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# 肺癌根治术后并发症危险因素分析及其生活质量变化研究 \*

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**摘要 目的:**探讨肺癌根治术后并发症的危险因素,并分析其生活质量的变化。**方法:**纳入我院2018年9月~2020年7月收治的行肺癌根治术患者104例,对患者的临床资料进行回顾性分析。根据患者术后3个月的并发症发生情况,分成并发症组(n=32)和非并发症组(n=72),分析肺癌根治术后并发症发生的影响因素,利用癌症病人生活质量测定量表(QLQ-C30)评估患者术前及术后3个月的生活质量。**结果:**肺癌根治术后32例出现并发症,其中切口感染6例,肺炎7例,肺不张9例,心律失常6例,脓胸4例。并发症组年龄 $\geq 60$ 岁、烟龄 $\geq 10$ 年、传统开胸术、慢性阻塞性肺疾病史人数占比高于非并发症组( $P<0.05$ )。多因素 Logistic 回归分析显示,年龄 $\geq 60$ 岁(OR=2.978, 95%CI: 1.415-6.267)、烟龄 $\geq 10$ 年(OR=3.847, 95%CI: 1.869-7.918)、传统开胸术(OR=3.065, 95%CI: 1.544-6.084)、慢性阻塞性肺疾病史(OR=2.848, 95%CI: 1.481-5.477)是肺癌根治术后患者发生并发症的危险因素( $P<0.05$ )。非并发症组术后3个月的总体生活质量量表、角色功能、躯体功能、情绪功能、社会功能评分高于术前与并发症组,且恶心呕吐、疲乏、疼痛、便秘、呼吸困难、食欲下降、睡眠障碍、腹泻评分较术前与并发症组明显降低( $P<0.05$ )。**结论:**肺癌根治术后并发症的发生主要与患者年龄、烟龄、手术方式、慢性阻塞性肺疾病史有关,且并发症对患者术后生活质量影响较大。

**关键词:**肺癌根治术;并发症;危险因素;生活质量

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## Analysis of Risk Factors of Complications after Radical Operation of Lung Cancer and Study on Changes of Life Quality\*

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**ABSTRACT Objective:** To explore the risk factors of complications after radical resection of lung cancer, and to analyze the changes in the quality of life. **Methods:** A total of 104 patients undergoing radical resection of lung cancer who were admitted to our hospital from September 2018 to July 2020 were included. The clinical data of the patients were retrospectively analyzed. The patients were divided into complication group(n=32) and non-complication group(n=72) according to their complications 3 months after operation, the influencing factors postoperative complications of radical resection of lung cancer were analyzed, and the quality of life of patients before and 3 months after operation was evaluated using the Quality of life measurement scale for cancer patients (QLQ-C30). **Results:** In 32 cases of complications after radical resection of lung cancer, there were 6 cases of incision infection, 7 cases of pneumonia, 9 cases of atelectasis, 6 cases of arrhythmia and 4 cases of empyema. The proportion of age  $\geq 60$  years, smoking age  $\geq 10$  years, traditional thoracotomy and chronic obstructive pulmonary disease history in the complication group were higher than those in the non-complication group ( $P<0.05$ ). Multivariate Logistic retrospective analysis showed that age  $\geq 60$  years (OR=2.978, 95%CI: 1.415-6.267), smoking age  $\geq 10$  years (OR=3.847, 95%CI: 1.869-7.918), traditional thoracotomy (OR=3.065, 95%CI: 1.544-6.084), chronic obstructive pulmonary disease history (OR=2.848, 95%CI: 1.481-5.477) were risk factors for complications ( $P<0.05$ ). The scores of general quality of life scale, role function, physical function, emotional function and social function in the non-complication group were higher than those in the pre-operative and complication group, and the scores of nausea and vomiting, fatigue, pain, constipation, dyspnea, loss of appetite, sleep disorder and diarrhea were significantly lower than those in the preoperative and complication group ( $P<0.05$ ). **Conclusion:** The incidence of complications after radical resection of lung cancer is mainly related to the patient's age, smoking age, operation mode and chronic obstructive pulmonary disease history, and the complications have a great impact on the quality of life of patients after operation.

