·临床研究·

# 肝癌术后重症老年患者术后3个月随访状态调查

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**【摘 要】 目的** 探讨肝癌术后重症老年患者近期生存质量并分析其影响因素。**方法** 回顾性分析2020年2月至2022年3月新疆医科大学附属肿瘤医院收治的152例肝癌术后入住重症监护室的重症老年患者的临床资料。术前及术后3个月使用老年营养风险指数(GNRI)评估患者营养风险,术后3个月使用肝癌患者生命质量测定量表(QOL-LCV2.0)评估患者近期生存质量。根据术后3个月患者生存质量测定结果将患者分为生存质量良好组(78例)与生存质量不良组(74例)。采用SPSS 24.0统计软件进行数据分析。根据数据类型,分别采用$\chi^2$检验或$t$检验进行组间比较。采用logistic回归分析评估肝癌术后重症老年患者近期生存质量不良的影响因素。**结果** 肝癌术后重症老年患者术后3个月QOL-LCV2.0总得分为(124.89±9.22)分。Logistic回归分析显示,年龄≥70岁($OR$=1.929,95%$CI$ 1.011~4.290;$P$<0.05)、术前GNRI≤98($OR$=3.593,95%$CI$ 2.252~5.734;$P$<0.05)及术后并发症($OR$=2.550,95%$CI$ 1.411~4.606;$P$<0.05)均为肝癌术后重症老年患者近期生存质量不良的危险因素。**结论** 肝癌术后重症老年患者近期生存质量值得关注,年龄、营养风险及术后并发症是影响患者近期生存质量的重要因素。

**【关键词】** 老年人;肝癌;生存质量;老年营养风险指数
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# Status of elderly critically ill patients at three months follow-up after liver cancer surgery

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**【Abstract】 Objective** To investigate the short-term quality of life in the elderly critically ill patients after liver cancer surgery and to analyze its influencing factors. **Methods** A retrospective analysis was made of the clinical data of 152 elderly critically ill patients admitted to intensive care unit after liver cancer surgery in the Affiliated Cancer Hospital of Xinjiang Medical University from February 2020 to March 2022. Before surgery and at three months after surgery, geriatric nutritional risk index (GNRI) was used to assess the nutritional risk of patients. At three months after surgery, quality of life with liver cancer (QOL-LCV2.0) was used to evaluate the short-term quality of life. Patients were classified into the good life-quality group ($n$=78) and poor life-quality group ($n$=74) according to the quality of life measured at three months after surgery. SPSS 24.0 was used for data analysis. According to the data type, *Chi*-square test or $t$ test was used to compare the enumeration data between groups. Logistic regression analysis was used to evaluate the influencing factors of poor short-term quality of life in the elderly critically ill patients after liver cancer surgery. **Results** At three months after surgery, the total score on QOL-LCV2.0 of the elderly critically ill patients after liver cancer surgery was (124.89±9.22) points. Logistic regression analysis showed that age ≥ 70 years ($OR$=1.929, 95%$CI$ 1.011-4.290; $P$<0.05), preoperative GNRI≤98 ($OR$=3.593, 95%$CI$ 2.252-5.734; $P$<0.05), and postoperative complications ($OR$=2.550, 95%$CI$ 1.411-4.606; $P$<0.05) were risk factors for poor short-term quality of life in the elderly critically ill patients after liver cancer surgery. **Conclusion** The short-term quality of life in the elderly critically ill patients after liver cancer surgery is worthy of attention. Age, nutritional risk and postoperative complications are important factors affecting their short-term quality of life.

**【Key words】** aged; liver cancer; quality of life; geriatric nutritional risk index
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肝癌是威胁全世界人民生命健康的恶性肿瘤,我国肝癌新发及死亡病例占全球总病例的45.27%和47.12%,随着人口老龄化进程加快等因素的影响,有专家预测我国未来25年肝癌每年发病人数及死亡人

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数将超过10万[1]。对于肝癌术后的重症患者,一般建议入住重症监护室(intensive care unit,ICU),以获得严密的病情观察,提高生存率,故有关肝癌术后重症患者生存率的研究较多[2]。老年患者基础疾病较多,各器官功能代偿功能有限,因此肝癌术后重症老年患者生存质量较差[3]。基于此,本研究对近年收治的肝癌术后重症老年患者生存质量进行分析,评估其影响因素,为老年肝癌的疾病管理提供参考数据。

