·临床研究·

老年慢性心力衰竭患者负面情绪及自我感受负担与生活质量的相关性

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【摘 要】 **目的** 调查并分析老年慢性心力衰竭(CHF)患者负面情绪、自我感受负担与生活质量的相关性。**方法** 将南京医科大学第一附属医院2020年2月至2022年12月收治的94例非老年CHF(非老年组)及122例老年CHF患者(老年组)纳为研究对象,比较两组患者临床特征、负面情绪[焦虑自评量表(SAS)、抑郁自评量表(SDS)]、自我感受负担[自我感受负担量表汉化版(SPBS)]及生活质量[明尼苏达心力衰竭生活质量问卷(MLHFQ)]的差异。采用SPSS 22.0软件进行数据分析。根据数据类型,组间比较分别采用t检验、方差分析及χ^2检验。采用Pearson线性相关分析CHF老年患者负面情绪、自我感受负担与其生活质量间的相关性,采用多元线性回归分析影响老年CHF住院患者生活质量的相关因素。**结果** 与非老年组相比,老年组CHF患者共病种数更多,美国纽约心脏病协会(NYHA)心功能分级整体更高,住院时间更长;用药方面,老年组患者β-受体阻滞剂使用率较低,地高辛使用率及≥3种药物联合使用者占比较高,差异均有统计学意义($P<0.05$)。Pearson相关性分析提示,老年CHF住院患者SAS、SDS以及SPBS量表得分与其MLHFQ量表总得分之间均呈正相关($P<0.05$)。多元线性回归分析提示,NYHA心功能分级、CHF病程、年住院次数、运动频率、焦虑、抑郁以及自我感受负担是影响老年CHF患者生活质量的相关因素($P<0.05$)。**结论** 与非老年患者相比,老年CHF住院患者病因及合并症更复杂,CHF病情更严重。而焦虑、抑郁及自我感受负担对老年CHF患者生活质量有负向预测作用。

【关键词】 老年人;慢性心力衰竭;负面情绪;自我感受负担;生活质量;相关性分析
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Correlation of negative emotions and self-perceived burden with quality of life in elderly patients with chronic heart failure

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【Abstract】 **Objective** To investigate and analyze the correlation of negative emotions and self-perceived burden with quality of life in the elderly patients with chronic heart failure (CHF). **Methods** A total of 94 non-elderly patients with CHF (non-elderly group) and 122 elderly patients with CHF (elderly group) admitted to the First Affiliated Hospital of Nanjing Medical University from February 2020 to December 2022 were enrolled in the study. The clinical characteristics, negative emotions [self-rating anxiety scale (SAS), self-rating depression scale (SDS)], and self-perceived burden [Chinese Version of Self-Perceived Burden Scale (SPBS)] and quality of life [Minnesota Living with Heart Failure Questionnaire (MLHFQ)] were compared between the two groups. SPSS 22.0 was used for data analysis. According to the data type, t test, analysis of variance, or *Chi*-square test was employed for comparison between groups. Pearson linear correlation analysis was used to analyze the correlation between negative emotions, self-perceived burden, and quality of life in the elderly CHF inpatients, and multivariate linear regression analysis was employed to analyze the factors affecting their quality of life. **Results** Compared with the non-elderly group, the elderly group had a higher comorbidity, higher New York Heart Association (NYHA) classes and longer hospital stay; in medication, the elderly group had a lower rate of β-blocker use, a higher rate of digoxin use, and a higher proportion of users of ≥ 3 drugs; the differences were statistically significant ($P<0.05$). Pearson correlation analysis showed that the scores of SAS, SDS and SPBS in the elderly group were positively correlated with total MLHFQ scores ($P<0.05$). Multivariate linear regression analysis showed that NYHA classes, CHF course, annual hospitalization frequency, exercise frequency, anxiety, depression, and self-perceived burden were factors affecting the quality of life in the elderly CHF patients ($P<0.05$). **Conclusion** Compared with the non-elderly patients, the etiology and comorbidity of the elderly CHF inpa-

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tients are more complex, and the CHF is more serious. Anxiety, depression, and self-perceived burden have negative predictive effects on the quality of life in elderly CHF patients.