**Key words:** Radical resection of lung cancer; Complications; Risk factors; Quality of life

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## 前言

肺癌是临床常见的一种恶性肿瘤,在各类恶性肿瘤中发病率、致死率位居第一位,每年全球新增肺癌病例数高于 200 万,且死亡病例数超过 100 万<sup>[1]</sup>。该病发生机制比较复杂,临床认为是多种因素共同作用的结果,如空气质量、生活习惯、不良饮食、吸烟等,均为肺癌发病诱因<sup>[2,3]</sup>。肺癌根治术是治疗该病的首选方式,在患者无手术禁忌的情况下通常选择手术治疗,将病灶切除,提高生命质量。然而,任何手术方式都不能完全避免并发症发生风险,并发症的发生对患者术后机体功能恢复影响较大,也是导致术后生活质量降低的重要因素<sup>[4,5]</sup>。研究表明,肺癌根治术后的常见并发症包括肺部感染、心律失常、切口感染、肺不张等,若未能及时处理,则会加重病情,甚至危及生命<sup>[6]</sup>。因此,临床及时明确肺癌根治术后并发症的危险因素很有必要,分析并发症对生活质量的影 响,以便尽快给予针对性处理,促进患者机体功能恢复,改善预后。本研究旨在观察肺癌根治术后并发症的危险因素,并分析其生活质量的变化,为这类手术并发症的预防提供依据,报告如下。

## 1 资料与方法

### 1.1 一般资料

纳入我院 2018 年 9 月~2020 年 7 月收治的行肺癌根治术患者 104 例,对患者的临床资料进行回顾性分析。其中男 59 例,女 45 例,年龄 50~75 岁,平均(62.39±10.07)岁;病理类型:腺癌 52 例,鳞癌 41 例,腺鳞癌 11 例;吸烟史:有 63 例,无 41 例;临床分期:Ⅰ期 60 例,Ⅱ期 44 例。

### 1.2 纳入、排除标准

纳入标准:(1)经病理诊断确诊为肺癌;(2)原发性肺癌;(3)行肺癌根治术;(4)临床资料完整。排除标准:(1)同时患其它原发性肿瘤者;(2)已出现远处转移者;(3)凝血功能异常者;(4)术前脑、肝、肾等脏器严重损害者;(5)术前行新辅助化疗、放疗者。

### 1.3 手术方法

所有患者术前均行全面检查,包括心脏彩超、头颅 MRI、胸部 CT 等。在 104 例患者中,行胸腔镜手术 78 例,行传统开胸术 26 例,两组术前均行气管插管全麻。(1)传统开胸术:选择健侧卧位,于侧腋中线行切口,长度约 10 cm,通过肉眼对癌变组织进行观察并切除,待切除完毕,对淋巴结予以清扫,待操作完毕后给予缝合,最后关胸。(2)胸腔镜手术:选择健侧卧位,在腋中线第 6~7 肋间行切口,长度约 1.5 cm,将其作为胸腔镜观察孔,于腋前线第 4 肋间行主操作孔,长度约 3~4 cm,于腋后线第 7~8 肋间行副操作孔,长度为 1.5~2.0 cm。在胸腔镜下对肿瘤进行观察,分析肿瘤大小、部位、淋巴结等情况,将肺牵连钳、肺抓钳插入,反向进行牵拉,若叶间裂分化完全,则经剥离钩分离,利用电凝止血,若分化不完全,则经剥离钩进行分离、解剖,寻求合适层面,将叶间组织切开,操作时对肺门组织予以保护。针对支气管周围淋巴结进行清扫,行电凝止血。采用血管夹将支气管动脉血管夹闭并对支气管行游离,将肺叶切除。选取左侧(5、6、7、8、9、10)、右侧(2、3、4、5、7、8、9、10)区淋巴结行清扫,常规置胸腔引流管,关胸。

