·临床研究·

老年冠心病患者经皮冠状动脉介入治疗术后生活质量的影响因素及与衰弱的相关性

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【摘 要】 **目的** 探讨老年冠心病(CHD)患者经皮冠状动脉介入术(PCI)后1年的生活质量,并分析其影响因素及与衰弱的相关性。**方法** 选择琼海市人民医院2021年1月至2022年1月收治的166例首次实施PCI治疗的老年CHD患者为研究对象,调查患者PCI前及术后1年的生活质量及衰弱状况。采用SPSS 19.0统计软件进行数据处理。根据数据类型,分别采用方差分析、t检验或χ^2检验进行组间比较。采用多元线性回归模型分析影响患者术后生活质量的相关因素。采用Pearson相关分析衰弱与生活质量的相关性。**结果** PCI后1年,老年CHD患者生活质量躯体健康、心理健康及量表总得分均较术前升高,差异均有统计学意义($P<0.05$)。多元线性回归分析结果显示,性别、独居、婚姻状态、术后吸烟、基础性疾病种类与老年CHD患者PCI后生活质量之间呈负相关($\beta=-0.153,-0.136,-0.173,-0.383,-0.125$;$P<0.05$);疾病心理社会适应能力、接受健康教育及体育锻炼与其生活质量之间呈正相关($\beta=0.165,0.056,0.189$;$P<0.05$),其共同解释老年CHD患者PCI后1年生活质量63.4%的变异度($F=58.484$,$P<0.001$)。衰弱发生率为24.10%(40/166),且衰弱量表得分与生活质量呈负相关($r=-0.411$;$P<0.001$)。**结论** 老年CHD患者经PCI治疗后,生活质量较术前明显提升,积极进行健康教育、改善患者不良习惯及加强运动,对提高患者生活质量具有一定价值。

【关键词】 老年人;冠心病;经皮冠状动脉介入术;生活质量
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Influencing factors of quality of life and correlation with frailty in elderly patients with coronary heart disease after percutaneous coronary intervention

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【**Abstract**】 **Objective** To investigate the quality of life at one year after percutaneous coronary intervention (PCI) in the elderly patients with coronary heart disease (CHD) and to analyze its influencing factors and correlation with frailty. **Methods** A total of 166 elderly CHD patients who underwent PCI for the first time in Qionghai People's Hospital between January 2021 and January 2022 were included as the study subjects. Their quality of life and frailty were investigated before PCI and at one year after PCI. The data was processed with SPSS statistics 19.0. According to the data type, analysis of variance, t test or *Chi*-square test was used for comparison between groups. The factors affecting the postoperative quality of life in patients were analyzed by multivariate linear regression model. Pearson correlation analysis was employed to analyze the correlation between frailty and quality of life. **Results** At one year after PCI, the scores of physical health and psychological health and total score of quality of life scale of elderly CHD patients increased compared with before the surgery ($P<0.05$). Multivariate linear regression analysis found that gender, living alone, marital status, smoking after surgery and types of underlying diseases were negatively correlated with quality of life in the elderly CHD patients after PCI($\beta=-0.153$, -0.136, -0.173, -0.383, -0.125; $P<0.05$), and that psycho-social adaptation ability, health education and physical exercise were positively correlated with quality of life($\beta=0.165$, 0.056, 0.189;$P<0.05$), which together explained 63.4% of the variance of quality of life in elderly CHD patients at 1 year after PCI ($F=58.484$, $P<0.001$). The incidence rate of frailty was 24.10% (40/166), and the score of frailty scale was negatively correlated with quality of life ($r=-0.411$; $P<0.001$). **Conclusion** The quality of life in the elderly CHD patients after PCI is significantly improved compared with before the surgery. Actively carrying out health education, improving bad habits and strengthening exercise are of some value in enhancing the patients' quality of life.

