·临床研究·

老年帕金森合并快速眼动睡眠行为障碍患者临床特点及轻度认知障碍的影响因素

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【摘 要】 目的 探讨老年帕金森病(PD)合并快速眼动睡眠行为障碍(RBD)患者的临床特点,并分析PD患者轻度认知障碍(MCI)发生的影响因素。**方法** 选择南京大学医学院附属苏州医院2021年1月至2024年1月收治的130例老年PD患者为研究对象。通过快速眼动睡眠行为障碍量表(RBDSQ)及多导睡眠图监测(PSG)判断患者是否伴有RBD,并将患者分为RBD组($n=63$)与非RBD(NRBD)组($n=67$)。比较两组患者临床资料、睡眠参数及蒙特利尔认知评估量表(MoCA)评分,统计两组MCI发生率。采用SPSS 26.0统计软件进行数据分析,根据数据类型行χ^2检验或t检验进行组间比较。采用二元logistic回归模型分析影响患者MCI发生的危险因素。**结果** 130例PD患者中,63例(48.46%)存在RBD。RBD组患者男性占比、左旋多巴等效剂量、Hoehn-Yahr(H-Y)分级≥3级者占比、帕金森病综合评分量表第三部分(UPDRS-Ⅲ)评分、Epworth嗜睡量表(ESS)评分、匹兹堡睡眠质量指数(PSQI)评分、汉密尔顿焦虑量表(HAMA)及汉密尔顿抑郁量表24项版(HAMD-24)评分均高于NRBD组,RBD组患者PD病程长于NRBD组($P<0.05$)。此外,RBD组患者睡眠效率(SE)水平低于NRBD组;觉醒指数(AI)及周期性肢体运动指数(PLMSI)水平高于NRBD组;RBD组患者MoCA量表中记忆、注意维度及量表总得分均低于NRBD组,RBD组MCI检出率(57.14%)高于NRBD组(34.33%),差异均有统计学意义($P<0.05$)。以老年PD患者是否检出MCI作为因变量,行二元logistic回归分析,结果提示受教育程度($OR=0.466$,95%CI 0.275~0.789)、UPDRS-Ⅲ得分($OR=1.394$,95%CI 1.117~1.739)、同型半胱氨酸(Hcy)($OR=1.368$,95%CI 1.162~1.609)及合并RBD($OR=1.589$,95%CI 1.301~1.940)是影响老年PD患者发生MCI的独立危险因素。**结论** 老年PD患者RBD发生率高,伴RBD者存在更为严重的中枢神经系统病变及更明显的情绪障碍,且伴RBD者睡眠结构改变,MCI发生率更高,合并RBD是PD患者并发MCI的独立危险因素。

【关键词】 帕金森病;快速眼动睡眠行为障碍;轻度认知障碍;认知功能

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Clinical characteristics of elderly Parkinson′s disease patients complicated with rapid eye movement sleep behavior disorder and influencing factors of mild cognitive impairment

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【Abstract】 Objective To explore the clinical characteristics of elderly patients with Parkinson′s disease (PD) complicated with rapid eye movement sleep behavior disorder (RBD), and to analyze the influencing factors of mild cognitive impairment (MCI) in the patients. **Methods** A total of 130 elderly PD patients admitted to our hospital from January 2021 to January 2024 were recruited, and according to the results of RBD screening questionnaire (RBDSQ) and polysomnography (PSG), they were divided into a RBD group ($n=63$) and a non-RBD group (NRBD, $n=67$). The clinical data, sleep parameters and Montreal cognitive assessment (MoCA) score were compared between groups, and the incidence of MCI was analyzed in the two groups. Data analysis was performed by using SPSS 26.0, and *Chi*-square test or t test was applied depending on data type. Binary logistic regression model was adopted to analyze the risk factors affecting the occurrence of MCI in the patients. **Results** Among the 130 PD patients, 63 (48.46%) was confirmed with RBD. The RBD group exhibited higher male ratio, increased evodopa equivalent dose, larger proportion of Hoehn-Yahr (H-Y) grade ≥3, and elevated scores of Movement Disorder Society-unified Parkinson′s disease rating scale Ⅲ (UPDRS-Ⅲ), Epworth sleepiness scale (ESS), Pittsburgh sleep quality index (PSQI), Hamilton anxiety scale (HAMA) and Hamilton depression scale-24