### 1.4 观察指标

(1)通过查看病历、查体等方式,收集患者的临床资料,包括性别、年龄、病理类型、吸烟史、烟龄、临床分期、肿瘤直径、手术方式、高血压史、糖尿病史、慢性阻塞性肺疾病史、手术时间、术中出血量、术后住院时间,分析肺癌根治术后并发症发生的影响因素。(2)利用癌症病人生活质量测定量表(Quality of life questionnaire-core 30, QLQ-C30)评估患者术前、术后 3 个月的生活质量。QLQ-C30 评分<sup>[7]</sup>:该量表共计条目 30 个,内含总体生活质量量表、5 个功能角色量表(包括角色功能、躯体功能、情绪功能、社会功能、认知功能)、3 个症状量表(包括恶心呕吐、疲乏以及疼痛)、6 个单项症状(包括便秘、呼吸困难、食欲下降、睡眠障碍、腹泻、精神压力)。其中总体生活质量量表含 2 个条目,每项计 1~7 分,分值越高,生活质量越好,其余条目均计 1~4 分,其中症状项目分值越高,代表症状越重,功能量表分值越高,提示生活质量越好,为了方便统计,经标准计分法将各维度粗分转化成 0~100 分。该量表整体的信度为 0.781,可信度高。所有患者均独立填写量表,若不具备填写能力,则由发放量表人员阅读量表内容,患者独立做出选择。本次发放量表 104 份,回收 104 份,回收成功率 100%。

### 1.5 统计学方法

经 SPSS20.0 软件行数据分析,计数资料用百分比(%)表示,行  $\chi^2$  检验。等级资料的比较,采用秩检验。计量资料以均数±标准差( $\bar{x} \pm s$ )表示,组间比较行成组 t 检验,组内比较行配对样本 t 检验。经多因素 Logistic 回归模型分析肺癌根治术后并发症发生的危险因素。 $P < 0.05$  为差异有统计学意义。

## 2 结果

### 2.1 104 例患者的并发症发生情况

104 例患者中,术后 3 个月有 32 例(30.77%)发生并发症,72 例(69.23%)无并发症,分成并发症组( $n=32$ )和非并发症组( $n=72$ )。32 例并发症患者中,切口感染 6 例(18.75%),肺炎 7 例(21.88%),肺不张 9 例(28.13%),心律失常 6 例(18.75%),脓胸 4 例(12.50%)。

### 2.2 肺癌根治术后并发症发生的单因素分析

并发症组年龄 $\geq 60$ 岁、烟龄 $\geq 10$ 年、传统开胸术、慢性阻塞性肺疾病史人数占比高于非并发症组( $P < 0.05$ ),两组在性别、病理类型、吸烟史、临床分期、肿瘤直径、高血压史、糖尿病史、手术时间、术中出血量、术后住院时间方面比较无差异( $P > 0.05$ ),见表 1。

### 2.3 肺癌根治术后发生并发症影响因素的多因素 Logistic 回归分析

经多因素 Logistic 回归模型对相关变量行量化赋值,以年龄、烟龄、手术方式、慢性阻塞性肺疾病史为自变量 X,以是否发生并发症为因变量 Y(否=0,是=1),结果显示,年龄 $\geq 60$ 岁、烟龄 $\geq 10$ 年、传统开胸术、慢性阻塞性肺疾病史是肺癌根治术后患者发生并发症的危险因素( $P < 0.05$ ),见表 2。

### 2.4 两组术前、术后 3 个月的 QLQ-C30 评分比较

两组术前各评分比较无差异( $P > 0.05$ )。非并发症组术后 3 个月的总体生活质量量表、角色功能、躯体功能、情绪功能、社会功能评分高于术前与并发症组,而恶心呕吐、疲乏、疼痛、便