【Key words】 aged; chronic heart failure; negative emotions; self-perceived burden; quality of life; correlation analysis

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与非老年人群相比,老年人群慢性心力衰竭(chronic heart failure, CHF)发病率及病死风险均更高[1]。随着健康观念的转换,人们对疾病的要求已不再局限于治疗层面,而是要求全面提高生活质量[2]。生活质量是一个涉及多维度的指标,其中心理因素对生活质量的影响不容忽视。有研究表示,焦虑是 CHF 患者躯体症状的前因变量,而抑郁会增加 CHF 患者全因死亡风险[3,4]。自我感受负担是指个体因疾病及疾病所产生的照护需求影响到他人而产生的负担感,在 CHF 患者中普遍存在。本研究通过调查老年 CHF 住院患者焦虑、抑郁、自我感受负担以及生活质量现状,探讨各指标之间的关系,旨在为改善老年 CHF 患者生活质量提供参考。

1 对象与方法

1.1 研究对象

将 2020 年 2 月至 2022 年 12 月南京医科大学第一附属医院收治的 216 例 CHF 患者纳为研究对象。本研究经医院伦理委员会批准(伦理批号:2019278),参与者均知情且同意。

纳入标准:(1)符合《欧洲急慢性心力衰竭诊治指南(2016)》[5]及《中国心力衰竭诊断和治疗指南(2018)》[6]中相关诊断标准,经临床确诊为 CHF;(2)美国纽约心脏病协会(New York Heart Association, NYHA)心功能分级Ⅱ~Ⅳ级;(3)病情稳定,意识清醒,能理解调查问卷内容并完成问卷调查。排除标准:(1)参与研究前 2 个月内发生急性病,如急性心肌梗死、急性肺栓塞等;(2)合并严重脑血管疾病、运动器官疾病或残疾等影响日常生活;(3)合并恶性肿瘤;(4)合并肝肾功能障碍或其他重要器官损害。

1.2 方法

采用问卷调查的方式展开研究,在 CHF 患者出院当天发放问卷,统一指导后,由患者自主完成相关调查问卷,对于不能自主填写问卷者,逐条读给患者听,帮助患者完成问卷,问卷填写完后当场回收,调查内容如下。(1)一般人口学资料包括年龄、性别、体质量指数(body mass index, BMI)等;(2)病情相关资料包括原发病、心功能分级、左心室射血分数(left ventricular ejection fraction, LVEF)、左室舒张末期内径、6 min 步行试验(6-minute walk test, 6MWT)、氨基末端 B 型钠尿肽前体(amino-terminal pro-B-type natriuretic peptide, NT-proBNP)、住院时间、年住院次数、患者用药信息等;(3)明尼苏达心力衰竭生活质量问卷(Minnesota living with heart failure questionnaire, MLHFQ)[7];(4)自我感受负担量表汉化版(self-perceived burden scale, SPBS)[8];(5)焦虑自评量表(self-rating anxiety scale, SAS)[9]及抑郁自评量表(self-rating depression scale, SDS)[10]。

1.3 统计学处理

采用 SPSS 22.0 统计软件进行数据分析。符合正态分布的计量资料用均数±标准差($\bar{x}\pm s$)表示,两组间比较采用 t 检验,多组间比较采用单因素方差分析;计数资料用例数(百分率)表示,采用 χ^2 检验。采用 Pearson 线性相关分析 CHF 老年患者负面情绪、自我感受负担与其生活质量间的相关性,采用多元线性回归分析影响老年 CHF 住院患者生活质量的相关因素。$P<0.05$ 为差异有统计学意义。

2 结 果

2.1 两组患者临床特征比较

老年组 CHF 患者年龄高于非老年组,合并高血压、糖尿病、脑血管疾病者占比高于非老年组,共病种数多于非老年组,NYHA 分级整体高于非老年组,住院时间长于非老年组,且老年组患者 β-受体阻滞剂使用率低于非老年组患者,地高辛使用率及 3 中以上药物联合使用者占比高于非老年组,差异均有统计学意义($P<0.05$;表 1)。