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经皮冠状动脉介入术(percutanenous coronary intervention, PCI)在治疗冠心病(coronary heart disease, CHD)中具有良好的临床应用价值[1,2]。临床对于接受PCI治疗的中青年CHD患者,重点关注其术后能否恢复正常工作,回归社会,而对老年CHD患者而言,则更关注其术后的日常生活。此外,老年CHD患者常并发衰弱,关注患者术后衰弱状况及是否会对生活质量造成影响,在临床中也具有重要意义[3]。

1 对象与方法

1.1 研究对象

选择琼海市人民医院2021年1月至2022年1月收治的166例行PCI手术治疗的老年CHD患者为研究对象。纳入标准:(1)年龄≥60岁;(2)不稳定型心绞痛;(3)均为首次进行PCI;(4)术后冠状动脉造影显示残余狭窄<20%,冠状动脉远端血流心肌梗死溶栓(thrombolysis in myocardial infarction, TIMI)3级;(4)PCI术后规律服用抗血小板药物,疗程至少1年;(5)认知能力良好。排除标准:(1)合并严重器官衰竭;(2)合并恶性肿瘤;(3)合并肢体瘫痪;(4)非手术CHD患者;(5)急性冠状动脉综合征或急性心肌梗死等行急诊PCI治疗者。本研究经医院医学伦理委员会批准(批号:2020078),患者及家属对研究内容知情且签署知情同意书。

1.2 方法

(1)收集患者性别、年龄(60~74岁低龄老年人;≥75岁高龄老年人)、个性特征[参照艾森克个性问卷(Eysenck personality questionnaire, EPQ)相关标准评估患者个性特征,分为外向、中性及内向]、术后吸烟、术后饮酒、合并基础疾病数量、病变血管数量、射血分数、是否接受过健康教育、体育锻炼频率等资料。(2)PCI前及术后1年对患者进行生活质量调查,其余问卷均在术后1年进行。采用国际通用的普适性量表中文版简明健康状况问卷(Chinese version of medical outcomes study 36-item short form, SF-36)[4]评估生活质量。采用疾病心理社会适应量表(self-report psychosocial adjustment to illness scale, PAIS-SR)[5]调查疾病适应能力。采用Tilburg衰弱评估量表(Tilburg frailty indicator, TFI)[6]评估患者衰弱发生情况,量表总分≥5分即可判定为衰弱。

1.3 统计学处理

采用SPSS 19.0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,多组间比较采用方差分析,检验有意义者,组内两两比较使用LSD-t检验;两组间比较采用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。采用多元线性回归模型分析影响患者生活质量的相关因素。采用Pearson线性相关分析衰弱与生活质量的相关性。$P<0.05$为差异有统计学意义。

2 结 果

2.1 老年CHD患者PCI前后生活质量情况比较

PCI后1年,老年CHD患者躯体健康、心理健康及量表总分均较术前升高,差异均有统计学意义($P<0.05$;表1)。

表1 老年CHD患者PCI前后生活质量比较

Table 1 Comparison of quality of life before and after PCI in elderly patients with CHD ($n=166$, points, $\bar{x}\pm s$)

Item	Before surgery	After surgery	t	P value
Physical health				
Physiological function	65.45±10.34	89.45±12.18	−27.462	<0.001
Role-physical	43.99±6.89	83.33±10.77	−57.402	<0.001
Somatic pain	44.48±7.11	92.54±13.52	−60.030	<0.001
General health	53.11±7.56	85.31±11.65	−43.193	<0.001
Average score	51.76±8.53	87.66±12.34	−44.326	<0.001
Psychological health				
Social function	65.15±12.15	85.49±10.65	−22.988	<0.001
Affective function	61.13±11.37	79.85±11.35	−21.232	<0.001
Vitality	56.77±10.54	79.43±12.74	−25.082	<0.001
Mental health	71.15±11.65	76.89±13.11	−5.974	<0.001
Average score	63.55±7.96	80.42±13.16	−20.583	<0.001
Total average score of scale	57.65±8.46	84.04±9.44	−37.990	<0.001

CHD: coronary heart disease; PCI: percutanenous coronary intervention.

