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胃癌患者营养风险与生活质量及近期预后的关系研究*

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摘要 目的:探讨胃癌患者的营养风险的危险因素,并分析其与患者生活质量及近期预后的关系。方法:纳入我院2017年4月~2019年10月收治的胃癌患者81例,利用营养风险筛查2002(NRS2002)评分分析患者有无营养风险,经Logistic多元回归分析胃癌患者营养风险的危险因素。经简明生活质量量表(SF-36)评估患者生活质量并进行比较,前瞻性随访3、12个月,统计患者近期预后,分析胃癌患者NRS2002评分与SF-36评分的相关性。结果:在81例胃癌患者中,营养风险发生率为53.09%。Logistic多元回归分析显示:年龄 ≥ 60 岁(OR=1.657,95%CI:1.042-2.635)、疼痛分度III~IV度(OR=4.515,95%CI:1.656-12.310)、消化道反应III~IV度(OR=3.947,95%CI:1.599-9.743)是胃癌患者营养风险发生的危险因素($P<0.05$),而营养补充(OR=0.899,95%CI:0.846-0.955)是胃癌患者营养风险发生的保护因素($P<0.05$)。营养风险组情绪角色功能、躯体角色功能、躯体功能、总体健康、心理健康、躯体疼痛评分低于无营养风险组,NRS2002评分高于无营养风险组($P<0.05$)。胃癌患者NRS2002评分与情绪角色功能、躯体角色功能、躯体功能、总体健康、心理健康、躯体疼痛评分呈负相关($P<0.05$)。营养风险组随访3个月的生存率为95.35%,与无营养风险组的100%比较无差异($P>0.05$)。营养风险组随访12个月的生存率为79.07%,低于无营养风险组的94.74%($P<0.05$)。结论:胃癌患者营养风险发生率较高,其发生与多种因素有关,营养风险会影响生活质量和近期预后,临床需及时对胃癌患者进行营养风险评估,并尽早干预。

关键词: 胃癌;营养风险;影响因素;生活质量;预后

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Study on the Relationship between Nutritional Risk, Quality of Life and Short-term Prognosis in Patients with Gastric Cancer*

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ABSTRACT Objective: To investigate the risk factors of nutritional risk in patients with gastric cancer, and to analyze the relationship between nutritional risk and patients' quality of life and short-term prognosis. **Methods:** 81 patients with gastric cancer who were admitted to our hospital from April 2017 to October 2019 were included, and the nutritional risk screening 2002 (NRS2002) score was used to analyze whether the patients had nutritional risk. Logistic multiple regression analysis was used to analyze the risk factors of nutritional risk in patients with gastric cancer. The quality of life of the patients was assessed and compared by the Concise Quality of Life Scale (SF-36), and the patients were followed up prospectively for 3 and 12 months, and the short-term prognosis of the patients was counted. The correlation between NRS2002 score and SF-36 score in patients with gastric cancer was analyzed. **Results:** Among 81 patients with gastric cancer, the nutritional risk occurred rate was 53.09%. Logistic multivariate regression analysis showed that age ≥ 60 years old (OR=1.657, 95%CI: 1.042-2.635), pain degree III ~ IV degrees (OR=4.515, 95%CI: 1.656-12.310), gastrointestinal tract reaction III ~ IV degrees (OR= 3.947, 95%CI: 1.599-9.743) were risk factor for gastric cancer patients with nutritional risk occurred ($P<0.05$), but nutritional supplement (OR= 0.899, 95%CI: 0.846-0.955) was protective factor for gastric cancer patients with nutritional risk occurred ($P<0.05$). The scores of emotional role function, physical role function, physical function, general health, mental health and physical pain in the nutritional risk group were lower than those in the no nutritional risk group, and the NRS2002 score was higher than that in the no nutritional risk group ($P<0.05$). The NRS2002 score of patients with gastric cancer was negatively correlated with emotional role function, physical role function, physical function, general health, mental health, and physical pain scores($P<0.05$). The 3-month follow-up survival rate of the nutritional risk group was 95.35%, which was no difference compared with the 100% of the no nutritional risk group ($P>0.05$). The 12-month follow-up survival rate of the nutritional risk group was 79.07%, which was lower than the 94.74% of the no nutritional

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risk group ($P<0.05$). **Conclusion:** The patients with gastric cancer have a high incidence rate of nutritional risk, which is related to a variety of factors, nutritional risk can affect the quality of life and short-term prognosis, clinical need for timely nutritional risk assessment of patients with gastric cancer, and early intervention.