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(HAMD-24), longer course of PD when compared with the NRBD group ($P<0.05$). In addition, lower sleep efficiency (SE) and higher arousal index (AI) and periodic limb movement of sleep index (PLMSI) were observed in the RBD group than the NRBD group ($P<0.05$). The scores of memory and attention dimensions and total score of MoCA scale were lower, and the detection rate of MCI (57.14% *vs* 34.33%) was higher in the RBD group than the NRBD group ($P<0.05$). With whether MCI was detected in elderly PD patients as the dependent variable, binary logistic regression analysis indicated that education level ($OR=0.466$, 95%*CI* 0.275-0.789), UPDRS-Ⅲ score ($OR=1.394$, 95%*CI* 1.117-1.739), homocysteine (Hcy) ($OR=1.368$, 95%*CI* 1.162-1.609) and concurrent RBD ($OR=1.589$, 95%*CI* 1.301-1.940) were independent risk factors for MCI in elderly PD patients. **Conclusion** The incidence of RBD is quite high in elderly PD patients. The PD patients with concomitant RBD have more severe central nervous system disorders, more pronounced emotional disorders, accompanied with changed sleep structure and higher incidence of MCI. Concurrent RBD is an independent risk factor for MCI in PD patients.

【Key words】 Parkinson's disease; rapid eye movement sleep behavior disorder; mild cognitive impairment; cognitive function

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帕金森病(Parkinson's disease,PD)是一种常见的神经系统退行性疾病,认知障碍是 PD 常见非运动症状,有研究显示,24%~60%的 PD 患者存在认知障碍,其中有 50%的患者最终进展为痴呆,给患者家庭带来沉重的负担[1]。轻度认知障碍(mild cognitive impairment,MCI)指认知功能下降,但尚未损及功能活动,是进展为帕金森痴呆的过渡阶段,该时期的认知障碍具有可逆性,是改善患者认知储备、预防认知衰退的重要干预时期[2]。良好的睡眠是维持认知功能的重要条件,而睡眠障碍是 PD 的常见非运动症状,睡眠障碍与认知功能障碍之间存在复杂的联系及相互作用机制[3]。快速眼动睡眠行为障碍(rapid eye movement sleep behavior disorder,RBD)是常见的睡眠障碍类型,主要表现为快速眼球运动睡眠期肌张力迟缓及梦境演绎行为。既往研究对 RBD 的诊断以量表为主,普遍缺乏多导睡眠图监测(polysomography,PSG)证据,容易造成误诊及漏诊,影响研究结果[4]。本研究以 PSG 明确老年 PD 患者 RBD 患病情况,对 PD 伴 RBD 患者的临床特点、睡眠参数以及认知功能进行分析,并探讨 RBD 与 PD-MCI 之间的关系,旨在为临床识别 RBD、改善 RBD 在预防认知障碍中的价值提供理论支持。

1 对象与方法

1.1 研究对象

选择南京大学医学院附属苏州医院 2021 年 1 月至 2024 年 1 月收治的 130 例老年 PD 患者作为研究对象。根据是否伴 RBD,将患者分为 RBD 组($n=63$)与非 RBD(non-RBD, NRBD)组($n=67$)。纳入标准:年龄≥60 岁;符合《中国帕金森病的诊断标准(2016 版)》[5]中相关诊断标准;病情稳定,可配合完成相关资料采集,完成相关调查量表评估。排除标准:继发性帕金森综合征或帕金森叠加综合征;合并智力或智能缺陷;合并路易体痴呆、阿尔兹海默症;服用可能影响认知功能药物;严重认知功能障碍[蒙特利尔认知评估量表(Montreal cognitive assessment,MoCA)得分≤10 分];合并严重身心疾病、精神疾病;合并其他可能影响睡眠质量的疾病,如药物或酒精依赖、恶性肿瘤、癫痫等;服用三环类抗抑郁药物、5-羟色胺再摄取抑制剂等可能诱发 RBD 的药物。本研究经医院医学伦理委员会批准(批号:2021157)。研究对象对研究内容知情并签署知情同意书。