2.2 影响老年CHD患者PCI后1年生活质量的单因素分析

单因素分析结果提示,性别、是否独居、婚姻状态、家庭经济情况、术后吸烟、基础性疾病种数、疾病心理社会适应能力、健康教育及体育锻炼与老年CHD患者PCI后1年生活质量相关($P<0.05$;表2)。

表 2 影响老年 CHD 患者 PCI 术后 1 年生活质量的单因素分析

Table 2 Univariate analysis of quality of life in elderly patients with CHD at 1 year after PCI (points, $\bar{x}\pm s$)

Item	n	Quality of life	t/F	P value
Gender			3.944	<0.001
Male	86	87.45±12.15		
Female	80	80.37±10.88		
Age			0.229	0.819
60−74 years	77	83.83±11.36		
≥75 years	89	84.25±12.11		
Education level			0.985	0.376
Primary school and below	96	83.45±10.89		
Middle school	50	84.25±11.05		
College and above	20	86.33±11.36		
Living alone			2.655	0.009
Yes	26	78.66±10.74		
No	140	85.04±11.34		
Marital status			6.969	<0.001
Married	116	88.16±11.26		
Unmarried/Divorced/Widowed	50	74.48±12.37		
Medical payment method			2.569	0.080
Medical insurance	81	84.38±10.88		
Basic medical insurance system for urban and rural residents	68	84.55±10.36		
Self-paying/others	17	80.40±11.34		
Family economic situation			9.737	<0.001
Good	53	88.44±12.05		
General	66	83.66±11.36		
Poor	47	79.61±10.85		
Personality characteristics			0.031	0.970
Introvert	30	84.11±13.26		
Neutral	94	83.84±12.74		
Extrovert	42	84.43±11.96		
Postoperative smoking			4.680	<0.001
Yes	20	72.15±10.17		
No	146	85.67±12.35		
Postoperative drinking			0.603	0.547
Yes	21	82.59±11.36		
No	145	84.25±11.85		
Underlying diseases			18.769	<0.001
0−1 type	63	89.24±12.31		
2 types	58	84.81±12.11		
≥3 types	45	75.77±10.85		
Diseased vessels			0.199	0.820
1	97	84.44±13.15		
2	50	85.12±13.21		
≥3	19	83.55±12.87		
Stents implanted			0.004	0.996
1	97	83.98±12.74		
2	56	84.16±13.16		
≥3	13	83.96±11.85		
Untreated diseased vessels			0.235	0.791
0	139	84.10±11.30		
1	11	84.64±12.15		
≥ 2	16	83.11±12.08		
Left ventricular ejection fraction			0.718	0.474
≤50%	31	82.78±10.98		
>50%	135	84.39±11.32		
Regional ventricular wall motion abnormality			0.721	0.472
Yes	36	82.78±12.14		
No	130	84.39±11.78		
Disease psycho-social adaptation ability			6.835	0.001
Poor	37	80.12±12.33		
Middle	89	83.69±11.74		
Good	40	88.45±11.86		
Receiving health education			4.333	<0.001
Yes	70	80.15±9.47		
No	96	86.88±10.17		
Physical exercise			4.317	0.015
seldom	76	81.66±10.36		
1−3 times/week	53	85.04±9.89		
>3 times/week	37	87.48±11.03		

CHD: coronary heart disease; PCI: percutanenous coronary intervention.

2.3 影响老年CHD患者PCI后1年生活质量的多元线性回归分析

将单因素分析中有意义的指标作为自变量(X),老年CHD患者PCI后1年生活质量总得分作为因变量(Y),进行多元线性回归分析,结果显示,性别、独居、婚姻状态、术后吸烟、基础性疾病种类与老年CHD患者PCI术后生活质量之间呈负相关;疾病心理社会适应能力、接受健康教育及体育锻炼与其生活质量之间呈正相关,其共同解释老年CHD患者PCI术后1年生活质量63.4%的变异度(表3)。

2.4 衰弱与生活质量的相关性

166例被调查对象中共有40例存在衰弱症状(24.10%),Pearson相关性分析提示,衰弱得分与患者生活质量呈负相关($r=-0.411$;$P<0.001$)。

