both $P>0.05$). There was no statistically significant difference in the total score of CSHQ sleep problems and the scores of each sub-item in the positive group between males and females (all $P>0.05$); and there were statistically significant differences in the score of sleep problems such as the bedtime habits, sleep latency, sleep anxiety, night awakenings, and parasomnia in the positive group which was divided into 3 parts according to the age of the children (all $P<0.05$). **Conclusion:** Omicron infection caused changes in the sleep time of hospitalized children and increased the positive incidence rate of sleep problems. Besides, the positive phenomenon of sleep problems could be found in different ages. However, the parent-child ward mode could minimize the effects mentioned, which revealed that the parent-child ward mode should be practiced timely to promote the physical and mental health of the affected children.

Keywords Omicron; positive hospitalized children; Children's Sleep Habits Questionnaire; sleep problems; parent-child ward

新型冠状病毒(以下简称新冠)肺炎(coronavirus disease 2019, COVID-19)疫情是21世纪最为严重的国际突发公共卫生事件,已持续传播2年多,在全球范围内造成了重大社会、经济损失及心理阴影^[1]。上海市于2022年3月新冠Omicron感染以家庭聚集性疫情暴发,截止2022年5月16日24时^[2]已累计确诊本土病例57 260例。特别是儿童的感染率呈明显上升趋势;截止2022年4月28日24时^[3],6岁以下儿童感染者累计12 707例,约占感染总数的2.4%,对儿童机体各方面产生了及其不利的影响。据国内外研究^[4-8]调查发现:此次疫情不仅改变了儿童睡眠模式,还增加了睡眠问题。儿童睡眠状况与自身免疫、体格生长、记忆巩固、认知发展和学习成绩等密切相关^[9-12],所以关注被病毒感染儿童的睡眠状况刻不容缓。但目前缺乏家庭聚集性发病影响儿童睡眠状况的研究,本研究采用儿童睡眠习惯调查问卷(Children's Sleep Habits Questionnaire, CSHQ)方式对新冠

Omicron毒株感染儿童与疫情期居家儿童进行对比分析研究,有利于制订相关干预措施,改善感染儿童睡眠质量,促进患儿身心健康。

1 对象与方法

1.1 对象

选取于2022年4月15日至2022年5月14日期间,在上海市第六人民医院临港区定点医院儿科住院部,确诊新冠Omicron毒株感染的67例2~12岁患儿作为阳性组;选取上海市同时期、同年龄段疫情期非感染新冠Omicron的92例居家儿童作为对照组。根据我国卫生健康委员会发布的睡眠卫生指南^[13]及参考金岚等^[14]研究,将两组患儿就寝时间分为21:00前、21:00—22:00、22:00后3个时间段。

1.2 阳性患儿诊断标准

1)符合中国国家卫生健康委员会COVID-19诊

疗方案(试行第九版)中的诊断标准^[15]; 2) 2~12岁儿童; 3) 家属知情并签署知情同意书; 4) 问卷中增加既往病史项目, 确定儿童无鼻腔、鼻咽、口咽等部位相关疾病、无营养性疾病、无心肺系统疾病、无遗传代谢病等。本研究通过上海交通大学附属第六人民医院医学伦理委员会批准(审批号: 2022-054), 中国临床试验注册号: ChiCTR2200059779。

1.3 儿童睡眠习惯调查问卷

CSHQ由Owens等^[16]在2000年编制出版。采用CSHQ对患儿睡眠行为和症状进行评定, 包含48项题目(33题为计分项), 其内容包括一般资料及8个分量表及临界值: 就寝习惯(>10.84分); 入睡潜伏期(>2.31分); 睡眠持续时间(>5.27分); 睡眠焦虑(>7.79分); 夜醒(>5.29分); 异态睡眠(>10.61分); 睡眠呼吸障碍(>4.50分); 白天嗜睡(>15.24分)。CSHQ是第1个并且目前应用最广泛的儿童睡眠情况筛查问卷。患儿陪护家长记录近1个月的睡眠行为和症状的平均水平。项目采用三级评分, 依据睡眠症状的发生频率, 从低到高依次评为1分(偶尔)至3分(通常), 总分>41表明患儿存在睡眠障碍, 其分数越高则睡眠障碍越严重。同时2007年李生慧等^[17-19]对中文版的CSHQ进行了制订及小样本的测量性能考核, 研究结果显示CSHQ中文版具有较好的信度和效度, 可用于我国学龄儿童睡眠状况研究。