1.2 方法

1.2.1 RBD 诊断 患者均进行快速眼动期睡眠行为障碍量表(RBD screening questionnaire,RBDSQ)[6]填写,该量表共包含 13 个条目,RBDSQ 量表得分≥7 分被初步判定伴有 RBD。为确保诊断准确性,所有患者均在无干扰、室温 18 ℃~25 ℃、避光环境中进行整夜 PSG 监测。记录 PSG 监测睡眠参数,包括睡眠潜伏期(sleep latency,SL)、总睡眠时间(total sleep time,TST)、睡眠效率(sleep efficiency,SE)、快速眼动睡眠(rapid eye movement sleep,REMS)、非快速眼动睡眠期(non-rapid eye movement sleep,NREMS)、觉醒指数(arousal index,AI)、周期性肢体运动指数(periodic limb movement in sleep index,PLMSI)、呼吸暂停低通气指数(apnea hypopnea index,AHI)。PBD 诊断需满足以下 4 点:(1)反复出现睡眠相关异常行为,PSG 证实异常行为出现在快速眼动睡眠期;(2)睡眠相关异常行为在后半夜发生更频繁,白天打盹时不常出现;(3)一旦从发作中觉醒,患者会完全清醒、警觉;(4)PSG 显示存在肌肉紧张、失迟缓现象。

1.2.2 量表评估 (1)采用 MoCA 量表[7]评估患者整体认知功能,量表总得分 0~30 分。满足以下几条标准即可诊断为轻度认知功能障碍(mild cognitive impairment,MCI):MoCA 得分<26 分;主观

感觉记忆力减退;日常生活能力基本正常;排除痴呆及其他可能导致脑功能紊乱或影响认知功能的精神疾病病史。(2)采用 Hoehn-Yahr(H-Y)分级量表[8]评估患者 PD 病情严重程度。(3)采用新版世界运动障碍学会帕金森病综合评分量表第三部分(Movement Disorder Society-unified Parkinson's disease rating scale Ⅲ,MDS-UPDRSⅢ)[9]评估患者 PD 运动功能。(4)采用 Epworth 嗜睡量表(Epworth sleepiness scale,ESS)[10]评估患者嗜睡程度;(5)采用匹兹堡睡眠质量指数(Pittsburgh sleep quality index,PSQI)[11]评估患者睡眠质量;(6)采用汉密尔顿焦虑量表(Hamilton anxiety scale,HAMA)及汉密尔顿抑郁量表 24 项版(Hamilton depression scale-24,HAMD-24)[12]评估患者焦虑、抑郁症状。

1.2.3 资料收集 收集患者性别、年龄、受教育程度、婚姻状态、体质量指数(body mass index,BMI)、同型半胱氨酸(homocystein,Hcy)、高血压、糖尿病、冠心病、肺部疾病等基础性疾病资料与患者 PD 病程、起病特点等资料。

1.3 统计学处理

采用 SPSS 26.0 统计软件进行数据分析。计量资料以均数±标准差($\bar{x}\pm s$)表示,组间比较采用 t 检验。计数资料以例数(百分率)表示,组间比较采用 χ^2 检验。采用二元 logistic 回归模型分析影响老年 PD 患者 MCI 发生的相关因素。$P<0.05$ 为差异有统计学意义。

2 结 果

2.1 两组患者临床资料

130 例 PD 患者中,63 例经 PSG 检查证实为 RBD,占 48.46%。RBD 组患者男性占比、左旋多巴等效剂量、H-Y 分级≥3 级者占比、UPDRS-Ⅲ评分、ESS 评分、PSQI 评分、HAMA 及 HAMD-24 评分均高于 NRBD 组,PD 病程长于 NRBD 组,差异均有统计学意义($P<0.05$;表 1)。