3 讨 论

生活质量评估是了解老年CHD患者PCI后生存现状及手术效果的重要手段[7,8]。本研究结果显示,经PCI治疗后,老年CHD患者生活质量各维度得分均较术前明显升高,PCI治疗后患者心肌供血障碍及临床症状明显改善,提高了患者的生活质量。本研究结果显示,性别、是否独居、婚姻状态、术后吸烟、基础性疾病种类、疾病心理社会适应能力、接受过健康教育、体育锻炼是影响老年CHD患者PCI后1年生活质量的影响因素,与既往研究结果相似[9,10]。

分析其原因如下。(1)性别。女性CHD患者PCI后1年生活质量较低,这与女性临床症状往往不典型、未能及时就医、错过最佳治疗时间、且女性冠状动脉较细,血运重建净效益更低等因素相关[11,12]。故临床应更关注老年女性CHD患者的术后康复。(2)独居及婚姻状态。独居或非在婚状态者的老年患者缺乏可靠的支持对象,经济状况可能也更差[13]。故应积极关注独居及非在婚状态的老年CHD患者生活状态,鼓励家属给予该类患者更多的关心及支持,提高患者术后生活质量。(3)术后吸烟。吸烟已被证实为各类心血管疾病的危险因素,何耀等[14]研究发现,术后戒烟可减少CHD患者心绞痛及再住院风险,提高心脏功能及生存率。故建议临床加强健康宣教力度,采用多途径帮助老年CHD患者戒烟。(4)基础性疾病。各种基础性疾病,包括糖尿病、高血压、高血脂症等均会加速动脉粥样硬化进程,增加心血管不良事件风险。而基础性疾病种类越多往往也预示着其躯体负担更重,导致生活质量更差。故对于合并多种基础性疾病者,应重视其基础性疾病的控制,加强随访。(5)疾病心理社会适应能力。不少老年CHD患者PCI后社会适应性降低,故引导患者家属主动帮助患者提高疾病适应性,对于改善患者的生活质量具有一定意义。(6)健康教育。随着临床对健康教育的重视及互联网的普及,健康教育越来越普遍、方便,而接受过健康教育者可从各方面全面了解疾病相关知识,提高自护手段,进而提高生活质量。(7)体育锻炼。适当的体育锻炼在维持生命力中具有重要意义,经常进行体育锻炼的老年患者术后1年生活质量更好,建议患者根据自身情况,积极进行体育锻炼。

衰弱在老年CHD患者中较为常见,有研究表示,衰弱将增加预后不良发生率[15]。本研究中,老年CHD患者PCI后1年衰弱检出率为24.10%,且相关性分析结果提示,衰弱与患者生活质量呈负相关,说明衰弱的发生也会降低患者生活质量,提示临床更应关注合并衰弱的老年CHD患者。

表3 影响老年CHD患者PCI后1年生活质量的多元线性回归分析

Table 3 Multivariate linear regression analysis of quality of life at 1 year after PCI in elderly patients with CHD

Factor	*B*	*SE*	*β*	*t*	*P* value
Constant	66.358	5.155	-	10.265	<0.001
Gender	-1.884	0.636	-0.153	-2.944	0.006
Living alone	-2.889	1.211	-0.136	-2.355	0.013
Marital status	-3.117	0.755	-0.173	-4.156	<0.001
Family economy	-0.911	1.533	-0.046	-0.577	0.611
Postoperative smoking	-0.744	0.083	-0.383	-8.155	<0.001
Types of underlying diseases	-0.163	0.042	-0.125	-3.554	<0.001
Disease psycho-social adaptation ability	3.778	1.255	0.165	3.105	<0.001
Receiving health education	0.831	0.074	0.056	6.481	<0.001
Physical exercise	2.698	0.836	0.189	4.435	<0.001

CHD: coronary heart disease; PCI: percutaneous coronary intervention. $R=0.796$, adjusted $R^2=0.634$, $F=58.484$, $P<0.001$. -: no datum.

综上所述,老年 CHD 患者经 PCI 治疗后,生活质量较术前明显提升,积极进行健康教育、改善患者不良习惯、加强运动,对于提高患者术后生活质量具有一定价值。

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