·临床研究·

老年非小细胞肺癌患者术后生活质量的纵向研究

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【摘 要】 目的 纵向研究老年非小细胞肺癌(NSCLC)患者术后生活质量,并分析其影响因素。**方法** 通过便利抽样法对行根治术治疗的老年NSCLC患者术后1个月行一般情况及生活质量问卷调查,共发放190份问卷,收回有效问卷182份,以术后1个月肺癌患者生活质量测定量表(FACT-L)总分分组,分为生活质量良好组(≥平均分)及生活质量不良组(<平均分);并对患者跟踪随访,在术后3、6个月时再次行生活质量调查。采用FACT-L调查患者生活质量。采用SPSS 24.0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、单因素重复测量方差分析及 χ^2 检验。采用logistic回归分析评估老年NSCLC患者术后1个月生活质量不良的影响因素。**结果** 182例老年NSCLC患者在术后3个月时有3例患者不配合复查或失访,未获得二次生活质量调查,予以剔除,术后6个月时有8例患者失访,获得171份有效问卷。随着术后时间的延长,老年NSCLC患者各维度FACT-L评分及其总分逐渐升高,差异有统计学意义($P<0.05$)。生活质量不良组吸烟史占比、中转开胸率、术后肺部并发症发生率及癌因性疲乏率均高于生活质量良好组($P<0.05$)。logistic回归分析显示,吸烟史($OR=3.074$,95%CI 1.461~6.468)、中转开胸($OR=2.377$,95%CI 1.099~5.145)、术后肺部并发症($OR=4.088$,95%CI 2.193~7.621)、癌因性疲乏($OR=3.016$,95%CI 1.535~5.927)均为老年NSCLC患者术后1个月生活质量不良的危险因素($P<0.05$)。171例老年NSCLC患者中,术后1个月有癌因性疲乏者术后6个月FACT-L总分明显低于无癌因性疲乏者($P<0.05$)。**结论** 有吸烟史、中转开胸、术后肺部并发症及癌因性疲乏的老年NSCLC患者术后早期生活质量较差,但随着术后时间的延长,患者生活质量可逐渐提升,癌因性疲乏可对患者术后生活质量产生持续不良影响。

【关键词】 老年人;非小细胞肺癌;根治术;生活质量;纵向研究;影响因素
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Postoperative quality of life in elderly patients with non-small cell lung cancer: a longitudinal study

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【Abstract】 Objective To make a longitudinal study on postoperative quality of life (QOL) in elderly patients with non-small cell lung cancer (NSCLC) and analyze its influencing factors. **Methods** Convenience sampling was used to subject the elderly NSCLC patients at 1 month after radical resection. A total of 190 questionnaires were distributed, and 182 valid ones were collected for their general data and QOL. According to the total score of functional assessment of cancer therapy-lung (FACT-L), the patients were divided into good (≥ average score) and poor (< average score) QOL groups. Then the patients were followed up, and their QOL was investigated again at 3 and 6 months after surgery. SPSS statistics 24.0 was employed for data analysis. Student's t test, one-way repeated measures analysis of variance or *Chi*-square test was adopted for intergroup comparison depending on different data type. Logistic regression analysis was performed to identify the influencing factors for poor QOL in elderly NSCLC patients at 1 month after surgery. **Results** Among the 182 elderly NSCLC patients, 3 patients were excluded because of no second survey for QOL due to not cooperating with the reexamination or lost to follow-up at 3 months after surgery. Another 8 patients were lost to follow-up at 6 months after surgery, and only 171 valid questionnaires were obtained. With the elapse of postoperative time, the scores of dimensions and total score of FACT-L were gradually increased in elderly patients with NSCLC ($P<0.05$). The proportion of smoking history, rate of conversion to thoracotomy, incidence of postoperative pulmonary complications and rate of cancer-related fatigue were significantly higher in the poor QOL group than the good QOL group ($P<0.05$). Logistic regression analysis showed that smoking history ($OR=3.074$, 95%CI 1.461-6.468), conversion to thoracotomy ($OR=2.377$, 95%CI 1.099-5.145), postoperative pulmonary complications ($OR=4.088$, 95%CI 2.193-7.621) and cancer-related fatigue ($OR=3.016$, 95%CI 1.535-5.927) were risk factors for poor QOL in the elderly