2.2 两组患者睡眠参数

RBD 组患者 SE 水平低于 NRBD 组,AI 以及 PLMSI 水平高于 NRBD 组,差异均有统计学意义($P<0.05$;表 2)。

表 1 两组患者临床资料比较

Table 1 Comparison of clinical data between two groups

Item	RBD group($n=63$)	NRBD group($n=67$)	t/χ^2	P value
Age(years, $\bar{x}\pm s$)	64.15±3.45	63.29±3.73	1.362	0.176
Gender[n(%)]			4.122	0.042
Male	43(68.25)	34(50.75)		
Female	20(31.75)	33(49.25)		
Education level[n(%)]			0.163	0.922
Primary school or below	13(20.63)	13(19.40)		
Middle school	26(41.27)	30(44.78)		
Junior college or above	24(38.10)	24(35.82)		
Marital status[n(%)]			0.544	0.461
Married	53(84.13)	53(79.10)		
Divorced/widowed/unmarried	10(15.87)	14(20.90)		
BMI(kg/m^2, $\bar{x}\pm s$)	22.46±2.16	23.01±2.24	1.424	0.157
Hypertension[n(%)]	16(25.40)	15(22.39)	0.162	0.687
Diabetes mellitus[n(%)]	12(19.05)	11(16.42)	0.154	0.695
Coronary heart disease[n(%)]	8(12.70)	7(10.45)	0.161	0.688
Lung disease[n(%)]	6(9.52)	7(10.45)	0.031	0.861
PD course(years, $\bar{x}\pm s$)	4.45±1.05	2.79±0.49	11.662	<0.001
Onset characteristics[n(%)]			0.498	0.480
Static tremor	45(71.43)	44(65.67)		
Movement delay	18(28.57)	23(34.33)		
Levodopa equivalent dose(mg, $\bar{x}\pm s$)	463.45±69.49	316.47±51.63	13.744	<0.001
H-Y grading[n(%)]			7.482	0.024
0-1	11(17.46)	24(35.82)		
2	24(38.10)	26(38.81)		
≥3	28(44.44)	17(25.37)		
UPDRS-Ⅲ(points, $\bar{x}\pm s$)	21.15±2.43	16.84±2.71	9.526	<0.001
ESS(points, $\bar{x}\pm s$)	7.89±1.17	6.67±1.09	6.155	<0.001
PSQI(points, $\bar{x}\pm s$)	12.08±1.74	9.41±1.87	8.414	<0.001
HAMA(points, $\bar{x}\pm s$)	15.43±2.03	12.33±2.23	8.272	<0.001
HAMD-24(points, $\bar{x}\pm s$)	15.08±1.86	11.74±1.94	10.008	<0.001

RBD: rapid eye movement sleep behavior disorder; NRBD: non-RBD; BMI: body mass index; PD: Parkinson's disease; H-Y: Hoehn-Yahr; UPDRS-Ⅲ: Movement Disorder Society-unified Parkinson's disease rating scale Ⅲ; ESS: Epworth sleepiness scale; PSQI: Pittsburgh sleep quality index; HAMA: Hamilton anxiety scale; HAMD-24: Hamilton depression scale-24.

表 2 两组患者睡眠参数比较

Table 2 Comparison of sleep parameters between two groups ($\bar{x}\pm s$)

Sleep parameters	RBD group ($n=63$)	NRBD group ($n=67$)	t	P value
TST(min)	411.79±70.03	414.02±68.92	0.183	0.855
SE(%)	70.15±13.45	79.88±12.08	4.344	<0.001
SL(min)	41.15±6.64	39.43±6.45	1.498	0.137
NREMS1 time(min)	59.45±10.34	60.38±9.79	0.527	0.599
NREMS1 proportion(%)	15.37±2.49	14.69±2.24	1.639	0.104
NREMS2 time(min)	243.15±22.89	244.23±25.14	0.256	0.799
NREMS2 proportion(%)	59.15±12.08	60.07±11.29	0.449	0.654
NREMS3 time(min)	58.45±9.43	56.96±10.34	0.857	0.393
NREMS3 proportion(%)	16.31±2.49	15.94±2.19	0.901	0.369
REMS latency(min)	194.15±26.43	201.01±23.38	1.570	0.119
REMS time(min)	64.15±10.54	63.74±10.61	0.221	0.826
REMS proportion(%)	13.45±2.16	12.99±2.25	1.188	0.237
AI(times/h)	19.15±2.28	14.07±2.43	12.273	<0.001
PLMSI(times/h)	18.15±2.74	13.02±2.57	11.015	<0.001

RBD: rapid eye movement sleep behavior disorder; NRBD: non-RBD; TST: total sleep time; SE: sleep efficiency; SL: sleep latency; NREMS: non-rapid eye movement sleep; REMS: rapid eye movement sleep; AI: arousal index; PLMSI: periodic limb movement in sleep index.