1.4 统计学处理

采用Excel软件建立数据库并进行双人核对录入, 使用SPSS 25.0统计学软件完成数据的分析处理。正态分布的定量资料以均数±标准差($\bar{x}\pm s$)表示; 定性资料用频数和百分比表示。正态分布的两组定量资料的比较采用独立样本 t 检验(方差不齐的数据采用校正 t 检验); 正态分布且方差齐的三组定量资料的比较采用单因素方差分析; 定性资料组间比较采用 χ^2 检验, 单向有序的列联表分析采用秩和检验。 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 人口学资料

经微信平台收集电子问卷, 2~12岁新冠Omicron毒株感染阳性住院患儿共有67例, 男女比例为1.48:1, 学龄期、学龄前期以及幼儿期患儿占比分别为34.33%、35.82%、29.85%。对照组患

儿共92例, 男女比例为1.42:1, 学龄期、学龄前期以及幼儿期患儿占比分别为50.00%、36.96%、13.04%(表1)。

2.2 睡眠时间

2.2.1 两组睡眠时间比较

各年龄组新冠Omicron毒株感染阳性住院患儿睡眠时间与对照组分析显示: 幼儿期夜间睡眠持续时间为(10.85±1.87) h少于对照组的(12.33±1.61) h, 差异有统计学意义($P<0.05$); 学龄前期、学龄期就寝时间、夜间睡眠持续时间与对照组比较, 差异均无统计学意义(均 $P>0.05$, 表2)。

2.2.2 两组入睡时间比较

幼儿期、学龄前期、学龄期年龄组新冠Omicron毒株感染阳性住院患儿睡眠3个时间段与对照组比较, 差异均无统计学意义(均 $P>0.05$, 表3)。

2.3 睡眠问题

2.3.1 两组CSHQ评分比较

新冠Omicron毒株感染阳性住院患儿CSHQ睡眠问题总评分高于对照组, 差异无统计学意义($P>0.05$); 同时CSHQ睡眠问题分量项睡眠持续时间评分高于对照组, 差异有统计学意义($P>0.05$)。剩余CSHQ睡眠问题7个分量项评分与对照组比较, 差异均无统计学意义(均 $P>0.05$, 表4)。

2.3.2 两组SCHQ睡眠问题阳性率比较

新冠Omicron毒株感染阳性住院患儿CSHQ的总体睡眠问题阳性率为83.58%, 略低于对照组84.78%, 差异无统计学意义($P>0.05$)。其中入睡潜伏期、睡眠持续时间分量项的睡眠问题阳性率为22.39%、26.87%, 均高于对照组17.39%、10.87%, 差异均有统计学意义(均 $P<0.05$)。剩余CSHQ睡眠问题6个分量项的睡眠问题阳性率与对照组比较, 差异无统计学意义($P>0.05$, 表5)。

2.4 睡眠差异

2.4.1 阳性组不同性别CSHQ评分比较

新冠Omicron毒株感染阳性住院患儿不同性别CSHQ睡眠问题评分比较结果显示: 不同性别CSHQ睡眠问题总分及8个分量项(就寝习惯、入睡潜伏期、睡眠持续时间、睡眠焦虑、夜醒、异态睡眠、睡眠呼吸障碍、白天嗜睡)评分比较, 差异均无统计学意义(均 $P>0.05$, 表6)。

2.4.2 阳性组不同年龄 CSHQ 评分比较

新冠Omicron毒株感染阳性住院患儿各年龄组CSHQ睡眠问题评分比较结果显示:各年龄组CSHQ睡眠问题总评分比较差异无统计学意义($P>0.05$);其中各年龄组CSHQ睡眠问题分量项

就寝习惯差异有统计学意义($P<0.01$),分量项入睡潜伏期、睡眠焦虑、夜醒、异态睡眠差异均有统计学意义(均 $P<0.05$)。剩余各年龄组CSHQ睡眠问题分量项评分比较差异均无统计学意义(均 $P>0.05$,表7)。

表1 人口学资料

Table 1 Demographic data

组别	n	性别 / [例 (%)]		年龄 / [例 (%)]		
		男	女	幼儿期	学龄前期	学龄期
阳性组	67	40 (59.70)	27 (40.30)	20 (29.85)	24 (35.82)	23 (34.33)
对照组	92	54 (58.70)	38 (41.30)	12 (13.04)	34 (36.96)	46 (50.00)

表2 阳性组与对照组儿童睡眠时间比较

Table 2 Comparison of children's sleep time between positive group and control group

