

· 临床研究 ·

老年肺间质纤维化患者生存现状调查

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【摘要】目的 调查老年肺间质纤维化患者生存现状并分析其相关因素。**方法** 将2020年6月到2022年6月新疆医科大学第一附属医院收治的246例老年肺间质纤维化患者纳为老年组,同期收治的160例非老年肺间质纤维化患者纳为非老年组。采用中文版特发性肺纤维化患者生活质量特异性量表(cATAQ-IPF)调查患者生活质量,中文版死亡态度描绘(DAP-R)量表调查患者死亡态度,对比老年组与非老年组临床特征。采用二元logistic回归模型分析影响老年组患者生活质量的相关因素;采用Pearson相关分析老年组患者生活质量与死亡态度之间的相关性。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 检验及 χ^2 检验。**结果** 老年组及非老年组中分别有220例及150例患者完成相关调查,对比发现,老年组年龄,合并高血压、糖尿病、冠心病比例,病程以及肺间质性纤维化-年龄-肺功能(ILD-GAP)指数高于非老年组,文化程度及cATAQ-IPF量表总得分均低于非老年组,差异均有统计学意义($P<0.05$)。老年肺间质纤维化患者cATAQ-IPF量表总得分(264.64 ± 36.78)分,其中受损最严重的三个维度分别是呼吸困难、死亡敏感、社交活动,受损相对最轻的维度是人际关系。二元logistic回归分析提示,病程($OR=2.323, 95\%CI\ 1.382\sim3.906$)、ILD-GAP指数($OR=3.725, 95\%CI\ 1.285\sim10.797$)、用力肺活量($OR=2.404, 95\%CI\ 1.514\sim3.817$)、医学研究委员会呼吸困难量表($OR=2.102, 95\%CI\ 1.555\sim2.843$)、焦虑($OR=1.774, 95\%CI\ 1.143\sim2.751$)、抑郁($OR=1.610, 95\%CI\ 1.124\sim2.304$)是影响老年肺间质纤维化患者生活质量的危险因素,而有配偶($OR=0.619, 95\%CI\ 0.474\sim0.809$)及医学应对方式($OR=0.489, 95\%CI\ 0.355\sim0.673$)是其生活质量的保护因素($P<0.05$)。Pearson相关性分析提示,患者生活质量得分与其死亡恐惧及死亡逃避之间呈正相关($r=0.246, 0.233; P=0.036, 0.043$),与自然接受之间呈负相关($r=-0.278; P=0.021$)。**结论** 与非老年组患者相比,老年肺间质纤维化患者合并基础性疾病更多,肺间质纤维化病程更长,病情更为严重,生活质量更低;除疾病相关因素外,心理因素对其生活质量均有影响,建议临床增加对老年肺间质纤维化患者心理健康的关注与干预。

【关键词】 老年人;肺间质纤维化;生活质量;多元线性回归分析

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Survival status of elderly patients with pulmonary interstitial fibrosis

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【Abstract】Objective To investigate the survival status in the elderly patients with pulmonary interstitial fibrosis and analyze its related factors. **Methods** A total of 246 elderly patients with pulmonary interstitial fibrosis admitted to the First Affiliated Hospital of Xinjiang Medical University from June 2020 to June 2022 were included in the elderly group, and 160 non-elderly patients with pulmonary fibrosis in the non-elderly group. The quality of life of patients was investigated with the Chinese version of the Tool to Assess Quality of Life in Idiopathic Pulmonary Fibrosis (cATAQ-IPF) and the patients' attitude towards death with the Chinese version of the Death Attitude Profile-Revised (DAP-R). The clinical characteristics were compared between the elderly group and the non-elderly group, and binary logistic regression model was employed to analyze the factors affecting the patients' quality of life in the elderly group. Pearson correlation analysis was performed to analyze the correlation between quality of life and patients' attitude towards death in the elderly group. SPSS 22.0 was used for statistical analysis. Depending on data type, data comparison between two groups was performed using t test or χ^2 test. **Results** In total, 220 patients in the elderly group and 150 in the non-elderly group completed the survey. Age, proportions of hypertension, diabetes mellitus and coronary heart disease, disease course and interstitial lung disease-gender-age-physiology (ILD-GAP) index in the elderly group were higher than those in the non-elderly group, and the education level and total score on cATAQ-IPF scale were lower than those in the non-elderly group, the differences being statistically significant ($P<0.05$). The total score on cATAQ-IPF in the elderly patients with pulmonary interstitial fibrosis was (264.64 ± 36.78) points, the three dimensions most severely impaired being dyspnea, death sensitivity and social activity and the least impaired being interpersonal

