·临床研究·

老年面肌痉挛患者情绪障碍及社交状态与生活质量的相关性

邵圆圆*,葛东明,葛慕莲,刘莉莉
(南京医科大学附属淮安第一医院神经外科,江苏 淮安 223300)

【摘 要】 **目的** 探讨老年面肌痉挛患者情绪障碍及社交状态与生活质量的相关性。**方法** 选择2021年6月至2023年6月南京医科大学附属淮安第一医院收治的220例老年面肌痉挛患者为研究对象,对患者进行问卷调查,最终回收有效问卷204份。使用汉密尔顿焦虑量表(HAMA)、汉密尔顿抑郁量表(HAMD)评估患者情绪障碍;使用社交回避及苦恼量表(SADS)评估患者社交状态;使用面肌痉挛生活质量评价量表(HFS-8)评估患者生活质量。根据痉挛程度将患者分为轻中度组(1~2级,120例)与重度组(3~4级,84例)。采用SPSS 24.0统计软件进行数据分析。根据数据类型,分别采用t检验或χ^2检验进行组间比较。采用logistic回归分析评估老年面肌痉挛患者重度痉挛的影响因素。采用Pearson相关性分析评估老年面肌痉挛患者情绪障碍、社交状态及生活质量的相关性。**结果** logistic回归分析显示,病程>5年(OR=4.332,95%CI 2.622~7.158;P<0.05)、右侧下纵束及下额枕束区径向扩散系数(RD)值显著升高(OR=5.109,95%CI 3.173~8.225;P<0.05)均为老年面肌痉挛患者重度痉挛的危险因素。Pearson相关性分析显示,老年面肌痉挛患者HAMA评分与HAMD评分、社交回避、社交苦恼、SADS总分及HFS-8评分均呈显著正相关(r=0.566,0.602,0.597,0.632,0.649;P<0.05);HAMD评分与社交回避、社交苦恼、SADS总分及HFS-8评分呈显著正相关(r=0.681,0.655,0.703,0.684;P<0.05);社交回避与社交苦恼、SADS总分及HFS-8评分呈显著正相关(r=0.766,0.795,0.633;P<0.05);社交苦恼与SADS总分及HFS-8评分呈显著正相关(r=0.801,0.608;P<0.05);SADS总分与HFS-8评分呈显著正相关(r=0.655;P<0.05)。**结论** 老年面肌痉挛患者情绪障碍及社交障碍与生活质量不良存在显著相关性,右侧下纵束及下额枕束区RD值显著升高及病程>5年的患者更易出现重度痉挛,可为临床治疗提供新思路。

【关键词】 老年人;面肌痉挛;生活质量;社交状态;抑郁;焦虑
【中图分类号】 R592;R745 【文献标志码】 A 【DOI】 10.11915/j.issn.1671-5403.2024.10.163

Correlation of emotional disorders and social status with quality of life in elderly patients with hemifacial spasm

Shao Yuanyuan*, Ge Dongming, Ge Mulian, Liu Lili
(Department of Neurosurgery, Huai'an First Hospital Affiliated to Nanjing Medical University, Huai'an 223300, Jiangsu Province, China)

【**Abstract**】 **Objective** To explore the correlation of emotional disorders and social status with quality of life in elderly patients with hemifacial spasm. **Methods** A total of 220 elderly patients with hemifacial spasm admitted to our hospital from June 2021 to June 2023 were recruited and surveyed with related questionnaires. Finally, 204 valid questionnaires were collected. Hamilton anxiety scale (HAMA) and Hamilton depression scale (HAMD) were used to evaluate the emotional disorders of patients, social avoidance and distress scale (SADS) was employed to assess the social status, and hemifacial spasm scale 8 items (HFS-8) was performed to estimate the quality of life. The patients were divided into mild-to-moderate group (grade 1-2, 120 cases) and severe group (grade 3-4, 84 cases) according to the severity of spasm. SPSS statistics 24.0 was used for data analysis. According to data type, student's t test or *Chi*-square test was applied for intergroup comparison. Logistic regression analysis was conducted to identify the influencing factors of severe spasm in elderly patients with hemifacial spasm. Pearson correlation analysis was utilized to evaluate the correlation of emotional disorders and social status with quality of life in elderly patients with hemifacial spasm. **Results** Logistic regression analysis showed that disease course >5 years (OR=4.332, 95%CI 2.622-7.158; P<0.05) and significant increase of radial diffusivity (RD) of right lower longitudinal tract and lower fronto-occipital tract (OR=5.109, 95%CI 3.173-8.225; P<0.05) were risk factors of severe spasm in elderly patients with hemifacial spasm. Pearson correlation analysis indicated that in the elderly patients with hemifacial spasm, HAMA score was positively correlated with HAMD score, social avoidance, social distress, SADS total score and HFS-8 score (r=0.566, 0.602, 0.597, 0.632, 0.649; P<0.05); HAMD score was also positively correlated with social avoidance, social distress, total SADS score and HFS-8 score (r=0.681, 0.655, 0.703, 0.684; P<0.05); social avoidance score of SADS was positively correlated with social distress, total SADS score and HFS-8 score (r=0.766, 0.795, 0.633; P<0.05); social distress score was positively