组别	n	幼儿期		
		就寝时间 /h	晨起时间 /h	夜间睡眠持续时间 /h
阳性组	20	21.07 ± 0.92	7.25 ± 1.16	10.85 ± 1.87
对照组	12	20.82 ± 0.93	7.49 ± 1.50	12.33 ± 1.61
t			2.280	
P			0.030	
组别	n	学龄前期		
		就寝时间 /h	晨起时间 /h	夜间睡眠持续时间 /h
阳性组	24	20.89 ± 0.61	6.99 ± 0.85	10.27 ± 1.36
对照组	34	21.12 ± 0.97	7.60 ± 0.96	10.38 ± 0.89
t			0.375	
P			0.709	
组别	n	学龄期		
		就寝时间 /h	晨起时间 /h	夜间睡眠持续时间 /h
阳性组	23	21.24 ± 0.69	6.91 ± 0.67	9.19 ± 1.09
对照组	46	21.34 ± 0.76	7.61 ± 0.87	9.48 ± 0.84
t			1.229	
P			0.223	

两组间比较采用独立样本t检验。

The independent sample *t*-test was used to compare between the 2 groups.

表3 阳性组与对照组儿童入睡时间比较

Table 3 Comparison of children's falling asleep time between the positive group and the control group

组别	n	幼儿期 / [例 (%)]			n	学龄前期 / [例 (%)]		
		21:00 前	21:00—22:00	22:00 后		21:00 前	21:00—22:00	22:00 后
阳性组	20	4 (20.00)	8 (40.00)	8 (40.00)	24	6 (25.00)	14 (58.33)	4 (16.67)
对照组	12	5 (41.67)	4 (33.33)	3 (25.00)	34	5 (14.70)	19 (55.89)	10 (29.41)
Z			-1.241				-1.310	
P			0.255				0.190	

组别	n	学龄期 / [例 (%)]			n	合计 / [例 (%)]		
		21:00 前	21:00—22:00	22:00 后		21:00 前	21:00—22:00	22:00 后
阳性组	23	3 (13.04)	8 (34.78)	12 (52.18)	67	13 (92.20)	30 (81.08)	24 (35.82)
对照组	46	7 (15.22)	25 (54.35)	14 (30.43)	92	17 (18.48)	48 (52.17)	27 (29.35)
Z			-1.470				-0.542	
P			0.141				0.588	

单向有序的列联表分析采用秩和检验。

The rank-sum test was used for one-way ordered contingency table analysis.

表4 阳性组与对照组CSHQ评分比较

Table 4 Comparison of CSHQ scores of children between the positive group and the control group

组别	n	CSHQ 评分			
		就寝习惯	入睡潜伏期	睡眠持续时间	睡眠焦虑
阳性组	67	11.40 ± 3.080	1.820 ± 0.777	4.492 ± 1.418	7.447 ± 1.979
对照组	92	11.07 ± 3.179	1.630 ± 0.766	3.880 ± 1.146	7.423 ± 2.164
t		0.670	1.538	2.908	0.071
P		0.504	0.126	0.004	0.943

组别	n	CSHQ 评分				
		夜醒	异态睡眠	睡眠呼吸障碍	白天嗜睡	总分
阳性组	67	4.089 ± 1.400	9.447 ± 2.210	3.686 ± 1.103	11.955 ± 2.566	49.835 ± 8.455
对照组	92	3.782 ± 1.035	8.934 ± 1.771	3.728 ± 1.006	11.902 ± 3.248	48.000 ± 7.346
t		1.589	1.623	-0.248	0.111	1.459
P		0.114	0.107	0.805	0.912	0.146

两组间比较采用独立样本t检验。

The independent sample t-test was used to compare between the 2 groups.

表5 阳性组与对照组CSHQ睡眠问题阳性率比较

Table 5 Comparison of positive results of CSHQ sleep disturbance between the positive group and the control group

组别	<i>n</i>	就寝习惯/[例(%)]	入睡潜伏期/[例(%)]	睡眠持续时间/[例(%)]	睡眠焦虑/[例(%)]
阳性组	67	40 (59.70)	15 (22.39)	18 (26.87)	40 (59.70)
对照组	92	54 (58.70)	16 (17.39)	10 (10.87)	49 (53.26)
χ^2		0.016	6.822	6.837	0.653
<i>P</i>		0.899	0.009	0.009	0.419

组别	夜醒/[例(%)]	异态睡眠/[例(%)]	睡眠呼吸障碍/[例(%)]	白天嗜睡/[例(%)]	总分/[例(%)]
阳性组	8 (11.94)	16 (23.88)	10 (14.93)	8 (11.94)	56 (83.58)
对照组	8 (8.70)	21 (22.83)	19 (20.65)	10 (10.87)	78 (84.78)
χ^2	0.451	0.024	0.853	0.044	3.710
<i>P</i>	0.502	0.877	0.356	0.833	0.054

定性资料组间比较采用 χ^2 检验。

The χ^2 test was used to compare qualitative data between the 2 groups.