秘、呼吸困难、食欲下降、睡眠障碍、腹泻评分低于术前与并发症组( $P<0.05$ ),两组术后3个月的认知功能、经济压力评分比较无差异( $P>0.05$ ),并发症组术后3个月的总体生活质量、躯体功能、情绪功能评分低于术前( $P<0.05$ ),见表3。

表1 肺癌根治术后并发症发生的单因素分析[n(%)]

Table 1 Single factor analysis of complications after radical resection of lung cancer[n(%)]

| Single factor                                    |                         | n  | Complication group(n=32) | Non-complication group(n=72) | $\chi^2/U$ | P     |
|--------------------------------------------------|-------------------------|----|--------------------------|------------------------------|------------|-------|
| Gender(n)                                        | Male                    | 59 | 19(59.38)                | 40(55.56)                    | 0.132      | 0.717 |
|                                                  | Female                  | 45 | 13(40.63)                | 32(44.44)                    |            |       |
| Age(years)                                       | $\geq 60$               | 61 | 26(81.25)                | 35(48.61)                    | 9.732      | 0.002 |
|                                                  | $<60$                   | 43 | 6(18.75)                 | 37(51.39)                    |            |       |
| Pathologic types(n)                              | Adenocarcinoma          | 52 | 18(56.25)                | 34(47.22)                    | 1.306      | 0.521 |
|                                                  | Squamous cell carcinoma | 41 | 10(31.25)                | 31(43.06)                    |            |       |
|                                                  | Adenosquamous carcinoma | 11 | 4(12.50)                 | 7(9.72)                      |            |       |
| Smoking history(n)                               | Yes                     | 63 | 20(62.50)                | 43(59.72)                    | 0.072      | 0.789 |
|                                                  | No                      | 41 | 12(37.50)                | 29(40.28)                    |            |       |
| Smoking age(years)                               | $\geq 10$               | 36 | 20(62.50)                | 16(22.22)                    | 15.879     | 0.000 |
|                                                  | $<10$                   | 68 | 12(37.50)                | 56(77.78)                    |            |       |
| Clinical stages(n)                               | I stage                 | 60 | 18(56.25)                | 42(58.33)                    | 0.039      | 0.843 |
|                                                  | II stage                | 44 | 14(43.75)                | 30(41.67)                    |            |       |
| Operation method(n)                              | Thoracoscopic surgery   | 78 | 17(53.13)                | 61(84.72)                    | 11.796     | 0.000 |
|                                                  | Traditional thoracotomy | 26 | 15(46.88)                | 11(15.28)                    |            |       |
| Tumor diameter(cm)                               | $>3$                    | 47 | 13(40.63)                | 34(47.22)                    | 0.389      | 0.533 |
|                                                  | $\leq 3$                | 57 | 19(59.38)                | 38(52.78)                    |            |       |
| Hypertension history(n)                          | Yes                     | 29 | 10(31.25)                | 19(26.39)                    | 0.260      | 0.610 |
|                                                  | No                      | 75 | 22(68.75)                | 53(73.61)                    |            |       |
| Diabetes history(n)                              | Yes                     | 24 | 8(25.00)                 | 16(22.22)                    | 0.096      | 0.756 |
|                                                  | No                      | 80 | 24(75.00)                | 56(77.78)                    |            |       |
| Chronic obstructive pulmonary disease history(n) | Yes                     | 27 | 15(46.88)                | 12(16.67)                    | 10.518     | 0.001 |
|                                                  | No                      | 77 | 17(53.13)                | 60(83.33)                    |            |       |
| Operation time(min)                              | $\geq 120$              | 41 | 12(37.50)                | 29(40.28)                    | 0.072      | 0.789 |
|                                                  | $<120$                  | 63 | 20(62.50)                | 43(59.72)                    |            |       |
| Intraoperative blood loss(mL)                    | $\geq 50$               | 30 | 13(40.63)                | 17(23.61)                    | 3.124      | 0.077 |
|                                                  | $<50$                   | 74 | 19(59.38)                | 55(76.39)                    |            |       |
| Postoperative hospital stay(d)                   | $>7$ d                  | 45 | 15(46.88)                | 30(41.67)                    | 0.245      | 0.621 |
|                                                  | $\leq 7$ d              | 59 | 17(53.13)                | 42(58.33)                    |            |       |