Key words: Gastric cancer; Nutritional risk; Influencing factors; Quality of Life; Prognosis

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前言

胃癌是全球患病率位居第四位的癌症,以中、老年居多,在年龄 55~70 岁群体中常见,男性患者多于女性,患病率、死亡率均较高^[1]。研究指出,胃癌患者约 40%~80%存在营养不良,可增加脏器损害风险,引起并发症,对预后影响非常大^[2]。在胃癌患者无手术禁忌的情况下,临床主张行胃癌切除术,提高生命质量,但研究表明,营养不良不仅可导致组织器官功能受损,削弱免疫功能,降低机体抵抗力,而且会增加胃癌手术后感染、心肺功能异常等发生风险,导致住院时间延长,不利于改善预后^[3]。因此,尽早对患者进行营养风险筛查至关重要。目前,临床评估营养风险的量表较多,包括营养风险指数、欧洲营养风险筛查(Nutritional risk screening2002,NRS2002)、微型营养评价等,其中 NRS2002 具有筛查时间短、应用简单、内容客观等特点,能够反映患者的营养风险情况^[4-6]。为了进一步了解胃癌患者营养风险与生活质量、预后的关系,本次研究纳入 81 例胃癌患者进行分析,利用 NRS2002 评分评估其有无营养风险,并分析营养风险与生活质量及近期预后的关系,为改善胃癌患者预后提供依据,现报道如下。

1 资料与方法

1.1 一般资料

纳入我院 2017 年 4 月~2019 年 10 月收治的胃癌患者 81 例,均行根治性手术,术后采用紫杉醇联+替吉奥化疗方案。其中男 45 例,女 36 例,年龄 41~72 岁,平均(56.62±12.28)岁;病理类型:腺癌 61 例,鳞癌 20 例;临床分期:Ⅰ期 23 例,Ⅱ期 37 例,Ⅲ期 21 例;肿瘤直径 2~8 cm,平均(4.89±2.16)cm;体质量指数 17~23 kg/m²,平均(20.45±2.07)kg/m²;吸烟史:有 28 例,无 53 例。纳入标准:①经手术病理证实为胃癌;②能够正常沟通;③经腹部 B 超、CT 等检查,提示未见远处转移;④对研究内容知情同意。排除标准:①同时患有其他原发性肿瘤者;②意识不清,处于昏迷状态者;③重症监护病例;④凝血功能异常,无法行手术者;⑤入院前近期有大手术史者。本研究通过我院伦理委员会审批。

1.2 研究方法

(1)营养风险:利用 NRS2002 评分分析患者术前有无营养风险。NRS2002 评分^[7]:内容包括营养损害程度(3 分)、疾病严重程度(3 分)、年龄≥70 岁(1 分),总分范围为 0~7 分,分值越高,提示营养风险越大,其中总分≥3 分、<3 分分别代表有营养风险、无营养风险,经筛查后据此分成营养风险组、无营养风险组。(2)收集两组的临床资料,包括性别、年龄、病理类型、临床分期、肿瘤直径、体质量指数、吸烟史、手术方式、手术时间、围术期输血、术中出血量、术后肺部感染、术后切口感染、术后

胸腔积液、切除范围、营养补充、疼痛分度、消化道反应。(3)经简明生活质量量表(The 36-item medical outcomes study short-form,SF-36)评估患者术前生活质量。SF-36 评分^[8]:包括 8 个维度,分别为情绪角色功能、躯体角色功能、躯体功能、总体健康、社会功能、心理健康、精力、躯体疼痛,含条目 36 个,每项计 0~100 分,分值与生活质量呈正比,各维度 Cronbach's α 系数为 0.70~0.91。(4)近期预后:前瞻性随访 3 个月、12 个月,统计近期生存与死亡情况。

1.3 统计学方法

数据分析采用 SPSS20.0 软件处理,计数资料用百分比(%)表示,行 χ^2 检验。计量资料以均数±标准差($\bar{x} \pm s$)表示,两组比较行独立样本 t 检验,等级资料采用秩检验。经 Logistic 多元回归分析胃癌患者营养风险的影响因素。经 Pearson 线性相关分析胃癌患者 NRS2002 评分与 SF-36 评分的相关性。采用 Kaplan-Meier 生存曲线分析预后, $P<0.05$ 为差异有统计学意义。