表6 阳性组不同性别CSHQ评分比较

Table 6 Comparison of CSHQ scores of different genders in the positive group

组别	<i>n</i>	CSHQ 评分			
		就寝习惯	入睡潜伏期	睡眠持续时间	睡眠焦虑
男	40	11.200 ± 2.980	1.750 ± 0.742	4.375 ± 1.294	7.500 ± 1.825
女	27	11.703 ± 3.255	1.925 ± 0.828	4.666 ± 1.593	7.370 ± 2.221
<i>t</i>		-0.654	-0.908	-0.824	0.261
<i>P</i>		0.516	0.367	0.413	0.795

组别	CSHQ 评分				
	夜醒	异态睡眠	睡眠呼吸障碍	白天嗜睡	总分
男	4.100 ± 1.446	9.275 ± 2.183	3.650 ± 0.921	11.850 ± 2.517	49.500 ± 8.329
女	4.074 ± 1.356	9.703 ± 2.267	3.740 ± 1.347	12.111 ± 2.679	50.333 ± 8.774
<i>t</i>	0.074	-0.776	-0.328	-0.406	-0.393
<i>P</i>	0.941	0.440	0.744	0.686	0.696

两组间比较采用独立样本*t*检验。

The independent sample *t*-test was used to compare between the 2 groups.

表7 阳性组不同年龄CSHQ评分比较

Table 7 Comparison of CSHQ scores of different ages in the positive group

组别	n	CSHQ 评分			
		就寝习惯	入睡潜伏期	睡眠持续时间	睡眠焦虑
幼儿期	20	12.550 ± 2.282	2.150 ± 0.670	5.000 ± 1.376	7.650 ± 1.598
学龄前期	24	12.625 ± 2.794	1.875 ± 0.797	4.416 ± 1.380	8.166 ± 1.685
学龄期	23	9.130 ± 2.751	1.478 ± 0.730	4.130 ± 1.423	6.521 ± 2.253
F		13.006	4.525	2.135	4.673
P		<0.01	0.015	0.127	0.013

组别	CSHQ 评分				
	夜醒	异态睡眠	睡眠呼吸障碍	白天嗜睡	总分
幼儿期	4.650 ± 1.598	10.450 ± 2.327	3.750 ± 1.332	11.150 ± 2.345	47.400 ± 7.344
学龄前期	4.083 ± 1.138	9.666 ± 1.551	3.583 ± 0.974	12.375 ± 2.081	51.583 ± 6.289
学龄期	3.608 ± 1.339	8.347 ± 2.288	3.739 ± 1.053	12.217 ± 3.103	49.835 ± 8.455
F	3.150	5.741	0.160	1.444	1.372
P	0.050	0.005	0.853	0.244	0.261

3组间比较采用单因素方差分析。

The one-way ANOVA was used to compare among the 3 groups.

3 讨论

自从COVID-19在全世界暴发以来,中国报道了首项新冠相关睡眠障碍的研究, Huang等^[20]对7 236名志愿者[年龄为(35.3±5.6)岁]进行了调查,其中参与者约35%曾出现广泛性焦虑症状,20%出现抑郁症状,18%出现睡眠质量低下,而睡眠障碍程度越重,抑郁、焦虑障碍发生概率越高^[21-23]。上海市此次新冠Omicron病毒感染疫情家庭聚集性暴发,由于儿童处于生长发育的特殊阶段,更易受到疫情的冲击。据国内外研究^[4-8]调查发现此次疫情造成了儿童睡眠模式的改变,睡眠问题的增加。本研究对阳性组与对照组儿童的睡眠时间、睡眠问题、睡眠差异,并结合其他参考文献进行探讨,结果显示阳性组幼儿期就寝时间为21.07±0.92,早于日本东京幼儿期平均就寝时间21.41^[24],但晚于对照组,可能与幼儿期神经系统发育不完善有关,抵抗病毒能力较弱有关。学龄前期儿童就寝时间为20.89±0.61,早于日本东京学龄前期儿童平均就寝时间21.55^[24],与美国学龄前期儿童平均就寝时间20.39相近^[25],且国内10所城市的学龄前期儿童就寝时间21.39±0.42^[26],也早于对照组,提示Omicron变异株病毒对阳性组