### 3 讨论

肺癌在中老年人群中较常见,近年来,随着我国人口老龄化进展,年龄超过70岁的肺癌患者占比高达47%,由于患者机体功能衰退,抵抗能力差,病情进展更加迅速,导致死亡率升高<sup>[8]</sup>。目前,手术仍是治疗肺癌的主要方式,但这类患者年龄通常较大,且部分患者患有基础疾病,易引起心肺并发症,影响术

后机体功能恢复<sup>[9-11]</sup>。研究表明,老年肺癌病例中,约19%~48%出现术后并发症,死亡率约为1%~22%<sup>[12]</sup>。肺癌术后并发症对患者生活质量的影响非常大,研究认为,手术创伤所致的疼痛、机体虚弱可导致患者出现焦虑、抑郁等负面情绪,降低生活质量<sup>[13,14]</sup>。因此,临床必须及时明确肺癌患者术后并发症的发生风险,了解其危险因素,尽早给予针对性干预,控制并发症的发生,改善其生活质量。

表 2 肺癌根治术后发生并发症影响因素的多因素 Logistic 回归分析

Table 2 Multivariate Logistic analysis of influencing factors of complications after radical resection of lung cancer

| Variable                                         | Quantitative assignment                               | B     | SE    | $\chi^2$ | P     | OR    | 95%CI       |
|--------------------------------------------------|-------------------------------------------------------|-------|-------|----------|-------|-------|-------------|
| Age                                              | <60 years=0, ≥ 60 years=1                             | 1.091 | 0.380 | 8.262    | 0.004 | 2.978 | 1.415-6.267 |
| Smoking age                                      | <10 years=0, ≥ 10 years=1                             | 1.347 | 0.368 | 13.381   | 0.000 | 3.847 | 1.869-7.918 |
| Operation method                                 | Thoracoscopic surgery=0,<br>Traditional thoracotomy=1 | 1.120 | 0.350 | 10.251   | 0.001 | 3.065 | 1.544-6.084 |
| Chronic obstructive<br>pulmonary disease history | No=0, Yes=1                                           | 1.047 | 0.334 | 9.842    | 0.002 | 2.848 | 1.481-5.477 |

表 3 两组术前、术后 3 个月的 QLQ-C30 评分比较( $\bar{x} \pm s$ , 分)

Table 3 Comparison of QLQ-C30 scores before and 3 months after operation between the two groups( $\bar{x} \pm s$ , scores)