收稿日期: 2023-09-21; **接受日期**: 2023-11-17
基金项目: 国家自然科学基金(81800644);江苏省自然科学基金青年基金(BK20171064)
通信作者: 邵圆圆, E-mail: 15189663173@163.com

correlated with total SADS score and HFS-8 score (r = 0.801, 0.608; P<0.05); total SADS score was positively correlated with HFS-8 score (r=0.655; P<0.05). **Conclusion** Emotional disorders and social disorders are significantly correlated with poor quality of life in elderly patients with hemifacial spasm. Patients with significantly increased RD of right lower longitudinal tract and lower fronto-occipital tract and disease course >5 years are more prone to severe spasm, which can provide new ideas for clinical treatment.

【**Key words**】 aged; hemifacial spasm; quality of life; social status; depression; anxiety

This work was supported by the National Natural Science Foundation of China (81800644) *and the Youth Fund of Natural Science Foundation of Jiangsu Province* (BK20171064).

Corresponding author: Shao Yuanyuan, E-mail:15189663173@163.com

面肌痉挛以单侧患病为主,好发于中老年人群,但由于症状主要在情绪激动、睡眠不足或精神紧张等情况下加重,部分患者在发病数年后才入院就诊,故面肌痉挛初诊的老年患者较为多见[1]。有研究指出,面肌痉挛发病因素中血管因素占 90%以上,但影响面肌痉挛程度的危险因素尚不明确[2]。面肌痉挛症状及引起的功能障碍可影响患者生活及工作,且长期面部抽搐症也影响外观,可能诱发心理及社交障碍[3]。基于此,本研究对老年面肌痉挛患者严重痉挛的危险因素进行分析,并评估患者情绪障碍、社交状态及生活质量之间的相关性,为老年面肌痉挛的临床干预提供新思路。

1 对象与方法

1.1 研究对象

选择 2021 年 6 月至 2023 年 6 月南京医科大学附属淮安第一医院收治的 220 例老年面肌痉挛患者为研究对象,对患者进行问卷调查及资料收集,最终回收有效问卷 204 份。纳入标准:诊断符合《面肌痉挛诊疗中国专家共识(2014)》[4],均为单侧不自主面部表情肌阵发性抽搐;年龄≥60 岁;初诊初治。排除标准:肿瘤、创伤、面瘫等因素导致的继发性面肌痉挛;存在视听障碍、认知功能障碍、精神疾病等难以配合调查;酒精或药物依赖史;吸毒史;佩戴心脏起搏器等磁共振检查禁忌证。研究内容获患者知情同意,并签署纸质版知情同意书。将痉挛程度 1~2 级纳入轻中度组(120 例),3~4 级纳入重度组(84 例)。

1.2 方法

1.2.1 资料收集 查阅电子病历收集患者基线资料,并使用 3.0T 超导型磁共振扫描系统行头颅磁共振弥散张量成像(diffusion tensor imaging, DTI),使用单次激发自旋回波-平面回波序列,观察局限于右侧下纵束、下额枕束,且存在各向异性分数(fractional anisotropy, FA)值降低、径向扩散系数(radial diffusivity, RD)值升高及平均扩散系数(mean diffusivity, MD)值升高的重叠脑区,应用 randomize 工具对数据进行分析,记录右侧下纵束、下额枕束 RD 值显著升高的病例。

1.2.2 问卷调查 (1)痉挛程度:使用 Cohen 痉挛评分标准[5],评分范围为 0~4 级。0 级为无痉挛;1 级为外部刺激轻度颤动;2 级为自发轻微颤动,无功能障碍;3 级为痉挛明显,轻微功能障碍;4 级为严重痉挛及功能障碍,影响生活。(2)情绪障碍:使用汉密尔顿焦虑量表(Hamilton anxiety scale, HAMA)与汉密尔顿抑郁量表(Hamilton depresssion scale, HAMD)[6]对情绪障碍进行评估,得分越高,焦虑或抑郁越严重。(3)社交状态:使用社交回避及苦恼量表(social avoidance and distress scale, SADS)[7]评估,得分越高,社交回避、苦恼越严重。(4)生活质量:使用面肌痉挛生活质量评价量表(hemifacial spasm scale 8 items, HFS-8)[8]评估,得分越高,疾病对生活质量影响越大,生活质量越差。