学龄前期患儿就寝时间无影响,这可能与亲子病房模式有关,患儿得到家长时刻陪伴督促,能及时就寝。

本研究阳性组幼儿期夜间持续睡眠时间为(10.85±1.87) h,高于日本东京幼儿期夜间睡眠持续时间9.25 h^[24],但低于2015年美国睡眠基金会推荐适宜幼儿期睡眠持续时间11~14 h^[27],且低于对照组(12.33±1.61 h, P<0.05),提示此次Omicron变异株病毒使阳性组幼儿期平均夜间持续睡眠时间缩短,对幼儿期患儿睡眠质量应特别引起重视。

阳性组各年龄段22:00后就寝率为35.82%,低于文献^[28]报道晚于22:00后就寝率儿童达45.9%的调查结果,但高于对照组的29.35%,与其他研究^[29]报道在疫情期间隔离人员的失眠特点主要表现在入睡时间和睡眠效率上较为一致。与2020年欧洲特别工作组的研究^[30]报道相符,表示失眠症状可能主要与限制活动、焦虑和其他社会心理因素有关。

本研究阳性组患儿CSHQ睡眠问题总评分高于临界总分,且高于对照组,就寝习惯评分大于临界分;阳性组睡眠持续时间问题评分高于对照组(P<0.05),提示此次疫情导致阳性住院患儿出现不同程度的睡眠问题,Omicron病毒对患儿的就寝习

惯、睡眠持续时间影响较大。

近年国内流行病学调查^[31-32]显示6.9%~36.21%的学龄前儿童存在入睡潜伏期延长。本研究显示:阳性组入睡潜伏期为22.39%,符合国内文献^[32]报道范围,但高于对照组的17.39%($P<0.05$),提示此次Omicron变异株病毒影响了阳性组患儿入睡潜伏期睡眠问题。

本研究睡眠持续时间睡眠问题阳性率为26.87%,显著高于对照组的10.87%($P<0.05$),提示Omicron变异株病毒导致阳性住院患儿出现睡眠持续时间问题且使睡眠持续时间问题上升。

本研究阳性组儿童睡眠相关呼吸障碍(sleep-related disordered breathing, SRDB)发生率为14.93%,远低于国外文献^[33]报道儿童SRDB发生率(20%~34.11%)及对照组的20.65%,提示Omicron变异株病毒对阳性住院儿童SRDB发生率无影响。患儿SRDB发生率可能与其他原因有关,有待进一步探讨。

本研究阳性组白天嗜睡占比为11.94%,稍高于我国广东地区^[34]儿童白天嗜睡的11.1%,稍高于对照组10.87%,提示Omicron变异株病毒感染可能使阳性组患儿白天嗜睡率升高。

综上所述,阳性组患儿睡眠问题出现符合正在开展的“国际新冠疫情睡眠研究(International COVID-19 Sleep Study)”的报道^[35]。这项研究^[35]主要研究失眠、噩梦、睡眠呼吸暂停、疲劳、精疲力尽和快眼动睡眠行为障碍,提示疲劳、嗜睡和快眼动睡眠行为障碍可能与新冠感染本身相关。

阳性住院患儿不同性别CSHQ睡眠问题评分比较结果无差别,与国内文献^[34,36]报道儿童睡眠问题男女有差别结果不一致。可能与这次疫情突然大暴发男女儿童身心都受到同等冲击,对突发应激事件都有相同心理应激反应有关。

阳性组患儿各年龄组CSHQ睡眠问题分量项就寝习惯、入睡潜伏期、睡眠焦虑、夜醒、异态睡眠评分比较,差异均有统计学意义(均 $P<0.05$),从高分到低分年龄组依次排列是幼儿期组、学龄前期、学龄期组,即发现年龄越小,睡眠问题分数越高,与杨青等^[37]的研究结果类似。原因可能是随着小儿年龄不断增长,神经系统发育逐步完善,从而使就寝习惯、入睡潜伏期、睡眠焦虑、夜醒、异态睡眠等这些睡眠问题逐渐减少,甚至消失,符合小儿神经生长发育规律,也提示Omicron变异株病毒对阳性住院组患儿不同年龄的睡眠问题差异无影响。

本研究不足之处是没有把新冠Omicron变异株

感染家庭亲子住院患儿睡眠、心理问题结合在一起分析研究。有机会本研究将继续跟踪随访这些曾经阳性住院患儿及对照组儿童睡眠状况,探讨阳性患儿痊愈后是否产生睡眠障碍等后遗症及产生后遗症后对小儿身心健康损害程度,更好为社会重大公共卫生事件后制订预防干预措施及临床治疗方案提供数据支持及参考依据。

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