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patients with NSCLC at 1 month after surgery ($P<0.05$). Among 171 elderly NSCLC patients, the total score of FACT-L at 6 months after surgery was significantly lower in those with cancer-related fatigue at 1 month after surgery than those without ($P<0.05$). **Conclusion** The elderly NSCLC patients with smoking history, conversion to thoracotomy, postoperative pulmonary complications and cancer-related fatigue are prone to poor QOL in the early postoperative period, but with the elapse of postoperative time, their QOL can be gradually improved. Cancer-related fatigue can have a continuous adverse effect on the postoperative QOL.

【Key words】 aged; non-small cell lung cancer; radical resection; quality of life; longitudinal study; influencing factors

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肺癌是全球常见恶性肿瘤,其中80%为非小细胞肺癌(non-small cell lung cancer, NSCLC),具有发病率高、预后差等特点;有调查指出[1],NSCLC患者总体5年生存率为55.6%,其中行根治术治疗的患者总体生存率为58.2%。但术后伴随疼痛、肺功能下降等症状表现,可影响患者生存质量[2]。另外,老年患者NSCLC基础疾病多、身体器官功能退化,术后恢复缓慢,生活质量可能更差[3]。目前,对于老年NSCLC患者生活质量的研究以横断面调查为主,但患者术后生理、心理、社会等多方面的健康状况可能随时间呈纵向变化[4]。基于此,本研究通过对老年NSCLC患者行生活质量横断面问卷调查,观察患者术后生活质量的纵向变化,报道如下。

1 对象与方法

1.1 研究对象

通过横断面研究使用便利抽样法选取2022年6月至2023年5月在首都医科大学附属北京朝阳医院行肺癌根治术治疗的老年NSCLC患者为调查对象,在术后1个月时发放调查问卷190份,收回有效问卷182份(95.79%)。

纳入标准:年龄≥60岁;经组织细胞学检查确诊为NSCLC,肿瘤局限于单个肺炎,未侵及主支气管;行择期胸腔镜单肺叶切除术+淋巴结清扫治疗;术后存活时间≥1个月;术后1个月意识清醒,沟通能力良好;对本调查知情,且签署知情同意书。排除标准:既往接受肺部手术或介入治疗;术后6个月内接受放化疗或靶向治疗;合并其他恶性肿瘤或血液系统疾病等威胁生命健康;术后1个月卡氏评分不足60分;合并精神疾病;高血压、冠心病等基础疾病处于急性发作期或难以控制。

1.2 方法

1.2.1 横断面调查 在术后1个月行初次问卷调查,在调查的前2~3 d电话通知患者及其家属,指导患者门诊复查,并在复查当日选择安静的诊室面对面问卷调查。问卷包括一般情况调查表、癌因性疲乏调查表、生活质量调查表。癌因性疲乏调查使用癌症疲乏量表评估,该量表由张凤玲等[5]编译为中文版,总得分≥18分被认为存在癌因性疲乏症状。生活质量调查表采用肺癌患者生活质量测定量表(functional assessment of cancer therapy-lung, FACT-L),中文版FACT-L由万崇华等[6]在2000年研制,得分越高,生活质量越好。将182例患者以术后1个月FACT-L总分平均分分组,分为生活质量良好组(≥平均分)及生活质量不良组(<平均分)。

1.2.2 纵向研究 对患者持续跟踪随访,在术后3、6个月时提前通知患者门诊复查。

1.3 统计学处理

采用SPSS 24.0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,多时间点的比较采用单因素重复测量方差分析,两两比较采用t检验;计数资料用例数(百分率)表示,采用χ^2检验。采用logistic回归分析评估老年NSCLC患者术后1个月生活质量不良的影响因素。$P<0.05$为差异有统计学意义。

2 结 果

2.1 老年NSCLC患者术后生活质量纵向分析

182例老年NSCLC患者在术后3个月时有3例患者不配合复查或失访,未获得二次生活质量调查,予以剔除,术后6个月时有8例患者失访,获得171份有效问卷。随着术后时间的延长,老年NSCLC患者各维度FACT-L评分及其总分逐渐升高,差异有统计学意义($P<0.05$;表1)。