1.3 统计学处理

采用 SPSS 24.0 统计软件进行数据处理。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 logistic 回归分析评估老年面肌痉挛患者重度痉挛的影响因素。采用 Pearson 相关性分析评估老年面肌痉挛患者情绪障碍、社交状态及生活质量的相关性。P<0.05 为差异有统计学意义。

2 结 果

2.1 两组患者基线资料比较

重度组病程、右侧下纵束及下额枕束区 RD 值显著升高率明显高于轻中度组,差异有统计学意义(P<0.05;表 1)。

2.2 logistic 回归分析评估患者重度痉挛的危险因素

以痉挛程度为因变量,将单因素分析中有统计学意义的数据赋值并代入 logistic 回归方程,结果显示,病程>5 年、右侧下纵束及下额枕束区 RD 值显著升高均为老年面肌痉挛患者重度痉挛的危险因素(P<0.05;表 2)。

2.3 两组患者情绪障碍、社交状态及生活质量情况比较

重度组 HAMA、HAMD 评分与社交回避、社交苦恼、SADS 总分及 HFS-8 评分均显著高于轻中度组,差异有统计学意义(P<0.05;表 3)。

表1 两组患者基线资料比较

Table 1 Comparison of baseline data between two groups

Item	Severe group(n=84)	Mild-to-moderate group(n=120)	t/χ^2	P value
Gender[n(%)]			0.556	0.456
Male	38(45.24)	48(40.00)		
Female	46(54.76)	72(60.00)		
Age(years, $\bar{x}\pm s$)	64.82±3.59	65.34±3.27	1.073	0.284
Disease course[n(%)]			20.724	<0.001
≤5 years	26(30.95)	76(63.33)		
>5 years	58(69.05)	44(36.67)		
Education level[n(%)]			1.105	0.575
Primary and junior high school	38(45.24)	48(40.00)		
Secondary vocational school and senior high school	30(35.71)	42(35.00)		
Junior college or above	16(19.05)	30(25.00)		
Hypertension[n(%)]	24(28.57)	28(23.33)	0.714	0.398
Diabetes mellitus[n(%)]	6(7.14)	12(10.00)	0.501	0.479
Hyperlipidemia[n(%)]	12(14.29)	20(16.67)	0.212	0.645
Smoking[n(%)]	22(26.19)	24(20.00)	1.084	0.298
Affected side[n(%)]			1.169	0.280
Left	44(52.38)	72(60.00)		
Right	40(47.62)	48(40.00)		
Involved muscle group[n(%)]				
Orbicularis oculi muscle	80(95.24)	110(91.67)	0.986	0.321
Zygomaticus	56(66.67)	76(63.33)	0.240	0.624
Levator muscle of upper lip	66(78.57)	94(78.33)	0.002	0.968
Levator anguli oris	70(83.33)	96(80.00)	0.362	0.547
Orbicularis oris muscle	44(52.38)	62(51.67)	0.010	0.920
Stapedius	40(47.62)	54(45.00)	0.136	0.712
Platysma	28(33.33)	38(31.67)	0.063	0.802
Responsible vessel[n(%)]				
Anterior inferior cerebellar artery	44(52.38)	62(51.67)	0.010	0.920
Posterior inferior cerebellar artery	30(35.71)	40(33.33)	0.124	0.724
Vertebral artery	20(23.81)	32(26.67)	0.212	0.645
Unknown responsible vessel	4(4.76)	6(5.00)	0.064	0.801
Increased RD of right lower longitudinal tract and lower fronto-occipital tract	62(73.81)	24(20.00)	58.672	<0.001

RD: radial diffusivity.

表2 患者重度痉挛的危险因素的logistic回归分析

Table 2 Logistic regression analysis of risk factors of severe spasm

Factor	β	SE	$Wald\ \chi^2$	OR	95%CI	P value
Disease course >5 years	1.466	0.395	13.774	4.332	2.622-7.158	<0.001
Increased RD of right lower longitudinal tract and lower fronto-occipital tract	1.631	0.420	15.080	5.109	3.173-8.225	<0.001

RD: radial diffusivity.