2.3 两组患者 MoCA 量表得分情况

RBD 组患者 MoCA 量表中记忆、注意维度及量表总得分均低于 NRBD 组,差异有统计学意义($P<0.05$;表 3)。RBD 组中 36 例(57.14%)患者 MoCA 量表得分<26 分,确诊为 MCI,NRBD 组中 23 例(34.33%)患者 MoCA 量表得分<26 分,确诊为 MCI,RBD 组 MCI 检出率高于 NRBD 组,差异有统计学意义($\chi^2=6.818$,$P=0.009$)。

表 3 两组患者 MoCA 量表得分情况比较

Table 3 Comparison of MoCA scores between two groups

(points, $\bar{x}\pm s$)

MoCA	RBD group ($n=63$)	NRBD group ($n=67$)	t	P value
Visual space and executive ability	4.15±1.05	4.29±0.93	0.806	0.422
Naming	2.36±0.47	2.47±0.45	1.363	0.175
Memory	3.26±0.63	4.11±0.57	8.075	<0.001
Attention	3.37±0.49	4.25±0.43	10.900	<0.001
Language	2.63±0.57	2.65±0.66	0.184	0.854
Abstraction	1.71±0.25	1.76±0.28	1.072	0.286
Orientation	5.73±0.84	5.80±0.87	0.466	0.642
Total score	23.21±3.46	25.33±3.31	3.570	<0.001

MoCA: Montreal cognitive assessment; RBD: rapid eye movement sleep behavior disorder; NRBD: non-RBD.

2.4 老年 PD 患者 MCI 发生的危险因素的二元 logistic 回归分析

根据临床经验与文献资料[13,14],将年龄、男性、高血压病史、糖尿病病史、PD 病程、受教育程度、HAMD-24 量表得分、HAMA 量表得分、UPDRS-Ⅲ得分、H-Y 分级、Hcy、是否合并 RBD 等可能影响 PD 患者 MCI 发生的相关因素作为分析指标进行单因素分析,后以老年 PD 患者是否检出 MCI 作为因变量,将单因素 logistic 回归分析中有意义的指标作为自变量,行多因素 logistic 回归分析,结果提示受教育程度、UPDRS-Ⅲ得分、Hcy 及合并 RBD 是影响老年 PD 患者 MCI 发生的独立危险因素(表 4)。

3 讨 论

睡眠障碍是 PD 患者常见的非运动症状,RBD 是常见的睡眠障碍类型,最新版 RBD 诊断标准中强调 PSG 在诊断 RBD 中的重要性,在缺乏 PSG 监测时,临床易将 RBD 与周期性肢体运动、睡眠呼吸暂停等相混淆,造成误诊或漏诊,导致分析结果不准确。本研究以 PSG 结合患者临床症状作为诊断 RBD 的依据,结果发现,130 例老年 PD 患者中共63 例(48.46%)存在 RBD,远高于一般老年人群 RBD 患病率[15],提示 PD 患者 RBD 发生情况比同龄人严重。

进一步分析结果提示,RBD 组患者男性占比较高,这与男性梦境较为暴力、梦中肢体运动表现更为明显、易被发现相关。H-Y 分级是以症状累及的侧别及是否累及躯干及其严重程度为依据,UPDRS-Ⅲ评分可对患者运动症状细微进行评价,本研究中,RBD 组患者 H-Y 分级、UPDRS-Ⅲ评分均高于 NRBD 组,提示合并 RBD 的患者 PD 运动症状更严重。同时,RBD 患者 PD 病程更长,左旋多巴等剂量更大,证实伴 RBD 者存在更为严重的中枢神经系统病变。此外,本研究中 RBD 组患者焦虑、抑郁症状更严重,这可能与 RBD、焦虑、抑郁之间存在相似的病理基础有关,RBD 病理机制涉及蓝斑核及中脑中

表4 PD患者MCI发生的危险因素的二元logistic回归分析

Table 4 Binary logistic regression analysis of risk factors of MCI occurrence in PD patients