## 1 对象与方法

### 1.1 研究对象

回顾性分析新疆医科大学附属肿瘤医院2020年2月至2022年3月收治的152例肝癌术后入住ICU的重症老年患者的临床资料。根据术后3个月患者生存质量测定结果将患者分为生存质量良好组与生存质量不良组。纳入标准:经病理学检查诊断为肝细胞癌且行手术切除;诊疗符合《原发性肝癌诊疗规范(2019年版)》[4];年龄≥60岁;术后急性生理功能和慢性健康状况评分系统Ⅱ(acute physiological and chronic health evaluation Ⅱ,APACHEⅡ)≥15分;术后生存时间≥3个月且保持意识清醒、沟通能力正常;实验室检查、病理学检查等资料完整。排除标准:继发性肝癌;术前行放化疗等抗肿瘤治疗;术前注射白蛋白制剂;合并精神疾病。

### 1.2 方法

1.2.1 资料收集 收集患者术前肝脏功能、全身基础状况、肝癌临床分期、手术状况及手术并发症等资料。术前对患者进行营养风险指数评估,入ICU时行APACHEⅡ评分。术后3个月对患者再次进行营养风险指数评估,并行生存质量等量表调查。所有患者在术前及术后3个月时采集外周肘静脉血3~4 ml,使用全自动生化分析仪(日本日立公司,型号:7600-220)检测血清白蛋白。

1.2.2 营养状态和量表评估方法 (1)老年营养风险指数(geriatric nutritional risk index, GNRI)[5]测定计算公式如下。GNRI=1.489×血清白蛋白(g/L)+41.7×实际体质量(kg)/理想体质量(kg)。男性理想体质量=身高(cm)-100-[(身高-150)/4];女性理想体质量=身高(cm)-100-[(身高-150)/2.5]。GNRI>98被认为是营养状况良好。(2)采用肝癌患者生命质量测定量表(quality of life with liver cancer, QOL-LCV2.0)[6]评估生存质量,总分为220分,得分越高生存质量越高。(3)采用简版老年抑郁量表(Abbreviated Geriatric Depression Scale, GDS-15)[7]评估抑郁状态,得分0~4分为无抑郁,5~10分为可能抑郁,11~15分抑郁。(4)使用家庭功能评定量表(family assessment device, FAD)[8]评估家庭功能,得分60~120分为家庭功能良好,121~180分为家庭功能一般,181~240分为家庭功能差。

### 1.3 统计学处理

采用SPSS 24.0统计软件进行数据分析。计量资料以均数±标准差($\bar{x}\pm s$)表示,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$\chi^2$检验或连续校正$\chi^2$检验、Fisher精确概率法检验。采用logistic回归分析评估肝癌术后重症老年患者近期生存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 肝癌术后重症老年患者术后3个月生存质量调查

152例肝癌术后重症老年患者中78例QOL-LCV2.0总得分≥124.89分,纳入生存质量良好组;74例QOL-LCV2.0总得分<124.89分,纳入生存质量不良组。患者术后3个月生存质量评分详见表1。

### 2.2 两组患者临床资料比较

生存质量不良组患者年龄及术后并发症发生率显著高于生存质量良好组;术前GNRI低于生存质量良好组,差异均有统计学意义($P<0.05$;表2)。

### 2.3 肝癌术后重症老年患者近期生存质量不良的影响因素

以术后3个月生存质量不良作为因变量,单因素分析中有统计学意义的指标作为自变量赋值带入logistic回归方程,赋值详见表3。结果显示年龄≥70岁、术前GNRI≤98及术后出现并发症为肝癌术后重症老年患者近期生存质量不良的危险因素($P<0.05$;表4)。

**表1 肝癌术后重症老年患者术后3个月QOL-LCV2.0评分**

Table 1 QOL-LCV2.0 scores of elderly critically ill patients after liver cancer surgery at 3 months after surgery ($n=152$)

| Item | Total score(points) | Lowest score(points) | Highest score(points) | Average score(points, $\bar{x}\pm s$) |
|---|---|---|---|---|
| Physical function | 60 | 24 | 42 | 34.29±6.07 |
| Psychological function | 60 | 21 | 40 | 30.44±5.36 |
| Symptoms/side effects | 50 | 20 | 42 | 33.79±5.02 |
| Social function | 50 | 18 | 39 | 26.37±4.41 |
| Total score | 220 | 95 | 148 | 124.89±9.22 |

QOL-LCV2.0: quality of life with liver cancer.