2.2 术后1个月生活质量良好与不良的老年NSCLC患者一般资料比较

生活质量不良组吸烟史占比、中转开胸率、术后肺部并发症发生率及癌因性疲乏率均高于生活质量良好组,差异有统计学意义($P<0.05$);其余指标比较,差异无统计学意义(表2)。

表 1 术后不同时间点 FACT-L 评分比较

Table 1 Comparison of FACT-L scores at different time points after surgery (points, $\bar{x}\pm s$)

Time point	n	Physiological status	Social family function	Emotional status	Functional status	Lung cancer specific module	Total score
1 month after surgery	182	20.87±2.95	18.52±2.83	18.97±3.11	15.49±2.76	25.26±4.28	99.11±6.12
3 months after surgery	179	22.24±3.06*	19.89±2.91*	20.43±3.06*	16.43±2.80*	26.78±4.03*	105.77±8.93*
6 months after surgery	171	25.40±2.83*#	20.75±3.04*#	22.19±2.93*#	18.07±3.11*#	29.55±4.58*#	115.96±9.02*#
F		108.603	26.192	49.641	35.811	44.922	192.310
P value		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

FACT-L: functional assessment of cancer therapy-lung. Compared with 1 month after surgery, * $P<0.05$; compared with 3 months after surgery, # $P<0.05$.

表 2 两组患者一般资料比较

Table 2 Comparison of general data between two groups

Item	Poor QOF group ($n=88$)	Good QOF group ($n=94$)	χ^2/t	P value
Male/female	49/39	50/44	0.114	0.736
Age[n(%)]			0.031	0.860
60-70 years	56(63.64)	61(64.89)		
>70 years	32(36.36)	33(35.11)		
Smoking history[n(%)]	53(60.23)	42(44.68)	4.403	0.036
Chronic obstructive pulmonary disease[n(%)]	19(21.59)	13(13.83)	1.889	0.169
Chronic pulmonary heart disease[n(%)]	3(3.41)	1(1.06)	0.328	0.567
Hypertension[n(%)]	18(20.45)	17(18.09)	0.164	0.685
Diabetes mellitus[n(%)]	4(4.55)	5(5.32)	0.010	0.919
Coronary heart disease[n(%)]	3(3.41)	4(4.26)	0.008	0.929
Education level[n(%)]			2.585	0.275
Primary school and junior high school	19(21.59)	17(18.09)		
Technical secondary school and senior high school	55(62.50)	53(56.38)		
Junior college and above	14(15.91)	24(25.53)		
Pathological type[n(%)]			0.517	0.772
Adenocarcinoma	65(73.86)	73(77.66)		
Squamous cell carcinoma	14(15.91)	14(14.89)		
Others	9(10.23)	7(7.45)		
Clinical staging[n(%)]			5.601	0.061
Ⅰ	29(32.95)	38(40.43)		
Ⅱ	52(59.09)	55(38.51)		
Ⅲ	7(7.95)	1(1.06)		
Tumor diameter(cm, $\bar{x}\pm s$)	3.22±0.58	3.09±0.54	1.566	0.119
Conversion to thoracotomy[n(%)]			4.640	0.031
Yes	8(9.09)	1(1.06)		
No	80(90.91)	93(98.94)		
Postoperative pulmonary complications[n(%)]			5.062	0.024
Yes	15(17.05)	6(6.38)		
No	73(82.95)	88(93.62)		
Cancer-related fatigue[n(%)]			4.770	0.029
Yes	65(73.86)	55(58.51)		
No	23(26.14)	39(41.49)		

QOF: quality of life.

2.3 老年 NSCLC 患者术后 1 个月生活质量不良的影响因素分析

以生活质量不良为因变量,上述有统计学意义的指标为自变量赋值(无=0,有=1),带入 logistic 回归方程,结果显示,吸烟史、中转开胸、术后肺部并发症、癌因性疲乏均为老年 NSCLC 患者术后 1 个月生活质量不良的危险因素($P<0.05$;表 3)。

表3 老年NSCLC患者生活质量不良的logistic回归分析

Table 3 Logistic regression analysis of poor quality of life in elderly NSCLC patients

Factor	β	*SE*	*Wald* χ^2	*P* value	*OR*	95%*CI*
Smoking history	1.123	0.422	7.082	0.008	3.074	1.461-6.468
Conversion to thoracotomy	0.866	0.341	6.450	0.011	2.377	1.099-5.145
Postoperative pulmonary complications	1.408	0.443	10.102	0.001	4.088	2.193-7.621
Cancer-related fatigue	1.104	0.381	8.396	0.004	3.016	1.535-5.927

NSCLC: non-small cell lung cancer.

