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肺癌初治患者睡眠障碍调查及与生活质量和睡眠卫生意识的关系研究*

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摘要 目的:分析肺癌初治患者睡眠障碍情况及其与生活质量和睡眠卫生意识的关系。**方法:**选取 400 例肺癌初治患者为研究对象,采用阿森斯失眠量表(AIS)评定患者睡眠质量,采用肺癌生活质量评估量表(FACT-L)评定患者生活质量,采用睡眠卫生意识量表(SHA)评定患者睡眠卫生意识,采用本院自制调查问卷收集患者临床资料。应用 Pearson 相关性分析 AIS 总分与 FACT-L 总分、SHA 总分的相关性。根据 AIS 总分将患者分为睡眠障碍组(AIS 总分 >6 分)和非睡眠障碍组(AIS 总分 ≤ 6 分),应用单因素和多因素 Logistic 回归分析睡眠障碍的影响因素。**结果:**400 例肺癌初治患者共有 252 例发生睡眠障碍,睡眠障碍发生率为 63.00% (252/400)。睡眠障碍组生理/情感/功能/(社会/家庭)维度、肺癌附加模块、FACT-L 总分低于非睡眠障碍组($P < 0.05$)。睡眠障碍组患者 SHA 总分、睡前 2h 剧烈运动、白天睡午觉、定期服用催眠类药物、晚上喝酒得分维度评分均低于非睡眠障碍组($P < 0.05$)。Pearson 相关性分析结果显示:AIS 总分与 FACT-L 总分、SHA 总分呈负相关($P < 0.05$)。单因素分析结果显示:肺癌初治患者睡眠障碍与性别、化疗次数、肿瘤分期、疼痛、焦虑、抑郁有关($P < 0.05$)。多因素 Logistic 回归分析结果显示:肺癌初治患者睡眠障碍的危险因素包括焦虑、疼痛、肿瘤分期、抑郁($P < 0.05$)。**结论:**肺癌初治患者睡眠障碍发生率较高,且受疼痛、肿瘤分期、焦虑、抑郁等因素的影响。此外,不良的睡眠卫生意识可导致较为严重的睡眠障碍,从而降低患者生活质量。

关键词:肺癌;睡眠障碍;生活质量;睡眠卫生意识;影响因素

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Investigation of Sleep Disorder in Patients with Primary Treatment of Lung Cancer and Its Relationship with Quality of Life and Sleep Hygiene Awareness*

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ABSTRACT Objective: To analyze the relationship between sleep disorders and quality of life and sleep hygiene awareness in patients with primary treatment of lung cancer. **Methods:** 400 patients with primary treatment of lung cancer were selected as the research object. The sleep quality was assessed by the Athens Insomnia Scale (AIS), the quality of life was assessed by lung cancer quality of life assessment scale (FACT-L), and the sleep hygiene awareness was assessed by sleep hygiene awareness scale (SHA), the clinical data of patients were collected by self-made questionnaire. Pearson correlation analysis was used to analyze the correlation between AIS total score and FACT-L total score, SHA total score. According to the AIS total score, the patients were divided into sleep disorder group (AIS total score >6 scores) and non-sleep disorder group (AIS total score ≤ 6 scores). The influencing factors of sleep disorder were analyzed by univariate and multivariate logistic regression. **Results:** A total of 252 of the 400 patients with primary treatment of lung cancer treated developed sleep disturbance, the incidence rate of sleep disturbance was 63.00% (252/400). The physiological/emotional/functional/(social/family) dimensions, lung cancer additional modules and FACT-L total score in the sleep disorder group were lower than those in the non-sleep disorder group ($P < 0.05$). The SHA total score, vigorous exercise 2 hours before bed, daytime nap, regular use of hypnotic drugs and evening drinking dimension scores in the sleep disorder group were all lower than those in the non-sleep disorder group ($P < 0.05$). Pearson correlation analysis showed that the AIS total score was negatively correlated with FACT-L total score and SHA total score ($P < 0.05$). Univariate analysis showed that sleep disturbance was related to gender, number of chemotherapy, tumor stage, pain, anxiety and depression in patients with lung cancer ($P < 0.05$). Multivariate Logistic regression analysis showed that the risk factors of sleep disorders in patients with primary treatment of lung cancer included anxiety, pain, tumor stage and depression ($P < 0.05$). **Conclusion:** The incidence of sleep disturbance in patients with primary treatment of lung cancer is high, and it is affected by pain, tumor stage, anxiety, depression and other factors. In addition, poor sleep hygiene awareness can lead to more serious sleep disorders, thereby reducing

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patients' quality of life.