2 结果

2.1 胃癌患者营养风险发生率及营养风险的单因素分析

在 81 例胃癌患者中,发生营养风险者 43 例(53.09%),无营养风险者 38 例(46.91%)。营养风险组年龄≥60 岁、疼痛分度Ⅲ~Ⅳ度、消化道反应Ⅲ~Ⅳ度占比高于无营养风险组,营养补充占比低于无营养风险组($P<0.05$),见表 1。

2.2 胃癌患者发生营养风险危险因素的 Logistic 多元回归分析

以表 1 中有统计学差异的变量为自变量 X,以有无营养风险为因变量 Y(无=0,有=1),结果提示年龄≥60 岁、疼痛分度Ⅲ~Ⅳ度、消化道反应Ⅲ~Ⅳ度是胃癌患者发生营养风险的危险因素($P<0.05$),而营养补充是胃癌患者营养风险发生的保护因素($P<0.05$),见表 2。

2.3 两组的 SF-36、NRS2002 评分比较

营养风险组情绪角色功能、躯体角色功能、躯体功能、总体健康、心理健康、躯体疼痛评分均低于无营养风险组,NRS2002 评分高于无营养风险组($P<0.05$),见表 3。

2.4 胃癌患者 NRS2002 评分与 SF-36 评分的相关性分析

经 Pearson 线性相关分析显示,胃癌患者 NRS2002 评分与情绪角色功能、躯体角色功能、躯体功能、总体健康、心理健康、躯体疼痛评分呈负相关($P<0.05$),见表 4。

2.5 胃癌患者营养风险与近期预后的关系分析

前瞻性随访 3 个月,营养风险组的生存率为 95.35%(41/43),死亡率为 4.65%(2/43)。无营养风险组无患者死亡,生存率为 100%(38/38),两组生存率比较无差异($\chi^2=0.395$, $P=0.529$)。随访 12 个月,营养风险组的生存率为 79.07%(34/43),死亡率为 20.93%(9/43)。无营养风险组的生存率为 94.74%(36/38),死亡率为 5.26%(2/38),营养风险组生存率低于无营

养风险组,差异有统计学意义($\chi^2=4.219, P=0.040$)。两组随访期 间的生存曲线图见图 1。

表 1 胃癌患者营养风险发生率及营养风险的单因素分析[n(%)]

Table 1 Univariate analysis of the incidence rate of nutritional risk and nutritional risk in patients with gastric cancer [n(%)]

Indicators		n	Nutritional risk group(n=43)	No nutritional risk group(n=38)	χ^2/U	P
Gender	Male	45	23(53.49)	22(57.89)	0.158	0.690
	Female	36	20(46.51)	16(42.11)		
Age(years)	<60	43	18(41.86)	25(65.79)	4.638	0.031
	≥ 60	38	25(58.14)	13(34.21)		
Pathologic types	Adenocarcinoma	61	31(72.09)	30(78.95)	0.510	0.475
	Squamous cell carcinomas	20	12(27.91)	8(21.05)		
	I stage	23	9(20.93)	14(36.84)	3.368	0.186
Clinical stages	II stage	37	20(46.51)	17(44.74)		
	III stage	21	14(32.56)	7(18.42)		
Tumor diameter(cm)	<5	46	22(51.16)	24(63.16)	1.183	0.277
	≥ 5	35	21(48.84)	14(36.84)		
Body mass index (kg/m ²)	≥ 21	38	18(41.86)	20(52.63)	0.940	0.332
	<21	43	25(58.14)	18(47.37)		
Smoking history	Yes	28	15(34.88)	13(34.21)	0.004	0.949
	No	53	28(65.12)	25(65.79)		
Operation method	Laparoscopic	46	24(55.81)	22(57.89)	0.036	0.850
	Open	35	19(44.19)	16(42.11)		
Operation time(min)	<2 h	47	22(51.16)	25(65.79)	1.772	0.183
	≥ 2 h	34	21(48.84)	13(34.21)		
Perioperative blood transfusion	Yes	21	14(32.56)	7(18.42)	2.099	0.147
	No	60	29(67.44)	31(81.58)		
Intraoperative blood loss(mL)	<500	63	35(81.40)	28(73.68)	0.694	0.405
	≥ 500	18	8(18.60)	10(26.32)		
Postoperative pulmonary infection	Yes	6	4(9.30)	2(5.26)	0.480	0.488
	No	75	39(90.70)	36(94.74)		
Postoperative incision infection	Yes	8	5(11.63)	3(7.89)	0.316	0.574
	No	73	38(88.37)	35(92.11)		
Postoperative pleural effusion	Yes	5	4(9.30)	1(2.63)	1.550	0.213
	No	76	39(90.70)	37(97.37)		
Resection range	Proximal end	11	6(13.95)	5(13.16)	0.020	0.990
	Distal end	28	15(34.88)	13(34.21)		
	Whole stomach	42	22(51.16)	20(52.63)		
Nutrition supplement	Yes	40	12(30.23)	28(73.68)	16.912	0.000
	No	41	31(72.09)	10(26.32)		
Pain degree	I ~ II degree	66	30(69.77)	36(94.74)	8.335	0.004
	III ~ IV degree	15	13(30.23)	2(5.26)		
Gastrointestinal tract reaction	I ~ II degree	68	31(72.09)	37(97.37)	9.565	0.002
	III ~ IV degree	13	12(27.91)	1(2.63)		