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relationship. Binary logistic regression analysis suggested that disease course ($OR = 2.323$, 95% CI 1.382–3.906), ILD-GAP index ($OR = 3.725$, 95% CI 1.285–10.797), forced vital capacity (FVC) ($OR = 2.404$, 95% CI 1.514–3.817), modified medical research council scale (mMRC) ($OR = 2.102$, 95% CI 1.555–2.843), anxiety ($OR = 1.774$, 95% CI 1.143–2.751) and depression ($OR = 1.610$, 95% CI 1.124–2.304) were the risk factors of quality of life in the elderly patients with pulmonary interstitial fibrosis, and having a spouse ($OR = 0.619$, 95% CI 0.474–0.809) and medical coping style ($OR = 0.489$, 95% CI 0.355–0.673) were the protective factors of quality of life ($P < 0.05$). Pearson correlation analysis showed that the patients' quality of life was positively correlated with death fear and death avoidance ($r = 0.246$, 0.233; $P = 0.036$, 0.043), and was negatively correlated with natural acceptance ($r = -0.278$, $P = 0.021$). **Conclusion** Compared with non-elderly patients, the elderly patients with pulmonary interstitial fibrosis have more underlying diseases, longer duration of pulmonary interstitial fibrosis, more serious condition and lower quality of life. In addition to disease-related factors, psychological factors have an impact on their quality of life. It is suggested to increase the attention to and intervention in psychological health in the elderly patients with pulmonary interstitial fibrosis in clinical practice.

【Key words】 aged; pulmonary interstitial fibrosis; quality of life; multivariate linear regression analysis

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肺间质纤维化是一组以肺泡壁支撑结构病变为主的弥漫性实质性肺疾病,其起病隐匿,早期症状不明显,但随着病情的发展,患者将出现呼吸困难、肺功能下降表现,还会并发呼吸衰竭。目前,肺间质纤维化尚缺乏有效治疗措施,患者预后较差,流行病学资料显示,肺间质纤维化确诊后 5 年生存率不足 50%^[1]。随着医学观念的改变,生活质量已成为评估患者生存状态的重要指标,但常用的简明健康问卷(short form of 36, SF-36)以及圣乔治呼吸问卷(St George's respiratory questionnaire, SGRQ)在评估肺间质纤维化患者生活质量中的特异性及针对性不高,本研究采用中文版特发性肺纤维化患者生活质量特异性量表(Chinese version of a tool to assess quality of life in idiopathic pulmonary fibrosis, cATAQ-IPF)对老年及非老年肺间质纤维化患者生活质量进行调查^[2]。同时对老年肺间质纤维化及非老年患者的临床特征进行对比,了解老年肺间质纤维化患者临床特点,此外,本研究还将心理因素作为分析指标,探究心理因素对老年肺间质纤维化患者生活质量的影响,现将结果报道如下。

1 对象与方法

1.1 研究对象

将 2020 年 6 月到 2022 年 6 月新疆医科大学第一附属医院收治的 246 例老年肺间质纤维化患者纳为老年组,同期收治的 160 例非老年肺间质纤维化患者纳为非老年组。

肺间质纤维化诊断及分类标准,具体如下。(1)参照《特发性肺纤维化诊断和治疗中国专家共识》(2016 年版)^[3]及《呼吸病学会》(第二版)^[4]中相关内容诊断肺间质纤维化:肺部高分辨率 CT (high resolution ratio CT, HRCT)提示患者存在典型普通间质性肺炎(usual interstitial pneumonia, UIP)表现,胸部 HRCT 特征性表现为胸膜下、基底部分布