| Indexes                          |                          | Complication group<br>(n=32) | Non-complication<br>group(n=72) | t      | P     |
|----------------------------------|--------------------------|------------------------------|---------------------------------|--------|-------|
| General quality of life<br>scale | Before operation         | 55.65± 7.52                  | 56.41± 5.82                     | 0.560  | 0.577 |
|                                  | 3 months after operation | 50.49± 6.45 <sup>°</sup>     | 65.53± 5.18 <sup>°</sup>        | 12.649 | 0.000 |
| Role function                    | Before operation         | 50.83± 5.84                  | 52.15± 6.03                     | 1.040  | 0.301 |
|                                  | 3 months after operation | 51.82± 6.87                  | 58.19± 4.71 <sup>°</sup>        | 5.494  | 0.000 |
| Physical function                | Before operation         | 47.83± 5.10                  | 49.18± 4.69                     | 1.319  | 0.190 |
|                                  | 3 months after operation | 41.36± 6.13 <sup>°</sup>     | 56.31± 6.85 <sup>°</sup>        | 10.598 | 0.000 |
| Emotional function               | Before operation         | 49.58± 5.56                  | 50.62± 5.14                     | 0.929  | 0.355 |
|                                  | 3 months after operation | 42.78± 4.81 <sup>°</sup>     | 57.43± 6.02 <sup>°</sup>        | 12.141 | 0.000 |
| Social function                  | Before operation         | 50.91± 6.76                  | 51.35± 5.53                     | 0.349  | 0.728 |
|                                  | 3 months after operation | 52.67± 5.14                  | 58.91± 3.98 <sup>°</sup>        | 6.728  | 0.000 |
| Cognitive function               | Before operation         | 62.77± 7.63                  | 63.54± 6.41                     | 0.533  | 0.595 |
|                                  | 3 months after operation | 63.75± 6.60                  | 65.24± 7.13                     | 1.006  | 0.317 |
| Nausea and vomiting              | Before operation         | 50.64± 4.31                  | 49.83± 5.57                     | 0.730  | 0.467 |
|                                  | 3 months after operation | 49.51± 4.25                  | 43.49± 7.53 <sup>°</sup>        | 4.226  | 0.000 |
| Fatigue                          | Before operation         | 49.64± 6.67                  | 50.71± 5.38                     | 0.868  | 0.388 |
|                                  | 3 months after operation | 47.91± 5.52                  | 44.42± 5.76 <sup>°</sup>        | 2.888  | 0.005 |
| Pain                             | Before operation         | 55.54± 7.69                  | 53.79± 6.64                     | 1.181  | 0.240 |
|                                  | 3 months after operation | 55.75± 6.62                  | 45.61± 7.45 <sup>°</sup>        | 6.621  | 0.000 |
| Constipation                     | Before operation         | 53.19± 5.06                  | 52.55± 6.87                     | 0.473  | 0.638 |
|                                  | 3 months after operation | 52.52± 6.71                  | 46.29± 6.56 <sup>°</sup>        | 4.439  | 0.000 |
| Dyspnea                          | Before operation         | 45.74± 8.32                  | 46.02± 9.41                     | 0.145  | 0.885 |
|                                  | 3 months after operation | 44.93± 7.43                  | 38.64± 8.57 <sup>°</sup>        | 3.593  | 0.000 |
| Loss of appetite                 | Before operation         | 40.93± 5.46                  | 41.86± 5.82                     | 0.766  | 0.445 |
|                                  | 3 months after operation | 40.84± 6.29                  | 34.76± 7.37 <sup>°</sup>        | 4.054  | 0.001 |
| Sleep disorder                   | Before operation         | 43.91± 6.63                  | 44.62± 5.04                     | 0.600  | 0.550 |
|                                  | 3 months after operation | 41.57± 7.17                  | 34.71± 6.87 <sup>°</sup>        | 4.637  | 0.000 |
| Diarrhea                         | Before operation         | 44.32± 3.88                  | 45.93± 7.71                     | 1.118  | 0.266 |
|                                  | 3 months after operation | 43.01± 4.59                  | 36.35± 7.69 <sup>°</sup>        | 4.545  | 0.000 |
| Economic pressure                | Before operation         | 48.64± 6.73                  | 49.57± 5.81                     | 0.717  | 0.475 |
|                                  | 3 months after operation | 49.29± 7.79                  | 47.31± 6.43                     | 1.356  | 0.178 |

Note: compared with before operation, <sup>°</sup> P<0.05.