Key words: Lung cancer; Sleep disorders; Quality of life; Sleep hygiene awareness; Influencing factors

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前言

癌症是威胁人类健康与生命的严重疾病,而肺癌又是全球发病率和死亡率最高的癌症^[1]。近 50 年来,我国肺癌发病率和死亡率呈急剧上升趋势,相关数据资料预测,预计到 2025 年,我国每年新发肺癌患者将超过 100 万^[2]。即便肺癌对人类的威胁不断增大,但随着医疗技术的进步,新型的安全有效的化疗药物以及靶向治疗药物不断生产,肺癌患者的预后也获得了不小的改善^[3]。在肺癌治疗中,化疗占据着较为重要的地位,但化疗带来的不良反应也不容忽视,如恶心、脱发、骨髓抑制、抑郁及乏力等。上述不良反应给患者带来直观的感受,使得不少人易忽视睡眠障碍对疾病的影响。睡眠是生物中普遍存在的自然休息状态,是维护身体健康的重要保证,充足的睡眠可帮助患者维持精力^[4]。而睡眠障碍则给患者造成一系列负面影响,如降低精神活力、免疫抵抗力下降等,降低患者生活质量^[5]。本研究通过探讨肺癌初治患者睡眠障碍情况及其与生活质量和睡眠卫生意识的关系,以期对肺癌初治患者睡眠障碍的早期干预提供参考。

1 资料与方法

1.1 一般资料

纳入标准:(1)诊断标准参考《中华医学会肺癌临床诊疗指南(2018 版)》^[6],经病理学检查、胸部增强 CT 等确诊为肺癌;(2)言语表达清楚、认知功能正常;(3)预计生存期大于 3 个月;(4)患者知情同意且签署同意书;(5)行肺癌切除术或至少行 1 周期化疗;(6)年龄 >18 岁。排除标准:(1)有精神病史;(2)治疗前存在睡眠障碍或意识障碍的患者;(3)合并药物、酒精依赖者;(4)合并甲状腺功能亢进、关节炎及严重躯体疾病者;(5)病情危重不能完成调查者。选取 2018 年 12 月~2020 年 12 月期间于我院进行初次治疗的 400 例肺癌患者。研究方案通过我院医学伦理学委员会批准。

1.2 方法

1.2.1 睡眠障碍 睡眠质量采用阿森斯失眠量表(AIS)^[7]评定,AIS 总分 24 分,其中失眠:AIS 总分 >6 分,可疑失眠:AIS 总分 4~6 分,无失眠:AIS 总分 ≤ 4 分。将失眠的患者纳为睡眠障碍组,无失眠或可疑失眠的患者纳为非睡眠障碍组。

1.2.2 生活质量 采用肺癌生活质量评估量表(FACT-L)^[8]评定,内容包括:情感维度(条目 6 个)、肺癌附加模块(条目 9 个)、功能维度(条目 7 个)、社会/家庭维度(条目 7 个)、生理维度(条目 7 个)。采用 0~4 分 5 级评分法评价每个条目,总分 144 分,分数越高,生活质量越高。

1.2.3 睡眠卫生意识 采用睡眠卫生意识量表(SHA)^[9]评定患者的睡眠卫生意识,SHA 包含 13 条目,1~7 级/每个条目,其中非常帮助睡眠为 1 级,中等帮助睡眠为 2 级,轻微帮助睡眠为 3 级,对睡眠无影响为 4 级,轻微干扰睡眠为 5 级,中等干扰