2.4 危险因素对术后6个月生活质量的影响分析

171例老年NSCLC患者中,有癌因性疲乏者术后6个月FACT-L总分明显低于无癌因性疲乏者($P<0.05$;表4)。

表4 危险因素对术后6个月FACT-L总分的影响

Table 4 Influence of risk factors on total score of FACT-L at 6 months after surgery

($n=171$, points, $\bar{x}\pm s$)

Item	FACT-L	*t*	*P* value
Smoking history		1.454	0.148
Yes	115.01±9.30		
No	117.05±8.98		
Conversion to thoracotomy		1.951	0.053
Yes	113.36±9.25		
No	116.09±8.99		
Postoperative pulmonary complications		1.194	0.234
Yes	113.70±9.31		
No	116.26±8.97		
Cancer-related fatigue		15.298	<0.001
Yes	108.35±10.12		
No	132.45±8.26		

FACT-L: functional assessment of cancer therapy-lung.

3 讨 论

研究指出,生活质量评分低于均值的癌症患者,死亡风险将升高69%[7,8],故评估癌症患者生活质量对预后观察有重要意义。有学者指出,NSCLC患者的心理及生理需求随术后时间的不同而发生变化[9]。本研究发现,老年NSCLC患者术后各维度FACT-L评分及其总分均随时间的延长而逐渐升高,提示患者术后生活质量可逐渐提升;手术创伤虽然会给患者带来身心痛苦,但经对症处理、康复锻炼等措施,患者在术后3~6个月时身心状况逐渐改善,生活质量随之提升[10]。

吸烟不仅是肺癌公认的高危因素,也是影响肺癌预后的重要因素[11]。本研究发现,吸烟史也是老年NSCLC患者术后1个月生活质量不良的危险因素。分析其原因为有吸烟史的患者上皮纤毛运动能力低下,术后排痰能力差,肺部症状较重,严重影响日常生活,故生活质量不良[12]。胸腔镜肺叶切除术是NSCLC的主流术式,中转开胸意味着手术创伤增加、手术时间延长、手术风险升高,影响患者术后康复[13]。本研究结果显示,中转开胸也是老年NSCLC患者术后1个月生活质量不良的危险因素,与目前研究[14]一致。此外,胸腔镜肺叶切除术造成的肺炎、肺不张等肺部并发症可造成患者术后疼痛增加、住院时间延长,还能引起死亡风险升高[15]。本研究中,术后肺部并发症也是造成患者术后1个月生活质量不良的危险因素。因此,对于老年NSCLC患者,完善围术期肺部并发症管理工作,降低肺部并发症发生率,对改善生活质量可能有积极作用。

另外,癌因性疲乏是NSCLC患者症状群最常见的症状,受身心压力、社会功能等的影响,患者在治疗期间可出现持续的疲劳,影响生存质量[16]。本研究结果也显示,癌因性疲乏也是导致术后1个月生活质量不良的危险因素,与上述文献[16]一致。不仅如此,术后1个月有癌因性疲乏者术后6个月FACT-L总分明显低于无癌因性疲乏者,吸烟史、中转开胸、术后肺部并发症对术后6个月FACT-L总分无影响,提示癌因性疲乏可对患者生活质量产生持续影响。癌因性疲乏主要受心理及社会等因素的影响,临床可通过心理干预及社会支持等预防对策,减轻老年NSCLC患者术后癌因性疲乏,改善患者生活质量。

综上,老年NSCLC患者术后生活质量可逐渐提升,但吸烟史、中转开胸、术后肺部并发症、癌因性疲乏可增加患者术后1个月生活质量不良风险,其中癌因性疲乏还能影响患者术后6个月的生活质量。

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