表 2 胃癌患者发生营养风险危险因素的 Logistic 多元回归分析

Table 2 Logistic multiple regression analysis of nutritional risk factors in patients with gastric cancer

	Variable	B	SE	χ^2	P	OR	95%CI
Age	<60 years old=0, ≥ 60 years old=1	0.505	0.237	4.553	0.033	1.657	1.042-2.635
Nutrition supplement	No=0, Yes=1	-0.106	0.031	11.795	0.001	0.899	0.846-0.955
Pain degree	I ~ II degree=0, III ~ IV degree=1	1.507	0.512	8.677	0.003	4.515	1.656-12.310
Gastrointestinal tract reaction	I ~ II degree=0, III ~ IV degree=1	1.373	0.461	8.869	0.003	3.947	1.599-9.743

表 3 营养风险组、无营养风险组的 SF-36、NRS2002 评分比较($\bar{x} \pm s$, 分)

Table 3 Comparison of SF-36 and NRS2002 scores between nutritional risk group and no nutritional risk group($\bar{x} \pm s$, scores)

Indicators		Nutritional risk group (n=43)	No nutritional risk group(n=38)	t	<i>P</i>
SF-36	Emotional role function	61.49± 7.25	65.14± 6.13	2.429	0.017
	Physical role function	60.41± 5.31	64.65± 3.87	4.060	0.000
	Physical function	52.43± 6.23	56.34± 5.96	2.877	0.005
	General health	60.73± 6.17	64.73± 3.75	3.469	0.001
	Social function	56.85± 7.85	55.19± 6.92	1.004	0.319
	Mental health	56.52± 9.51	60.84± 5.64	2.445	0.017
	Energy	55.69± 8.89	54.75± 8.31	0.490	0.626
	Physical pain	51.65± 6.58	55.46± 4.78	2.947	0.004
	NRS2002 score	4.12± 1.01	2.34± 0.21	10.655	0.000

表 4 胃癌患者 NRS2002 评分与 SF-36 评分的相关性分析

Table 4 Correlation analysis of NRS2002 score and SF-36 score in patients with gastric cancer

Indicators	NRS2002 score	
	r	P
Emotional role function	-0.568	0.007
Physical role function	-0.497	0.019
Physical function	-0.518	0.012
General health	-0.682	0.000
Social function	-0.311	0.063
Mental health	-0.765	0.000
Energy	-0.340	0.054
Physical pain	-0.719	0.000

3 讨论

营养不良在胃癌患者中比较常见,是影响患者治疗耐受性的重要因素^[9]。营养风险的发生可导致患者机体免疫力下降,延长住院时间,增加继发病风险,促进病情进展,加大治疗难度,降低生活质量,影响预后^[10-12]。倪珊珊等^[13]发现,胃癌患者营养风险占比高达 70.5%,且营养风险越高,患者营养不良发生率相应升高,生活质量明显下降。徐令婕等^[14]认为,胃癌患者治疗耐受性与营养状况密切相关,且营养不良者易出现负性情绪,

影响疾病治疗。因此,临床必须重视恶性肿瘤患者的营养风险筛查,为改善预后提供依据,此外,在进行营养风险评估后,还要及时明确影响机体营养水平的因素,以便提高营养干预的针对性,纠正营养不良状态。