表3 两组情绪障碍、社交状态及生活质量评分比较

Table 3 Comparison of emotional disorders, social status and quality of life between two groups (points, $\bar{x}\pm s$)

Item	Severe group (n=84)	Mild-to-moderate group(n=120)	t	P value
Emotional disorders				
HAMA	15.78±2.80	10.36±2.12	15.726	<0.001
HAMD	13.22±2.15	9.05±1.93	14.487	<0.001
Social status				
Social avoidance	10.23±1.97	7.65±1.23	11.503	<0.001
Social distress	9.80±1.78	6.97±1.08	14.105	<0.001
Total SADS score	20.03±3.24	14.62±2.24	14.105	<0.001
HFS-8	20.16±3.96	16.24±3.04	7.992	<0.001

HAMA: Hamilton anxiety scale; HAMD: Hamilton depresssion scale; SADS: social avoidance and distress scale; HFS-8: hemifacial spasm scale 8 items.

2.4 情绪障碍、社交状态及生活质量的相关性

Pearson相关性分析显示,老年面肌痉挛患者HAMA评分与HAMD评分、社交回避、社交苦恼、SADS总分及HFS-8评分呈显著正相关(r=0.566, 0.602, 0.597, 0.632, 0.649; P<0.05);HAMD评分与社交回避、社交苦恼、SADS总分及HFS-8评分呈显著正相关(r=0.681, 0.655、0.703, 0.684; P<0.05);社交回避与社交苦恼、SADS总分及HFS-8评分呈显著正相关(r=0.766, 0.795, 0.633; P<0.05);社交苦恼与SADS总分及HFS-8评分呈显著正相关(r=0.801, 0.608; P<0.05);SADS总分与HFS-8评分呈显著正相关(r=0.655; P<0.05)。其中相关系数最高的为SADS总分与社交苦恼及社交回避。

3 讨 论

据文献报道,面肌痉挛患者常存在血管压迫现象,进而引起神经根脱髓鞘改变,有学者指出,面神经异位电冲动的发放是导致面肌不自主抽动的原因[9]。Zhang 等[10]研究发现,异常电冲动的发放可由受累神经传入高级中枢,引起面肌痉挛患者脑内微结构改变。本研究证实右侧下纵束及下额枕束区 RD 值显著升高是老年面肌痉挛患者重度痉挛的危险因素。分析其原因:下纵束纤维及下额枕束纤维均走行于视辐射区,参与调控视觉网络功能,RD 值升高提示出现脱髓鞘及神经炎性反应,当患者注视耗费时间延长时,可造成下纵束纤维及下额枕束纤维脱髓鞘及神经炎性反应进一步增强,RD 值显著升高,也导致面神经异位电冲动发放显著增多,诱发重度痉挛[11]。此外,面肌痉挛作为一种缓慢、渐进性发展的疾病,痉挛程度也会随病程的延长而不断加重[12]。本研究结果显示,病程>5 年是重度痉挛的危险因素,说明病程较长者易发展为重度痉挛,提示面肌痉挛早期治疗的重要性。因此,建议各地医疗机构应加强对地区居民面肌痉挛知识的宣教工作,指导患者尽早就医,避免因病程延长导致疾病进行性加重。

紧张、焦虑等负面情绪刺激下,面肌痉挛患者临床症状将加剧,而严重、频繁的面部抽搐又将给患者带来极大的心理压力,两者相互作用进一步加剧疾病发作的严重程度,形成恶性循环[13]。此外,不自主的面部抽动也影响外观,患者可能会因外观异常而产生社交恐惧与回避,而重度痉挛引起的视觉及语言障碍等也将严重影响患者社交状况及生活质量。本研究中,重度组 HAMA、HAMD 评分、社交回避、社交苦恼、SADS 总分及 HFS-8 评分均显著高于轻中度组,提示重度痉挛患者还伴随较为严重的社交障碍及生活质量不良,与 Wang 等[14]结果一致。

研究显示,社交、情绪与生活质量可相互影响,提示临床应重视老年面肌痉挛患者的社会支持及社交状况,通过建立病友交流群、心理咨询等手段提高患者社会支持水平,改善其社交恐惧感[15]。本研究结果显示,老年面肌痉挛患者情绪、社交、生活质量评分相互均呈显著正相关,提示情绪障碍严重时对社交也更易表现出回避或苦恼,心理健康水平显著下降,疾病发作也能造成更剧烈的面部抽搐,导致生活质量降低。

综上,老年面肌痉挛患者情绪、社交及生活质量可相互影响,且病程超过 5 年、右侧下纵束及下额枕束区 RD 值显著升高者患重度痉挛风险更高,可为老年面肌痉挛的临床工作提供参考。

【参考文献】

[1] Zhao H, Zhu J, Tang YD, *et al*. Hemifacial spasm: comparison of results between patients older and younger than 70 years operated on with microvascular decompression[J]. J Neurol Surg A Cent Eur Neurosurg, 2022, 83(2): 118-121. DOI: 10.1055/s-0040-1721018.