2.2 两组患者负面情绪、自我感受负担及生活质量比较

老年组 CHF 患者 SAS、SDS、SPBS 评分及 MLHFQ 量表总得分均高于非老年组,差异均有统计学意义($P<0.05$;表 2)。

2.3 一般人口学资料及病情对老年 CHF 患者生活质量的影响

NYHA 心功能分级、CHF 病程、年住院次数、运动频率、6MWT 与老年 CHF 患者生活质量得分具有相关性($P<0.05$;表 3)。

表1 两组患者临床特征比较

Table 1 Comparison of clinical characteristics between two groups

Item	Elderly group(n=122)	Non-elderly group(n=94)	χ^2/t	P value
Age(years, $\bar{x}\pm s$)	71.33±4.39	55.47±5.13	24.453	<0.001
Etiology and comorbidity[n(%)]				
Coronary heart disease	95(77.87)	67(71.28)	1.231	0.267
Hypertension	83(68.03)	46(48.94)	8.049	0.005
Cardiomyopathy	18(14.75)	12(12.77)	0.176	0.675
Valvular disease	16(13.11)	8(8.51)	1.140	0.286
Diabetes mellitus	49(40.16)	25(26.60)	4.340	0.037
Hyperlipidemia	42(34.43)	31(32.98)	0.050	0.824
Cerebrovascular disease	39(31.97)	15(15.96)	7.258	0.007
Renal insufficiency	32(26.23)	16(17.02)	2.605	0.107
Atrial fibrillation	24(19.67)	20(21.28)	0.084	0.772
Pulmonary infection	37(30.00)	19(20.21)	2.829	0.093
Number of comorbidity(n, $\bar{x}\pm s$)	3.56±0.43	2.31±0.33	23.372	<0.001
NYHA grading[n(%)]			7.660	0.022
Ⅱ	24(19.67)	34(36.17)		
Ⅲ	61(50.00)	40(42.55)		
Ⅳ	37(30.33)	20(21.28)		
Hospital stay (d, $\bar{x}\pm s$)	11.78±2.16	10.03±1.83	6.303	<0.001
Anti-heart failure medication[n(%)]				
ACEI/ARB	99(81.15)	73(77.66)	0.398	0.528
β-blocker	72(59.02)	78(82.98)	14.367	<0.001
Diuretic	101(82.79)	71(75.53)	1.723	0.189
Aldosterone receptor antagonist	63(51.64)	40(42.55)	1.757	0.185
Digoxin	65(53.28)	20(21.28)	22.783	<0.001
Medication combination[n(%)]			16.867	<0.001
Two drugs	24(19.67)	43(45.74)		
Three drugs or more	98(80.33)	51(54.26)		

NYHA: New York Heart Association; ACEI/ARB: angiotension converting enzyme inhibitor/angiotension receptor blocker.

表2 两组患者负面情绪、自我感受负担及生活质量比较

Table 2 Comparison of negative emotions, self-perceived burden and quality of life between two groups (points, $\bar{x}\pm s$)

Group	n	SAS	SDS	SPBS	MLHFQ			
					Body field	Emotional field	Other field	Total score
Elderly	122	43.11±4.15	44.98±3.98	31.15±6.35	23.58±4.15	8.99±1.98	13.90±1.97	46.47±6.32
Non-elderly	94	39.74±4.36	40.35±4.11	25.57±5.13	20.15±3.71	7.11±2.11	13.87±2.05	41.53±5.31
t		5.788	8.357	6.949	6.304	6.723	0.109	6.098
P vaule		<0.001	<0.001	<0.001	<0.001	<0.001	0.913	<0.001

SAS: self-rating anxiety scale; SDS: self-rating depression scale; SPBS: self-perceived burden scale; MLHFQ: Minnesota living with heart failure questionnaire.

2.4 老年CHF患者负面情绪、自我感受负担与其生活质量的相关性

Pearson相关性分析提示,SAS、SDS以及SPBS量表得分均与MLHFQ量表总得分间呈正相关(r=0.461,0.326,0.493;P<0.05)。

2.5 老年CHF患者生活质量的多元线性回归分析

多元线性回归分析提示,NYHA心功能分级、CHF病程、年住院次数、运动频率、SAS、SDS以及SPBS评分是影响老年CHF患者生活质量的相关因素(P<0.05;表4)。

表 3 一般人口学资料及病情对老年 CHF 患者生活质量的影响

Table 3 Effect of general demographic data and disease condition on quality of life in elderly patients with CHF (points, $\bar{x}\pm s$)

Indicator	n	Total score of MLHFQ	t/F	P value
Age			0.297	0.767
<80 years	60	46.63±6.15		
⩾ 80 years	62	46.31±5.74		
NYHA grading			56.065	<0.001
Ⅱ	24	41.15±6.15		
Ⅲ	61	43.55±6.17		
Ⅳ	37	54.73±6.36		
CHF course			11.214	<0.001
<0.5 years	18	43.29±5.78		
0.5-<5.0 years	77	46.33±5.31		
⩾ 5.0 years	27	48.98±5.43		
Annual hospitalization frequency			42.759	<0.001
1 time	66	42.92±5.69		
1-⩽3 times	36	48.48±5.71		
>3 times	20	54.58±5.58		
LVEF			0.152	0.928
<40%	19	47.01±6.15		
40%-⩽50%	30	46.86±6.33		
50%-⩽60%	46	46.15±6.74		
>60%	27	46.21±5.98		
Number of comorbidity			0.597	0.552
<3 types	69	46.15±6.77		
⩾3 types	53	46.89±6.82		
Exercise frequency			34.656	<0.001
Never	40	52.33±5.88		
Occasional	53	44.73±6.14		
Regular	29	41.58±5.94		
Left ventricular end-diastolic diameter			1.200	0.234
Abnormal	93	46.84±6.11		
Normal	29	45.30±5.87		
6MWT			14.625	<0.001
<150 m	42	49.45±5.43		
150-<426 m	63	45.55±6.03		
426-<550 m	17	42.59±5.73		
NT-proBNP			1.057	0.293
Normal	20	45.13±6.17		
Abnormal	102	46.74±6.24		