本研究采用 NRS-2002 评估患者的营养风险情况,该评分方法在营养评估中应用越来越广泛,不仅能够反映手术对机体营养的影响,而且充分体现了年龄与营养风险的关系,评价内容较全面。本研究结果显示,81 例胃癌患者营养风险发生率为 53.09%,与林丽等^[15]结论接近。通过进一步分析,发现年龄≥ 60

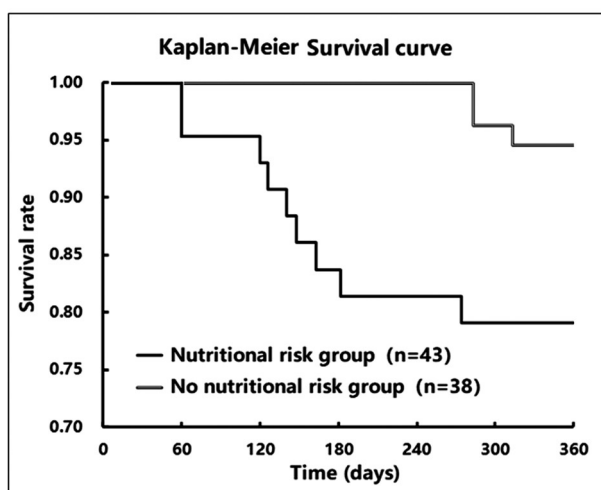


图1 两组随访期间的生存曲线图

Fig.1 The survival curve of the two groups during the follow-up period

岁、疼痛分度Ⅲ~Ⅳ度、消化道反应Ⅲ~Ⅳ度是胃癌患者发生营养风险的危险因素($P<0.05$),而营养补充是胃癌患者营养风险发生的保护因素($P<0.05$),考虑原因如下:(1)年龄越大的患者活动量减少,新陈代谢减慢,消化道功能呈衰退趋势,影响机体对营养物质的吸收,导致营养不良。(2)营养补充能促进机体摄入更多蛋白质、能量,有利于改善机体营养情况,降低营养风险的发生。(3)疼痛越重的患者容易出现食欲下降,对进食影响非常大,导致每日摄入的营养物质不足,增加营养风险的发生。(4)消化道反应越重的患者易引起食欲减退、恶心呕吐等症状,严重情况下甚至可能诱发肠麻痹,影响进食^[16-18]。郑米华等^[19]发现,临床分期也会影响胃癌患者的营养状况,而本研究并未体现这点。分析原因,可能与本次未纳入Ⅳ期患者有关,也可能因样本量较少所致,未来还需增加样本量进行论证。李国立等^[20]认为胃癌患者应在围手术期进行营养支持干预,纠正营养不良状态。目前,营养制剂的种类较多,包括维生素、微量元素、膳食纤维等相关制剂,此外,还有临床常用的肠内全营养制剂,临床可根据患者情况选择相应制剂进行干预,满足代谢需求。

本结果显示,营养风险患者的生活质量较无营养风险者明显下降,且NRS2002评分与SF-36的心理、躯体相关维度评分存在相关性。原因主要在于有营养风险的患者机体抵抗能力相对较差,且这类病人大多年龄较大,消化道反应以及疼痛症状较重,容易出现身体不适,影响躯体与心理功能,降低生活质量^[21-23]。王晓峥等^[24]也认为,营养状况会影响胃癌患者生活质量,为本次结论给予了支持,而本研究进一步证实营养状况与生活质量有相关性,临床可考虑通过分析营养水平,预测胃癌患者生活质量的变化趋势。本次结果提示,营养风险对患者3个月的近期预后无影响,但会影响12个月的预后。有营养风险的患者营养不良发生率高,可导致胃癌术后并发症风险增高,加剧免疫功能损害,随着营养状况越差,癌细胞播散速度加快,转移能力越强,导致预后越差^[25]。临床需尽早对患者进行营养支持,加强健康宣教,及时给予营养指导,控制营养风险发生率,改善预后。

综上所述,营养风险在胃癌患者中发生率较高,对患者生活质量与近期预后影响非常大,临床需引起重视。本研究局限

性在于纳入样本量少,且未结合实验室指标分析患者营养水平,未来还需增加相关指标予以探讨。

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