[2] Zhong W, Ying T, Li S, *et al*. New technology: compound abnormal muscle response during microvascular decompression for hemifacial spasm[J]. J Craniofac Surg, 2022, 33(3): 283-285. DOI: 10.1097/SCS.0000000000008143.

[3] Zhou J, Shi Q, Jiang L, *et al*. Association study of the pneumatization degree of mastoid air cells and postoperative complications after microvascular decompression in hemifacial spasm[J]. Acta Neurochir (Wien), 2022, 164(6): 1543-1550. DOI: 10.1007/s00701-022-05155-4.

[4] 上海交通大学颅神经疾病诊治中心. 面肌痉挛诊疗中国专家共识[J]. 中国微侵袭神经外科杂志, 2014, 20(11): 528-532. DOI: 10.11850/j.issn.1009-122X.2014.11.018.

[5] Youssef AS, Schroeder HWS. Indication for a skull base approach in microvascular decompression for hemifacial spasm[J]. Acta Neurochir (Wien), 2022, 164(12): 3247-3248. DOI: 10.1007/s00701-022-05398-1.

[6] Zhu Q, Jiang G, Lang X, *et al*. Prevalence and clinical correlates of abnormal lipid metabolism in first-episode and drug-naïve patients with major depressive disorder with abnormal glucose metabolism[J]. Sci Rep, 2023, 13(1): 8078-8783. DOI: 10.1038/s41598-023-35290-6.

[7] 张雪凤, 高峰强, 耿靖宇, 等. 社交回避与苦恼对手机成瘾的影响:孤独感、安全感和沉浸的多重中介效应[J]. 中国临床心理学杂志, 2018, 26(3): 494-497. DOI: 10.16128/j.cnki.1005-3611.2018.03.017.

[8] 王天宇, 高俊, 王鑫, 等. 显微血管减压术对偏侧面肌痉挛患者生活质量的影响[J]. 基础医学与临床, 2018, 38(7): 1003-1006. DOI: 10.3969/j.issn.1001-6325.2018.07.020.

[9] Zhang Y, Xia L, Lin J, *et al*. Retrospective study of the combined application of the blink reflex and lateral spread reflex in microvascular decompression of facial nerve surgery[J]. Ann Palliat Med, 2021, 10(12): 12310-12318. DOI: 10.21037/apm-21-3197.

[10] Zhang T, Zhao C, Qi X, *et al*. Brain white matter structural alteration in hemifacial spasm: a diffusion tensor imaging study[J]. J Craniofac Surg, 2023, 34(2): 674-679. DOI: 10.1097/SCS.0000000000009083.

[11] Zhang J, Yu Q, Gu P, *et al*. Brain structure alterations in hemifacial spasm: a diffusion tensor imaging study[J]. Clin EEG Neurosci, 2022, 53(2): 165-172. DOI: 10.1177/1550059420979250.

[12] Yılmaz ATC, Yılmaz M, Öztekin MF. Comparison of preseptal and pretarsal onabotulinum toxin an injection in patients with hemifacial spasm[J]. Int J Neurosci, 2021, 131(6): 549-554. DOI: 10.1080/00207454.2020.1750389.

[13] Wu F, Wei P, Wang G, *et al*. Roles of preoperative anxiety and depression in the outcomes of microvascular decompression in hemifacial spasm for adolescent patients[J]. Medicine (Baltimore), 2021, 100(32): e26831. DOI: 10.1097/MD.0000000000026831.

[14] Wang C, Zhu X, Xia L, *et al*. Botulinum toxin A improves psychological distress in patients with hemifacial spasm[J]. Acta Neurol Belg, 2022, 122(1): 43-49. DOI: 10.1007/s13760-021-01601-9.

[15] 王梦雨, 李家磊, 郭虹, 等. D 型人格对老年人抑郁情绪的影响机制: 社会支持和心理弹性的中介作用[J]. 中华老年多器官疾病杂志, 2021, 20(9): 650-654. DOI: 10.11915/j.issn.1671-5403.2021.09.136.

(编辑: 郑真真)