睡眠为 6 级,非常干扰睡眠为 7 级。量表总分 13~91 分,分数越高,睡眠卫生意识越好。

1.2.4 临床资料 患者临床资料情况采用本院自制调查问卷调查,包括:家庭平均月收入、疼痛、年龄、焦虑、有无手术史、文化程度、性别、肿瘤分期、化疗次数、婚姻状况、抑郁情况。为了保证问卷填写的质量和统一性,本问卷采用研究者提问并填写,患者回答的形式。问卷填写完毕后,由研究者立即检查并补齐空缺和遗漏。所有调查信息经核查无误后,由双人录入建立数据库。其中焦虑、抑郁由焦虑抑郁量表(HADS)^[10]评定,HADS 包括 14 个条目,两个子量表各 7 条目,每个子量表评分均在 0~21 之间,焦虑、抑郁越严重的患者得分越高,焦虑或抑郁标准:量表得分 >9 分。疼痛采用视觉疼痛模拟评分法(VAS)^[11]评估,总分 0~10 分,疼痛越强的患者分数越高。

1.3 统计学方法

利用 SPSS24.0 统计软件分析数据。计数资料以绝对数和构成比表示,比较采用卡方检验。非正态分布的计量资料以[M(P25,P75)]表示,采用秩和检验。用($\bar{x} \pm s$)表示正态分布的计量资料,采用 t 检验。应用 Pearson 相关性分析 AIS 总分与 FACT-L 总分、SHA 总分的相关性。应用单因素和多因素 Logistic 回归分析睡眠障碍的影响因素。 $P < 0.05$ 为差异有统计学意义。

2 结果

2.1 肺癌初治患者睡眠障碍发生情况

400 例肺癌初治患者 AIS 总分为(6.41 ± 2.78)分。其中失眠者 252 例,无失眠者 36 例,可疑失眠者 112 例。睡眠障碍人数 252 例,睡眠障碍发生率为 63.00(252/400)。

2.2 睡眠障碍组与非睡眠障碍组的生活质量相关评分对比

睡眠障碍组生理/情感/功能/(社会/家庭)维度、肺癌附加模块、FACT-L 总分低于非睡眠障碍组($P < 0.05$),详见表 1。

2.3 睡眠障碍组与非睡眠障碍组的睡眠卫生意识相关评分对比

睡眠障碍组患者 SHA 总分、睡前 2h 剧烈运动、白天睡午觉、定期服用催眠药物、晚上喝酒评分均低于非睡眠障碍组($P < 0.05$),两组每晚睡同样长时间、上床睡觉时感到饥饿、上床睡觉时感到口渴、每天抽烟超过 20 支、睡前没法让自己轻松、晚上吃含有咖啡因的食物、下午或傍晚锻炼身体、每天同一时间睡觉、每天同一时间醒来评分对比无统计学差异($P > 0.05$),详见表 2。

2.4 AIS 总分与 FACT-L 总分、SHA 总分的相关性分析

Pearson 相关性分析结果显示,AIS 总分与 FACT-L 总分、SHA 总分呈负相关($r = -0.436$ 、 -0.452 , $P = 0.000$ 、 0.000)

2.5 肺癌初治患者睡眠障碍影响因素的单因素分析

单因素分析结果显示:肺癌初治患者睡眠障碍与性别、化疗次数、肿瘤分期、疼痛、焦虑、抑郁有关($P < 0.05$),而与婚姻状况、文化程度、年龄、家庭平均月收入、有无手术史无关($P > 0$ 。

05), 详见表 3。

2.6 肺癌初治患者睡眠障碍影响因素的多因素 Logistic 回归分析

以睡眠障碍为因变量(发生睡眠障碍 =1, 未发生睡眠障碍 =0), 以性别、化疗次数、肿瘤分期、疼痛、焦虑、抑郁为自变量(性别: 女 =0, 男 =1; 化疗次数: 1 次 =0, 2 次 =1, 3 次及以上

=2; 肿瘤分期: I~II 期 =0, III~IV 期 =1; 疼痛: 无 =0, 有 =1; 焦虑无 =0, 有 =1; 抑郁无 =0, 有 =1), 纳入多因素 Logistic 回归分析模型, 结果显示: 肺癌初治患者睡眠障碍的危险因素包括焦虑、疼痛、肿瘤分期、抑郁($P < 0.05$), 详见表 4。

表 1 睡眠障碍组与非睡眠障碍组 FACT-L 评分对比($\bar{x} \pm s$, 分)

Table 1 Comparison of FACT-L score between sleep disorder group and non-sleep disorder group($\bar{x} \pm s$, scores)