Factor	Univariate analysis			Multivariate analysis		
	β	*P* value	*OR*(95%*CI*)	β	*P* value	*OR*(95%*CI*)
Age	1.125	0.003	3.080(1.468-6.462)	1.221	0.149	3.391(0.648-17.730)
Male	0.461	0.030	1.586(1.047-2.403)	0.449	0.221	1.567(0.765-3.210)
Hypertension	0.745	0.049	2.106(1.004-4.419)	0.739	0.106	2.094(0.857-5.118)
Diabetes mellitus	0.411	0.141	1.508(0.873-2.606)			
PD course	0.645	0.039	1.906(1.036-3.506)	0.663	0.142	1.941(0.802-4.697)
Education level	-0.845	0.014	0.430(0.219-0.841)	-0.764	0.005	0.466(0.275-0.789)
HAMD-24	0.345	0.119	1.412(0.916-2.177)			
HAMA	0.363	0.186	1.438(0.840-2.460)			
UPDRS-Ⅲ	0.397	<0.001	1.487(1.262-1.754)	0.332	0.003	1.394(1.117-1.739)
H-Y staging	0.412	0.197	1.510(0.808-2.821)			
Hcy	0.337	<0.001	1.401(1.200-1.635)	0.313	<0.001	1.368(1.162-1.609)
Concurrent RBD	0.515	<0.001	1.674(1.341-2.089)	0.463	<0.001	1.589(1.301-1.940)

PD: Parkinson′s disease; MCI: mild cognitive impairment; HAMD-24: Hamilton depression scale-24; HAMA: Hamilton anxiety scale; UPDRS-Ⅲ: Movement Disorder Society-unified Parkinson′s disease rating scale Ⅲ; H-Y: Hoehn-Yahr; Hcy: homocystein; RBD: rapid eye movement sleep behavior disorder.

缝核,而蓝斑核及中脑中缝核受损将下调5-羟色氨酸及去甲肾上腺素水平,引起焦虑抑郁情绪[16]。本研究结果显示,男性、病程长、病情严重的PD患者更易发生RBD,且合并RBD者伴有更严重的情绪障碍,这为临床筛查RBD高危个体及其干预方案的制定提供了参考。此外,本研究对患者进行睡眠监测发现,合并RBD者睡眠效率下降,觉醒指数及睡眠周期性肢体运动指数均高于NRBD者,与既往研究结果相似[17],提示合并RBD者存在睡眠结构改变。

认知障碍是PD患者另一常见非运动症状,在健康中老年人群中,睡眠质量差是认知功能下降的早期迹象。Stavitsky等[18]首次报道了PD患者睡眠障碍与其注意力及执行力下降显著相关,RBD被证实与α-突触核蛋白(α-synucleinopathy)相关神经退行性疾病相关,但RBD与PD患者认知功能的关系仍处于研究阶段[19]。本研究中,合并RBD的PD患者记忆及注意维度得分更低,且MCI检出率高于NRBD组,提示合并RBD者MCI发生率高,且主要损害患者认知功能的记忆及注意维度。通过二元logistic回归模型控制其他变量后证实合并RBD是影响PD患者发生MCI的独立危险因素,提示RBD与MCI之间关系密切。结合既往研究分析其原因:(1)RBD患者快速眼动睡眠期肌张力降低相关脑干神经网络异常,该异常的神经网络投射至大脑皮质可影响患者神经活动,促进MCI的发生;(2)认知障碍与RBD之间具有相似的葡萄糖代谢改变;(3)RBD患者脑组织内α-突触核蛋白及β-淀粉样蛋白沉积量更多,范围更广,这也在一定程度上加剧了MCI发生风险[20];(4)RBD能通过新皮质、边缘皮质、丘脑区域的胆碱能去神经支配促进MCI。

RBD是影响PD患者发生MCI的独立危险因素,提示调节RBD在预防或逆转MCI中具有一定潜能,这与罗玲等[21]研究结论相似。因此建议临床从改善RBD症状入手,预防MCI以及帕金森痴呆,可行手段包括保持规律作息、创造安静适宜的睡眠环境、睡前避免服用具有兴奋精神的药物、避免饮酒以及口服褪黑素、氯硝西泮等助眠药物等。此外,建议临床加强对男性、PD长病程、中枢神经系统病变严重等PD患者的RBD筛查,为其睡眠障碍的干预提供依据。

本研究由于样本量较小,且仅通过单一量表评估患者认知功能,所得结论可能存在偏倚,为增强研究结论的可靠性,后续还需针对以上不足进一步修正研究方案,开展深入研究。此外,为进一步证实研究的实用性价值,还需开展前瞻性研究,对改善RBD在预防MCI中的价值进行验证。

综上所述,老年PD患者RBD发生率高,伴RBD者存在更为严重的中枢神经系统病变以及更明显的情绪障碍,RBD患者睡眠结构改变,MCI发生率更高,且合并RBD是PD患者并发MCI的独立危险因素。

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