为主的双肺网状改变,晚期出现蜂窝影,伴(或不伴)牵拉性支气管扩张,磨玻璃样改变不明显;当胸部 HRCT 提示肺部病变分布特征与病变性质为非 UIP 型时,对于无手术禁忌证者行肺组织活检,病理活检低倍镜下可见致密的胶原纤维组成的纤维化病变以及散在分布的成纤维细胞灶,并可见伴蜂窝肺改变的瘢痕纤维化区域。符合上述任意一条即可确诊。(2)特发性肺纤维化(idiopathic pulmonary fibrosis, IPF)诊断:排除其他已知的可能导致继发肺间质纤维化的因素,如职业暴露、药物性肺损伤及结缔组织疾病;未行肺组织活检,胸部 HRCT 应呈典型普通型间质性肺炎改变。符合以上两条即可确诊。(3)继发性肺间质纤维化(secondary pulmonary fibrosis, SPF):在符合肺间质纤维化诊断标准的前提下有明确病因导致的肺部影像学改变。

纳入标准:老年组患者年龄 ≥ 60 岁,非老年组患者年龄 < 60 岁;临床资料完整;了解自身患病实情;神志清楚,沟通及理解能力正常,可配合完成调查。排除标准:合并心肝肾等重要器官功能损害;合并恶性肿瘤;处于疾病急性加重期无法配合完成问卷调查。剔除标准:剔除 1 s 用力呼气容积(forced expiratory volume in one second, FEV1)/用力肺活量(forced vital capacity, FVC) < 0.7 的患者。

1.2 方法

1.2.1 调查方法 严格按照纳入及排除标准筛选研究对象,向患者解释研究目的、调查内容及保密性,采用统一解释话语向患者说明问卷填写方法及注意事项,发放调查问卷,要求患者在 15~20 min 内填写完毕,当场回收。老年组问卷调查有效率为 89.00% (220/246),非老年组问卷调查有效率为 93.75% (150/160)。

1.2.2 调查问卷 (1)一般人口学及病历资料:收集患者性别、年龄、文化程度、婚姻状态、家庭月收入、体质指数(body mass index, BMI)、吸烟史、基

基础性疾病、病程、病种、疾病严重程度、呼吸功能指标、是否应用激素治疗(未应用激素治疗者包括初诊及少数不需要使用激素者)等信息。呼吸功能指标包括肺一氧化碳弥散量(diffusion capacity for carbon monoxide of the lung, DLCO)、FEV1、FVC。(2)cATAQ-IPF 量表^[5]:cATAQ-IPF 量表包括咳嗽、呼吸困难、规划、睡眠、死亡敏感性、疲劳、情绪、社交活动、经济状况、独立性、性生活、人际关系、治疗13个维度,共74个条目。各条目均采用Likert 5级评分法,得分越高提示患者在所属领域的受损程度越严重。量表各维度Cronbach's α 系数为0.700~0.931。(3)医学研究委员会呼吸困难量表(modified medical research council scale, mMRC)^[6]:该量表用于评估患者呼吸困难程度,0分为轻度呼吸困难,1分为中度呼吸困难,2~4分为重度呼吸困难。(4)医院焦虑抑郁量表(hospital anxiety and depression scale, HAD)^[7]:量表共包含14个条目,焦虑及抑郁分别计分,所得分数相加为总分,总分0~7分为无症状,8~10分为症状可疑,11~21分为肯定存在症状。(5)6 min 步行试验(six-minute walk test, 6 MWT)^[8]:6 min 步行距离<150 m 提示患者有重度运动功能障碍,150~425 m 提示患者出现中度运动功能障碍,>425 m 属于轻度运动功能障碍。(6)医学应对方式问卷(medical coping modes questionnaire, MCMQ)^[9]:量表包括面对、回避及屈服三个维度,共20个条目,各条目得分1~4分,各维度项目均得分越高表示个体更倾向于采用这种应对方式。(7)中文版死亡态度描绘(death attitude profile-revised, DAP-R)^[10]量表:量表包括死亡恐惧、死亡逃避、自然接受、趋近接受、逃离接受5个维度,其中死亡恐惧、死亡逃避为负向态度,自然接受、趋近接受及逃离接受为正向态度,各问题均采用Likert 5级计分法,各维度得分以平均分表示,得分越高,被调查者的死亡态度越倾向此维度,各维度的Cronbach's α 系数为0.836~0.906。