Items	Non-sleep disorder group(n=148)	Sleep disorder group(n=252)	t	P
Social/family dimensions	21.08±2.26	16.91±2.85	15.209	0.000
Physiological dimension	23.41±2.19	15.75±3.76	22.605	0.000
Functional dimension	21.96±2.35	15.14±2.87	24.484	0.000
Emotional dimension	18.47±2.39	13.07±2.23	22.766	0.000
Lung cancer additional modules	30.37±3.61	24.82±3.49	15.161	0.000
FACT-L total score	115.29±12.38	85.69±9.61	26.670	0.000

表 2 睡眠障碍组与非睡眠障碍组的 SHA 评分对比

Table 2 Comparison of SHA score between sleep disorder group and non-sleep disorder group

Items	Non-sleep disorder group(n=148)	Sleep disorder group(n=252)	t(Z)	P
Daytime nap	3.00(1.00,4.00)	2.00(1.00,4.00)	-2.513	0.011
Regular use of hypnotic drugs	4.00(3.00,6.00)	3.00(2.00,4.00)	-2.414	0.015
Vigorous exercise 2 hours before bed	4.00(3.00,7.00)	3.00(1.00,5.00)	-4.108	0.000
Sleep the same amount of time every night	1.50(1.00,4.00)	2.00(1.00,4.00)	-0.543	0.583
Go to bed hungry	4.96±0.52	4.92±0.76	0.567	0.571
Go to bed thirsty	5.02±0.66	4.97±0.57	0.798	0.425
Smokes more than 20 cigarettes a day	4.68±0.71	4.61±0.89	0.816	0.415
I can't relax myself before going to bed	4.83±0.74	4.78±0.75	0.647	0.518
Eat caffeinated food at night	4.72±0.68	4.67±0.72	0.684	0.794
Exercise in the afternoon or evening	4.77±0.79	4.71±0.86	0.694	0.488
Go to bed at the same time every day	4.96±0.71	4.91±0.64	0.560	0.576
Wake up at the same time every day	5.13±0.78	5.08±0.84	0.590	0.566
Evening drinking	4.35±0.44	4.09±0.38	6.227	0.000
SHA total score	59.45±3.21	56.52±4.49	6.921	0.000

3 讨论

随着医疗技术地不断提升, 不少癌症患者均可得到有效的治疗, 病情受控^[12]。因此, 医护人员对癌症患者的关注逐渐从躯体症状扩大至心理症状, 但有关癌症对患者睡眠的影响, 以及睡眠障碍带来的诸多不良风先尚存在不少误区认知。良好的睡眠能保护大脑, 康复机体, 而长期缺乏良好睡眠除了无法维持患者体力、精力外, 还会降低患者的免疫力、生活质量及认知能

力^[13]。肺癌初治患者出现睡眠问题的原因主要在于以下几点: 肺癌是我国发病率和死亡率占据首位的恶性肿瘤, 且早期检出率偏低, 不少患者确诊时已至疾病中晚期, 远期生存率有限, 心理压力, 睡眠深受影响^[14]; 肺癌患者因气管受压、肺受损等原因出现胸闷、呼吸困难等, 导致其无法获得良好的睡眠; 不良的睡眠习惯、医院环境等因素也影响着患者睡眠^[15-17]。本次研究中, 400 例肺癌初治患者, 睡眠障碍 252 例, 睡眠障碍发生率为 63.00%。与刘威等人^[18]的研究结果数据相接近, 但高于张炎改

表 3 肺癌初治患者睡眠障碍影响因素的单因素分析 [n(%)]

Table 3 Univariate analysis of the influencing factors of sleep disorder in patients with primary treatment of lung cancer [n(%)]