Left ventricular end-diastolic diameter: male normal range of 40-55 mm, female normal range of 35-50 mm, beyond the normal range is abnormal; plasma NT-proBNP: using kit-related information (FDA company, USA), plasma NT-proBNP level<125 pg/ml in people under 75 years and plasma NT-proBNP< 450 pg/ml in people⩾ 75 years. CHF: chronic heart failure; NYHA: New York Heart Association; LVEF: left ventricular ejection fraction; 6MWT: 6-minute walk test; NT-proBNP: amino-terminal pro-B-type natriuretic peptide.

表 4 老年 CHF 患者生活质量的多元线性回归分析

Table 4 Multivariate linear regression analysis of quality of life in elderly patients with CHF

Factor	B	SE	β	t	P value
Constant	28.774	2.963	-	12.254	<0.001
NYHA grading	4.846	1.864	0.135	2.677	0.013
CHF course	3.788	1.255	0.143	2.344	0.021
Annual hospitalization frequency	7.122	2.677	0.283	3.258	<0.001
Exercise frequency	-5.336	1.766	-0.153	-3.115	0.001
SAS	0.965	0.101	0.525	8.796	<0.001
SDS	0.574	0.086	0.141	2.513	0.018
SPBS	0.311	0.042	0.232	3.715	<0.001
6MWT	0.274	0.133	0.258	1.337	0.094

$R=0.789$, $R^2=0.637$, adjusted $R^2=0.611$, $F=24.558$, $P<0.001$. CHF: chronic heart failure; NYHA: New York Heart Association; SAS: self-rating anxiety scale; SDS: self-rating depression scale; SPBS: self-perceived burden scale; 6MWT: 6-minute walk test.

3 讨 论

有研究表示,与非老年 CHF 患者相比,老年 CHF 患者非典型临床症状及疾病相关并发症更多,预后不良风险更高[11]。本研究发现,老年 CHF 住院患者基础性疾病及共病种类数更多,且 NYHA 心功能分级整体更靠后,住院时间更长,心力衰竭用药更为复杂,说明老年 CHF 患者病因更为复杂,病情更为严重。此外,老年 CHF 患者还存在更为严重的焦虑、抑郁情绪及自我感受负担,生活质量也更差。

本研究发现,老年 CHF 住院患者生活质量整体处于中低水平,生活质量 MLHFQ 量表中躯体领域及情绪领域得分均明显高于非老年组患者。进一步行多元线性回归分析提示,NYHA 心功能分级、CHF 病程、年住院次数等病情相关指标对老年 CHF 患者生活质量有负向预测作用,而规律运动对其生活质量有正向预测作用。这可能与规律运动能有效提高患者自我效能感、预防肌少症、改善患者生活态度相关,也提示了规律运动对提高患者生活质量有帮助[12]。

有研究显示,CHF 患者普遍存在焦虑抑郁情绪[13]。焦虑、抑郁情绪的存在会降低患者对自身疾病的重视度,促使其选择更为消极的疾病应对方式,同时,焦虑、抑郁还会影响患者睡眠质量,加重其躯体症状[14]。CHF 是一种慢性进展性疾病,尚无有效根治方法,会给患者造成沉重的躯体负担及经济负担,导致患者产生负罪感,即自我感受负担。而自我感受负担更易引起沮丧、神经质、焦虑等负面情绪,影响心理健康[15]。本研究发现老年 CHF 住院患者焦虑、抑郁以及自我感受负担与其生活质量均呈正相关,多元线性回归分析提示,焦虑、抑郁以及自我感受负担也是影响老年 CHF 住院患者生活质量的相关因素。针对此,建议临床积极关注老年 CHF 住院患者负面情绪,从多角度出发,有效降低患者不良心理负担,在改善其生活质量中具有一定意义。

综上,与非老年患者相比,老年 CHF 住院患者病因及合并症更复杂,CHF 病情更严重。而焦虑、抑郁及自我感受负担对老年 CHF 患者生活质量有负向预测作用。

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