1.2.3 相关定义及检测指标 (1)BMI<18.50 kg/m² 为体质量过轻,18.50~24.00 kg/m² 为正常,>24.00 kg/m² 为超重;(2)吸烟:每天至少1支烟持续1年以上者即可定义为吸烟;(3)肺间质性纤维化-年龄-肺功能(interstitial lung disease-gender-age-physiology, ILD-GAP)指数^[11]评估疾病严重程度,评估项目包括肺间质性纤维化亚型、性别、年龄、肺功能,总得分0~8分,得分越高,疾病严重程度越高;(4)采用日本Chestac-35F肺功能检测仪测量DLCO、FEV1、FVC。其中DLCO<40%为重度弥散功能障碍,40%~60%为中度弥散功能障碍,>60%为正常或轻度弥散功能障碍;FEV1/FVC≤70%为异常,>70%为

正常。FVC 测量值>80%为正常,60%~80%为轻度异常,40%~60%为中度异常。

1.3 统计学处理

采用SPSS 19.0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,采用 t 检验;计数资料用例数(百分率)表示,采用 χ^2 检验。采用Pearson线性相关分析法分析老年肺间质纤维化患者生活质量与死亡态度之间的相关性,采用二元logistic回归模型分析影响老年肺间质纤维化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 老年组及非老年组肺间质纤维化患者临床特征及生活质量比较

老年组年龄,合并高血压、糖尿病、冠心病比例,病程以及ILD-GAP指数均高于非老年组,文化程度及cATAQ-IPF量表总得分均低于非老年组,差异均有统计学意义($P<0.05$;表1)。

2.2 老年肺间质纤维化患者生活质量 cATAQ-IPF 量表调查结果

老年肺间质纤维化患者cATAQ-IPF量表总得分(264.64±36.78)分,老年肺间质纤维化患者ATAQ-IPF量表受损最严重的三个维度分别是呼吸困难、死亡敏感、社交活动,受损相对最轻的维度是人际关系(表2)。

2.3 影响老年肺间质纤维化患者生活质量的单因素分析

将cATAQ-IPF量表总得分>平均分的老年肺间质纤维化患者纳为生活质量受损组,得分≤平均分者作为对照组。统计发现,生活质量受损组与对照组的年龄、性别、家庭月收入、6MWT、DLCO、是否服用激素等资料比较,差异无统计学意义;而两组有无配偶、病程、ILD-GAP指数、FVC、mMRC、焦虑、抑郁以及医学应对方式等资料比较,差异有统计学意义($P<0.05$;表3)。

2.4 影响老年肺间质纤维化患者生活质量的多因素分析

将老年间质性纤维化患者生活质量作为因变量(Y ,cATAQ-IPF量表总得分>平均分=0,cATAQ-IPF量表总得分≤平均分=1),单因素分析中 $P<0.2$ 的指标及文献提示有可能有影响的指标作为自变量(赋值说明见表4),行二元logistic多因素回归分析,结果提示病程、ILD-GAP指数、FVC、mMRC、焦虑、抑郁是影响老年肺间质纤维化患者生活质量的危险因素,而有配偶及医学应对方式是其生活质量的保护因素($P<0.05$;表5)。