Factors	Non-sleep disorder group(n=148)	Sleep disorder group(n=252)	χ^2	P
Age(years)				
≤ 60	82(55.41)	131(51.98)	0.438	0.508
>60	66(44.59)	121(48.02)		
Gender				
Male	113(76.35)	137(54.37)	19.231	0.000
Female	35(23.65)	115(45.63)		
Education degree				
Junior high school and below	88(59.46)	151(59.92)	1.792	0.409
High school or technical secondary school	31(20.95)	63(25.00)		
Junior college or above	29(19.59)	38(15.08)		
Average monthly household income(yuan)				
<3000	69(46.62)	119(47.22)	0.349	0.844
3000~5000	48(32.43)	86(34.13)		
>5000	31(20.95)	47(18.65)		
Number of chemotherapy				
1 time	86(58.11)	106(42.06)	14.975	0.006
2 times	42(28.38)	72(28.57)		
3 times or more	20(13.51)	74(29.37)		
Marital status				
Unmarried, widowed or divorced	62(41.89)	96(38.10)	0.562	0.543
Married	86(58.11)	156(61.90)		
Tumor stage				
I~II stage	97(65.54)	86(34.13)	37.702	0.000
III~IV stage	51(34.46)	166(65.87)		
With or without surgery history				
Yes	86(58.11)	149(59.13)	0.040	0.842
No	62(41.89)	103(40.87)		
Pain				
Yes	46(31.08)	141(55.95)	23.169	0.000
No	102(68.92)	111(44.05)		
Anxiety				
Yes	57(38.51)	152(60.32)	17.767	0.000
No	91(61.49)	100(39.68)		
Depression				
Yes	61(41.22)	156(61.90)	16.079	0.000
No	87(58.78)	96(38.10)		

等^[19]学者报道的 40.5%。可能研究对象间存在个体差异有关。

本次研究的单因素及多因素 Logistic 回归分析显示,肿瘤分期、疼痛、抑郁、焦虑是肺癌初治患者睡眠障碍的危险因素。疼痛作为应激源可对内分泌系统产生影响,致使分泌更多的皮

质醇、醛固酮等激素,减少胰岛素分泌,从而使机体处于长期应激状态,可增加非快速动眼睡眠期的炎性介质分泌^[20-22]。此外,肺癌初治患者因对疾病预后的不确定性,易产生抑郁、焦虑情绪,且身体上的疼痛感受也会给患者带来一系列的抑郁、焦虑

表 4 肺癌初治患者睡眠障碍影响因素的多因素 Logistic 回归分析

Table 4 Multivariate Logistic regression analysis of influential factors of sleep disorder in patients with primary treatment of lung cancer

Variable	β	SE	Wald χ^2	OR	95%CI	P
Tumor stage	1.492	0.487	6.063	4.065	1.626~10.961	0.004
Pain	1.153	0.405	4.953	3.109	2.342~9.453	0.006
Anxiety	2.173	1.129	8.824	7.315	1.834~10.347	0.002
Depression	2.341	0.846	10.297	9.248	2.728~11.384	0.000

等心理负担,出现心率加快、夜间多梦、精神紧张等间接干扰患者睡眠的症状^[23-25]。需引起注意的是,睡眠障碍过于严重会反作用于机体,机体疼痛敏感性提高,负性情绪加重。因此,临床治疗该病患者时,应密切关注其躯体疼痛,并给予相关对症药物治疗,尽可能的减少因疼痛原因引起的睡眠障碍情况的发生。而肿瘤分期晚期患者睡眠质量差,其原因为晚期患者躯体症状较严重,加上晚期患者基本已无治愈可能,预后较差,同时还要承担不小的医疗费用,患者心理压力大^[26,27],同时还有研究表明,细胞因子、肿瘤代谢产物等对 5-羟色胺的分泌有影响,并干扰睡眠^[28],引发患者持续睡眠障碍。

本研究显示,生活质量在睡眠障碍组患者中低于非睡眠障碍组,且睡眠卫生意识较差。提示睡眠卫生意识差是导致睡眠障碍不可忽视的原因,且睡眠障碍可导致生活质量下降。Pearson 相关性分析结果显示:AIS 总分与 FACT-L 总分、SHA 总分呈负相关,即睡眠质量越好的肺癌初治患者,其睡眠卫生意识和生活质量通常也更好。AIS 是主观睡眠评估量表,睡眠卫生意识错误时刻可使大脑微觉醒次数增加,而大脑微觉醒次数增加又可以影响前睡眠片段化,出现一系列连锁反应,使得主观睡眠质量降低,导致其生活质量无法改善^[29-31]。提示在临床工作中,提高个人态度信念利于患者睡眠质量和生活质量的提高,临床实践中可普及相关睡眠认知及行为疗法,以改善患者睡眠情况。

综上所述,肺癌初治患者睡眠障碍发生率较高,且受到焦虑、疼痛、肿瘤分期、抑郁等因素的影响。此外,不良的睡眠卫生意识可导致较为严重的睡眠障碍,从而降低患者生活质量。

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