本次结果显示,104例患者中,肺癌术后并发症发生率约为30.77%,主要并发症表现为肺不张、肺炎,与王一北等<sup>[15]</sup>结论基本吻合。本研究发现,肺癌术后并发症的发生与多种因素有关,包括年龄、烟龄、手术方式、慢性阻塞性肺疾病史,分析原因可能如下:(1)肺癌患者的年龄普遍偏大,而随着年龄增长,身体重要脏器功能逐渐衰退,抵抗能力下降,脏器储备能力也相应削弱,导致肺癌根治术风险增加,容易引起术后并发症<sup>[16]</sup>。(2)烟草内含有尼古丁,随着烟龄越长,患者呼吸道会长期遭受尼古丁危害,导致肺部、气管功能均受损,削弱了肺部与气管的正常生理作用,防御能力也逐渐下降或丧失,增加了术后肺部感染、肺炎发生风险<sup>[17]</sup>。(3)手术方式的选择对肺癌患者而言至关重要,既往行传统开胸手术虽然能取得较好的肺癌切除效果,但手术切口大,对机体造成的创伤重,出血量多,更容易引起切口感染<sup>[18]</sup>。(4)慢性阻塞性肺疾病是比较常见的一种慢性病,若未能及时处理,则可进展成呼吸衰竭、肺心病,增加死亡风险,如果肺癌患者术前已患有慢性阻塞性肺疾病,表明在手术之前,其肺功能已经受到损害,故术后更容易引起肺不张以及肺炎等症状<sup>[19]</sup>。因此,临床针对上述病例,必须采取针对性措施,预防并发症发生。例如针对年龄 $\geq 60$ 岁的患者,加强对其生命体征的监测,观察重要脏器功能的变化,术前对基础疾病及时给予对症处理,此外,医护人员需加强围术期健康知识宣教,使患者进一步了解肺癌根治术期间的保健知识,提高医嘱遵从率。针对烟龄较长的患者,必须指导其尽早戒烟,减轻尼古丁对肺部、气管的影响,必要时,可根据情况使用保护肺部与气管的药物。尽量选择胸腔镜手术对肺癌患者进行治疗,减轻手术创伤及其对心肺功能的不良影响,减少出血量,促进机体恢复。针对术前合并慢性阻塞性肺疾病的患者,给予盐酸氨溴索治疗,并指导其训练呼吸功能,减轻肺部应激。郭海萍等<sup>[20]</sup>研究提示,年龄、吸烟指数对肺癌患者术后康复的影响较大,为本次结论给予了支持。而李震宇等<sup>[21]</sup>发现,手术时间也与肺癌术后心肺并发症发生有关,本次研究并未体现这点,分析原因,可能在于该研究中的手术时间以3h为界,而本次以2h为界,导致结论出现差异,未来还将对此进一步论证。

本研究结果提示,在行肺癌根治术后,发生并发症者术后3个月的总体生活质量、躯体功能、情绪功能评分明显下降,而未发生并发症者术后3个月的生活质量较术前明显改善。原因可能在于,肺炎、切口感染、脓胸等并发症的发生均会引起疼痛,而术后疼痛会导致患者害怕咳嗽,导致痰液无法及时排出,或引起肺部感染、低氧血症等事件,不利于术后康复,降低生活质量<sup>[22]</sup>。陈瑞英等<sup>[23]</sup>认为,加强对患者进行肺康复训练(如呼吸训练、咳嗽训练等)指导,能够减轻排痰、咳嗽时的疼痛感,更大幅度提升肺部功能,降低并发症风险。既往研究<sup>[24,25]</sup>虽然有关于肺癌手术患者生活质量的报道,但大多局限于分析不同手术或护理方式对其生活质量的影响,而本研究创新点在于明确了肺癌根治术后并发症发生的危险因素,并分析了患者手术前后生活质量的变化,为日后预防肺癌术后并发症提供依据,以便改善患者术后生活质量。此外,本研究也有不足,具体如下:(1)本次选取的样本量较少,且仅观察了术后3个月的并发症及生活质量变化,观察时间较短;(2)因考虑到患者术后不宜立刻进行生活质量调查,故未分析术后1个月的生活质量变化,所纳入

的时点较少。日后将增加样本量、延长观察时间、增设时点,观察患者术后远期并发症与生活质量的变化。

综上所述,肺癌根治术后并发症发生率较高,其中年龄、烟龄、手术方式、慢性阻塞性肺疾病史与其术后并发症发生密切相关,可导致患者生活质量降低,临床需引起重视,根据情况给予针对性干预,改善患者的预后。

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