表 1 老年组及非老年组肺间质纤维化患者临床特征及生活质量比较

Table 1 Comparison of clinical characteristics and quality of life between elderly and non-elderly patients with pulmonaryinterstitial fibrosis				
Item	Elderly group (n=220)	Non-elderly group (n=150)	t/χ^2	P value
Age(years, $\bar{x}\pm s$)	78.78±13.37	51.47±10.48	20.999	<0.001
Gender[n(%)]			0.027	0.869
Male	170(77.27)	117(78.00)		
Female	50(22.73)	33(22.00)		
Education level[n(%)]			15.526	<0.001
Primary school or below	66(30.00)	19(12.67)		
Middle school	89(40.45)	71(47.33)		
Junior college or above	65(29.55)	60(40.00)		
Family monthly income [n(%)]			3.930	0.140
<3 000 yuan	63(28.64)	31(20.67)		
3 000–5 000 yuan	87(39.54)	59(39.33)		
>5 000 yuan	70(31.82)	60(40.00)		
BMI[n(%)]			4.064	0.131
<18.5 kg/m ²	78(35.46)	55(36.67)		
18.5–23.9 kg/m ²	115(52.27)	86(57.33)		
≥23.9 kg/m ²	27(12.27)	9(6.00)		
History of smoking[n(%)]	121(55.00)	80(53.33)	0.100	0.752
Respiratory associated symptoms [n(%)]	182(82.73)	125(83.33)	0.023	0.879
Hypertension[n(%)]	63(28.64)	16(10.67)	17.151	<0.001
Diabetes mellitus[n(%)]	43(19.55)	10(6.67)	12.054	<0.001
Coronary heart disease[n(%)]	41(18.64)	7(4.67)	15.417	<0.001
Dyslipidemia[n(%)]	18(8.18)	10(6.67)	0.293	0.588
Disease course[n(%)]			8.632	0.013
<1 year	143(65.00)	113(75.33)		
1–5 years	47(21.36)	30(20.00)		
>5 years	30(13.64)	7(4.67)		
Disease type[n(%)]			0.151	0.698
SPF	72(32.73)	52(34.67)		
IPF	148(67.27)	98(65.33)		
ILD-GAP index[n(%)]			5.451	0.020
0–3 points	152(69.09)	120(80.00)		
≥4 points	68(30.91)	30(20.00)		
Use of hormone therapy[n(%)]	184(83.64)	131(87.33)	0.963	0.326
cATAQ-IPF (points, $\bar{x}\pm s$)	264.64±36.78	216.74±40.13	11.851	<0.001

BMI: body mass index; SPF: secondary pulmonary fibrosis; IPF: idiopathic pulmonary fibrosis; ILD-GAP: interstitial lung disease-gender-age-physiology; cATAQ-IPF: Chinese version of a tool to assess quality of life in idiopathic pulmonary fibrosis.

表 2 老年肺间质纤维化患者生活质量 cATAQ-IPF 量表调查结果

Table 2 Survey results of quality of life cATAQ-IPF scale in elderly patients with pulmonary interstitial fibrosis (points, $\bar{x}\pm s$)			
Dimension	Total scale	Average scale	Ranking
Cough	18.72±2.74	0.62±0.21	11
Dyspnea	21.84±4.37	0.87±0.27	1
Planning	19.03±3.46	0.63±0.18	10
Sleep	19.87±2.98	0.66±0.19	9
Death sensitivity	20.66±3.85	0.83±0.22	2
Fatigue	18.43±3.33	0.74±0.17	7
Emotion	26.74±4.05	0.76±0.23	6
Social activity	24.63±4.06	0.82±0.23	3
Economic status	23.14±3.63	0.77±0.23	5
Independence	19.46±2.98	0.78±0.22	4
Sexual life	17.01±3.04	0.68±0.19	8
Interpersonal relationship	16.68±2.34	0.56±0.13	13
Treatment	18.43±2.75	0.61±0.16	12

表 3 影响老年肺间质纤维化患者生活质量的单因素分析
Table 3 Univariate analysis of quality of life in elderly patients with pulmonary interstitial fibrosis [n(%)]