**表 2 两组患者临床资料比较**

Table 2 Comparison of clinical data between two groups

| Item | Poor life-quality group($n$=74) | Good life-quality group($n$=78) | $\chi^2/t$ | $P$ value |
|---|---|---|---|---|
| Gender[$n$(%)] | | | 0.751 | 0.386 |
| Male | 55(74.32) | 53(67.95) | | |
| Female | 19(25.68) | 25(32.05) | | |
| Age[$n$(%)] | | | 5.057 | 0.025 |
| 60-<70 years | 35(47.30) | 51(65.38) | | |
| ≥70 years | 39(52.70) | 27(34.62) | | |
| Body mass index(kg/m$^2$, $\bar{x}\pm s$) | 20.83±2.11 | 21.04±1.96 | 0.636 | 0.526 |
| Smoking[$n$(%)] | 29(39.19) | 23(29.49) | 1.588 | 0.208 |
| Liver function Child-Pugh grading[$n$(%)] | | | 0.030 | 0.862 |
| A | 57(77.03) | 61(78.21) | | |
| B | 17(22.97) | 17(21.79) | | |
| Preoperative GNRI[$n$(%)] | | | 5.170 | 0.023 |
| ≤98 | 62(83.78) | 53(67.95) | | |
| >98 | 12(16.22) | 25(32.05) | | |
| Basic lung disease[$n$(%)] | 23(31.08) | 22(28.21) | 0.151 | 0.698 |
| Chronic obstructive pulmonary disease[$n$(%)] | 13(17.57) | 10(12.82) | 0.666 | 0.414 |
| Bronchiectasis[$n$(%)] | 7(9.46) | 8(10.26) | 0.027 | 0.869 |
| Pulmonary emphysema[$n$(%)] | 3(4.05) | 4(5.13) | 0.005 | 0.943# |
| Hypertension[$n$(%)] | 25(33.78) | 26(33.33) | 0.004 | 0.953 |
| Diabetes mellius[$n$(%)] | 12(16.22) | 13(16.67) | 0.006 | 0.940 |
| Coronary heart disease[$n$(%)] | 6(8.11) | 7(8.97) | 0.036 | 0.849 |
| Maximum tumor diameter[$n$(%)] | | | 0.028 | 0.868 |
| ≤5 cm | 36(48.65) | 39(50.00) | | |
| >5 cm | 38(51.35) | 39(50.00) | | |
| TNM clinical staging[$n$(%)] | | | 0.035 | 0.851 |
| Ⅰ-Ⅱ | 55(74.32) | 59(75.64) | | |
| Ⅲ-Ⅳ | 19(25.68) | 19(24.36) | | |
| Portal vein tumor thrombus[$n$(%)] | 9(12.16) | 6(7.69) | 0.853 | 0.356 |
| Positive postoperative incision margin[$n$(%)] | 2(2.70) | 0(0.00) | - | 0.235* |
| Postoperative complications[$n$(%)] | 27(36.49) | 15(19.23) | 5.655 | 0.017 |
| Pleural effusion[$n$(%)] | 11(14.86) | 7(8.97) | 1.262 | 0.261 |
| Abdominal infection[$n$(%)] | 5(6.76) | 2(2.56) | 0.715 | 0.398# |
| Lung infection[$n$(%)] | 4(5.41) | 2(2.56) | 0.233 | 0.629# |
| Incision infection[$n$(%)] | 3(4.05) | 1(1.28) | 0.314 | 0.575# |
| Ascites[$n$(%)] | 3(4.05) | 2(2.56) | 0.004 | 0.952# |
| Bleeding[$n$(%)] | 1(1.35) | 1(1.28) | 0.455 | 0.500# |
| Postoperative APACHE Ⅱ score(points, $\bar{x}\pm s$) | 20.31±3.06 | 19.97±2.48 | 0.754 | 0.452 |
| GNRI at 3 months after surgery[$n$(%)] | | | 0.606 | 0.436 |
| ≤98 | 35(47.30) | 32(41.03) | | |
| >98 | 39(42.70) | 46(58.97) | | |
| Depression status at 3 months after surgery[$n$(%)] | | | 2.205 | 0.332 |
| No depression | 9(12.16) | 14(17.95) | | |
| Possible depression | 43(58.11) | 48(61.54) | | |
| Depression | 22(29.73) | 16(20.51) | | |
| Family function at 3 months after surgery[$n$(%)] | | | 2.708 | 0.258 |
| Good | 12(16.22) | 19(24.36) | | |
| General | 49(66.22) | 51(65.38) | | |
| Poor | 13(17.57) | 8(10.26) | | |