Factor	Impaired QOF group (n=125)	Control group (n=95)	χ^2	P value
Age			1.930	0.165
60–80 years	80(64.00)	52(54.74)		
≥80 years	45(36.00)	43(45.26)		
Gender			3.298	0.069
Male	91(72.80)	79(83.16)		
Female	34(27.20)	16(16.84)		
Education level			1.610	0.447
Primary school or below	40(32.00)	26(27.37)		
Middle school	46(36.80)	43(45.26)		
Junior college or above	39(31.20)	26(27.37)		
Family monthly income			2.820	0.244
<3 000 yuan	35(28.00)	28(29.47)		
3 000–5 000 yuan	55(44.00)	32(33.68)		
>5 000 yuan	35(28.00)	35(36.84)		
Presence of spouse	92(73.60)	89(93.68)	14.929	<0.001
Disease course			16.113	<0.001
<1 year	69(55.20)	74(77.90)		
1–5 years	30(24.00)	17(17.89)		
>5 years	26(20.80)	4(4.21)		
ILD-GAP index			13.261	<0.001
0–3 points	74(59.20)	78(82.11)		
≥4 points	51(40.80)	17(17.89)		
6MWT			3.939	0.140
<150 m	50(40.00)	30(31.58)		
150–425 m	65(52.00)	50(52.63)		
>425 m	10(8.00)	15(15.79)		
DLCO			0.920	0.631
<40%	55(44.00)	36(37.90)		
40%–60%	48(38.40)	39(41.05)		
>60%	22(17.60)	20(21.05)		
FVC			19.097	<0.001
40%–60%	33(26.40)	10(10.53)		
61%–80%	60(48.00)	35(36.84)		
>80%	32(25.60)	50(52.63)		
mMRC			41.486	<0.001
0–1 points	30(24.00)	64(67.37)		
2–4 points	95(76.00)	31(32.63)		
Depression	60(48.00)	19(20.00)	18.388	<0.001
Anxiety	40(32.00)	6(6.32)	21.532	<0.001
Medical coping style			26.091	<0.001
Negative	110(88.00)	55(57.89)		
Positive	15(12.00)	40(42.11)		
Whether to take hormones	107(85.60)	77(81.05)	0.816	0.366
BMI			0.444	0.801
<18.5 kg/m ²	42(33.60)	36(37.89)		
18.5–23.9 kg/m ²	67(53.60)	48(50.53)		
≥24.0 kg/m ²	16(12.80)	11(11.58)		
History of smoking	70(56.00)	51(53.68)	0.117	0.732
Respiratory associated symptoms	105(84.00)	77(81.05)	0.328	0.567
Hypertension	40(32.00)	23(24.21)	1.603	0.206
Diabetes mellitus	27(21.60)	16(16.84)	0.777	0.378
Coronary heart disease	26(20.80)	15(15.79)	0.894	0.344
Dyslipidemia	11(8.80)	7(7.37)	0.147	0.701
Disease type			1.408	0.235
SPF	45(36.00)	27(28.42)		
IPF	80(64.00)	68(71.58)		

QOF: quality of life; ILD-GAP: interstitial lung disease-gender-age-physiology; 6MWT: six-minute walk test; DLCO: diffusion capacity for carbon monoxide of the lung; FVC: forced vital capacity; mMRC: modified medical research council scale; BMI: body mass index; SPF: secondary pulmonary fibrosis; IPF: idiopathic pulmonary fibrosis.

表 4 多因素分析中自变量赋值表

Table 4 Assignment table of independent variables in multivariable analysis

Variable	Assignment form
Age	60–79 years = 0, ≥80 years = 1
Gender	Male = 0, Female = 1
Spouse	No = 0, Yes = 1
Family monthly income	>5 000 yuan = 1, 3 000–5 000 yuan = 2, <3 000 yuan = 1
Diseasecourse	< 1 year = 1, 1–5 years = 2, >5 years = 3
ILD-GAP index	0–3 = 0, ≥4 = 1
6MWT	> 425 m = 1, 150–425 m = 2, <150 m = 3
DLCO	>60% = 1, 40%–60% = 2, <40% = 3
FVC	> 80% = 1, 60%–80% = 2, 40%–60% = 3
mMRC	0–1 point = 0, 2–4 points = 1
Anxiety	No = 0, Yes = 1
Depression	No = 0, Yes = 1
Medical coping style	Negative = 0, Positive = 1

ILD-GAP: interstitial lung disease-gender-age-physiology; 6 MWT: six-minute walk test; DLCO: diffusion capacity for carbon monoxide of lung; FVC: forced vital capacity; mMRC: modified medical research council scale.

表 5 影响老年肺间质纤维化患者生活质量的多因素分析
Table 5 Multivariate analysis of quality of life in elderly patients with pulmonary interstitial fibrosis

Factor	β	SE	Wald χ^2	OR	95%CI	P value
Age	0.643	0.393	2.677	1.902	0.880–4.109	0.103
Gender	1.136	0.673	2.849	3.114	0.833–11.647	0.092
Family monthly income						
<3 000 yuan	0.581	0.339	2.937	1.788	0.920–3.474	0.087
3 000–5 000 yuan	0.426	0.231	3.401	1.531	0.974–2.408	0.066
>5 000 yuan	–	–	–	1.000	–	–
Having a spouse	–0.479	0.136	12.405	0.619	0.474–0.809	<0.001
Disease course						
<1 year	–	–	–	1.000	–	–
1–5 years	0.793	0.477	2.764	2.210	0.868–5.629	0.097
>5 years	0.843	0.265	10.120	2.323	1.382–3.906	0.002
ILD-GAP index	1.315	0.543	5.865	3.725	1.285–10.797	0.016
6MWT						
<150 min	0.839	0.522	2.583	2.314	0.832–6.437	0.109
150–425 min	0.541	0.311	3.026	1.718	0.934–3.160	0.083
>425 min	–	–	–	1	–	–
DLCO						
<40%	0.713	0.379	3.539	2.040	0.971–4.288	0.061
40%–60%	0.434	0.268	2.622	1.543	0.913–2.610	0.106
>60%	–	–	–	1	–	–
FVC						
>80%	–	–	–	1.000	–	–
60%–80%	0.473	0.263	3.235	1.605	0.958–2.687	0.073
40%–60%	0.877	0.236	13.809	2.404	1.514–3.817	<0.001
mMRC	0.743	0.154	23.277	2.102	1.555–2.843	<0.001
Depression	0.476	0.183	6.766	1.610	1.124–2.304	0.010
Anxiety	0.573	0.224	6.544	1.774	1.143–2.751	0.011
Medical coping style	–0.716	0.163	19.295	0.489	0.355–0.673	<0.001

ILD-GAP: interstitial lung disease-gender-age-physiology; 6 MWT: six-minute walk test; DLCO: diffusion capacity for carbon monoxide of the lung; FVC: forced vital capacity; mMRC: modified medical research council scale. –: no datum.

2.5 老年肺间质纤维化患者死亡态度得分分析

老年肺间质纤维化患者死亡态度中自然接受维度得分最高,为(3.27±0.46)分;其次是死亡恐惧与死亡逃避,分别为(3.13±0.62)分和(3.08±0.51)分;趋近接受与逃离接受得分相对较低,分别为(2.64±0.43)分和(2.52±0.37)分。

2.6 老年肺间质纤维化患者生活质量及死亡态度的相关性分析

相关性分析提示,老年肺间质纤维化患者生活质量得分与其死亡恐惧及死亡逃避之间呈正相关,与自然接受之间呈负相关($P<0.05$;表6)。

表 6 老年肺间质纤维化患者生活质量与死亡态度之间的相关性分析

Table 6 Correlation analysis between quality of life and death attitude in elderly patients with pulmonary interstitial fibrosis

Dimension	Quality of life	
	r	P value
Death fear	0.246	0.036
Death avoidance	0.233	0.043
Natural acceptance	–0.278	0.021
Approaching acceptance	–0.165	0.156
Escape acceptance	–0.173	0.132