GNRI: geriatric nutritional risk index; APACHE Ⅱ: acute physiological and chronic health evaluation Ⅱ. *: Fisher exact probability method; #: continuously corrected *Chi*-square test. -: no datum.

**表 3 自变量赋值**

Table 3 Variable assignment

| Variable | Assignment |
|---|---|
| Age | 60-<70 years=0, ≥70 years=1 |
| Preoperative GNRI | >98=0, ≤98=1 |
| Postoperative complications | No=0, Yes=1 |

GNRI: geriatric nutritional risk index.

## 3 讨 论

根治性切除手术是肝癌的主要治疗手段,但老年患者基础疾病多,围术期循环不稳定,术后 APACHE Ⅱ 评分较高,此类重症患者需转入 ICU 监护[9]。肝癌切除手术虽然是主要治疗手段,但由于手术创伤、并发症等造成的生理压力及疾病、治疗带

**表4 肝癌术后重症老年患者近期生存质量不良的logistic回归分析**

Table 4 Logistic regression analysis of poor short-term quality of life in elderly critically ill patients after liver cancer surgery

| Factor | $\beta$ | *SE* | *Wald* $\chi^2$ | *P* value | *OR* | 95%*CI* |
|---|---|---|---|---|---|---|
| Age≥70 years | 0.657 | 0.289 | 5.168 | 0.023 | 1.929 | 1.011-4.290 |
| Preoperative GNRI≤98 | 1.279 | 0.326 | 15.392 | <0.001 | 3.593 | 2.252-5.734 |
| Postoperative complications | 0.936 | 0.278 | 11.336 | 0.001 | 2.550 | 1.411-4.606 |

GNRI: geriatric nutritional risk index.

来的心理压力,术后重症患者生存率及生存质量较低,目前生存率相关研究较多,但生存质量调查及分析较少[10]。本研究对152例肝癌术后入住ICU的老年患者近期生存质量展开调查,发现其平均总得分为(124.89±9.22)分,处于满分220分的中间水平,提示肝癌术后重症老年患者近期生存质量有待提高。

进一步logistic回归分析发现,年龄≥70岁是肝癌术后重症老年患者术后3个月生存质量不良的危险因素。究其原因可能是年龄越高的患者各器官功能衰弱越严重,代偿能力严重受限,手术创伤造成的不良影响难以恢复,故术后3个月生存质量较差[11]。GNRI是近年常用的老年营养风险评估项目[12]。由于恶性肿瘤细胞的高代谢、患者营养摄取不足等因素的影响,老年肝癌患者常合并营养不良,手术并发症风险升高,患者也更易出现虚弱感和疲劳感[13]。本研究中,术前GNRI≤98也是近期生存质量不良的危险因素,提示术前营养状态差,存在较高营养不良风险者应在术前给予积极的营养支持治疗,纠正营养不良,避免在该状态下手术造成手术风险升高及术后生存质量低下。本研究中,生存质量不良组术后并发症发生率显著高于生存质量良好组,且术后并发症为肝癌术后重症老年患者近期生存质量不良的危险因素。其原因可能为肝癌切除术后并发症增加患者能量消耗,延迟组织愈合,影响患者术后康复进程,造成生存质量降低。

近年有报道指出[14,15],家庭成员情感支持越高、抑郁水平越低的患者,生存质量越高。但本研究中,生存质量不同的两组患者术后3个月抑郁状态及家庭功能并无显著差异,与上述报道不同。分析其原因为本研究评估的是肝癌切除术后重症患者的近期生存质量,患者受手术创伤、并发症等生理因素的影响较大,心理因素对生存质量的影响相对较弱。

综上所述,肝癌切除术后重症老年患者近期生存质量有待提高,年龄较高、术前GNRI较低及术后出现并发症者更易出现生存质量不良。

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