3 讨论

对比发现,与非老年肺间质纤维化患者相比,老年组患者基础性疾病更多,肺间质纤维化病程更长,病情更为严重,且其生活质量得分更低。基于以上调查,提示老年肺间质纤维化患者的生存质量应受到额外的关注。本研究利用 cATAQ-IPF 量表进行生活质量评估,结果发现老年组患者呼吸困难、死亡敏感及社交活动等维度受损最严重,而人际关系维度受损最轻。这提示呼吸困难症状对患者生活质量造成的不良影响最大,且疾病带来的相关症状也在较大程度上限制了患者社交活动,降低其社交维度的生活质量;此外,老年肺间质纤维化患者死亡敏感维度得分也偏高。

进一步行二元 logistic 多因素回归分析发现,除病程、ILD-GAP 指数、FVC、mMRC 等疾病相关指标外,焦虑、抑郁、有无配偶及医学应对方式也是影响老年肺间质纤维化患者生活质量的相关因素。提示患者生活质量受到疾病因素与心理因素的共同影响,分析其原因如下。(1)疾病因素。肺间质纤维化是一种慢性进展性疾病,且尚缺乏有效治疗方法,故随着病程的延长,患者临床症状加重,劳动力下降,加上反复入院治疗带来的经济开销及身心痛苦

体验,病程越长,患者生活质量越差。ILD-GAP 指数是综合了性别、疾病亚型、年龄、肺功能等指标,能有效反映患者疾病严重程度,故 ILD-GAP 指数得分越高,患者生活质量越差。FVC 是反映患者呼吸道通畅度的指标,FVC 越高,提示呼吸道通气功能越差,FVC 降低会引起低氧血症,加剧呼吸困难程度,进而降低生活质量。mMRC 是反映呼吸困难程度的指标,呼吸困难将引起胸痛、乏力、睡眠障碍等临床症状,还会导致缺氧与精神紧张,降低生活质量;与赵希平等^[13]研究结果相似。基于以上发现,提示临床应着重对肺间质纤维化病程长、病情严重,以及存在 FVC 明显下降、呼吸困难症状患者生活质量的关注,从应用多手段改善患者临床症状、减缓疾病进展出发,改善患者生活质量。(2)心理因素。蔡萧君等^[14]研究结果表明肺间质纤维化患者存在明显的焦虑、抑郁症状。而焦虑、抑郁情绪将降低患者睡眠质量,增加不良情绪,不利于疾病的发展,本研究证实焦虑抑郁影响老年组患者生活质量。积极的应对方式有助于患者心态的调节,帮助其以更乐观更积极的态度面对疾病与生活,进而提高生活质量。(3)配偶。有配偶的老年肺间质纤维化患者生活质量更高,这与配偶的存在能给予患者更细致的生活照顾与精神支持相关^[15]。以上研究表明,除了积极缓解患者呼吸困难症状、改善患者通气功能外,重视患者不良情绪与消极心理的干预,如积极开展心理讲座,传授自我心理疏导方式、改变患者疾病消极应对方式、搭建病友分享平台等,在提高患者生活质量中也有着重要的意义。

介于研究发现老年肺间质纤维化患者死亡敏感维度得分较高,本研究对老年肺间质纤维化患者的死亡态度进行了调查,结果显示,患者死亡态度中自然接受维度得分最高,其次是死亡恐惧与死亡逃避。而相关性分析发现,患者生活质量得分与其死亡恐惧及死亡逃避之间呈正相关,与自然接受之间呈负相关。提示患者生活质量还与其死亡态度之间密切相关,建议临床增加针对死亡教育的相关心理辅导内容,帮助患者以平和的心态面对疾病与死亡,提高生活质量。

综上,老年肺间质纤维化患者生活质量下降,其呼吸困难、死亡敏感及社交活动维度受损程度相对较重;而除疾病相关因素外,心理因素如焦虑、抑郁、应对方式、死亡态度等对其生活质量均有影响,建议临床增加对患者心理健康的关注与干预。

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