· 临床研究 ·

老年脑卒中后吞咽障碍患者摄食训练依从性及技能护理需求的相关性

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【摘 要】 **目的** 调查老年脑卒中后吞咽障碍(PSD)患者摄食训练依从性,并分析其与技能护理需求的关联性。**方法** 选取 2023 年 1 月至 2023 年 12 月在邯郸市第一医院行摄食训练的 242 例老年 PSD 患者为研究对象并发放问卷,问卷有效回收率为 97.52%(236/242)。根据完成摄食训练时间及次数评估依从性,分为完全依从(完成时间及次数≥70%)、部分依从(40%≤完成时间及次数<70%)及不依从(完成时间及次数<40%),将完全依从与部分依从患者纳入良好依从组,不依从患者纳入不依从组,使用《吞咽障碍患者护理需求问卷》评估老年 PSD 患者对吞咽障碍生理、安全、技能、知识及社会支持的护理需求情况。采用多因素 logistic 逐步回归分析评估老年 PSD 患者摄食训练不依从的危险因素,采用 Spearman 秩相关分析评估老年 PSD 患者摄食训练依从性与各维度护理需求的相关性。采用 SPSS 25.0 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、单因素方差分析及 χ^2 检验。**结果** 236 例老年 PSD 患者完全依从 104 例(44.07%),部分依从 74 例(31.35%),不依从 58 例(24.58%)。不依从组与良好依从组在年龄、受教育程度、显著心理痛苦及家庭关怀度低方面比较,差异均有统计学意义(均 $P<0.05$)。多因素 logistic 逐步回归分析结果显示,年龄≥70 岁($OR=2.710$,95%CI 1.456~5.046;$P<0.05$)、显著心理痛苦($OR=3.593$,95%CI 2.198~5.873;$P<0.05$)、家庭关怀度低($OR=3.815$,95%CI 2.381~6.113;$P<0.05$)均为老年 PSD 患者摄食训练不依从的危险因素,受教育程度为大专及以上则为保护因素($OR=0.360$,95%CI 0.099~0.794;$P<0.05$)。摄食训练完全依从者对技能及知识的吞咽障碍护理需求评分均显著高于部分依从及不依从者($P<0.05$),部分依从者评分则高于不依从者($P<0.05$)。Spearman 秩相关分析显示,老年 PSD 患者摄食训练依从性与技能及知识吞咽障碍护理需求均呈显著正相关($r=0.744$,0.705;$P<0.05$)。**结论** 技能及知识护理需求越高的老年 PSD 患者摄食训练依从性越好,年龄≥70 岁、存在显著心理痛苦及家庭关怀度低更易出现摄食训练不依从,受教育程度为大专及以上者不易出现不依从,可为老年 PSD 患者摄食训练管理提供参考信息。

【关键词】 老年人;脑卒中后吞咽障碍;摄食训练;依从性;护理需求

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Correlation between feeding training compliance and skill nursing needs for elderly patients with post-stroke dysphagia

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【Abstract】 **Objective** To investigate the compliance of feeding training in elderly patients with post-stroke dysphagia (PSD), and to analyze its association with skill nursing needs. **Methods** A total of 242 elderly PSD patients receiving feeding training in our hospital from January 2023 to December 2023 were enrolled in this study. Our questionnaires were distributed to all of the participants, and 236 (236/242) valid questionnaire were collected, with an effective recovery rate of 97.52%. According to training compliance assessed by the time and frequency of feeding training completion, the patients were divided into complete compliance (completion time and frequency ≥70%), partial compliance (40%≤ completion time and frequency <70%) and non-compliance (completion time and frequency <40%). The participants with complete and partial compliance were included into a good compliance group, and those with non-compliance into a non-compliance group. Nursing needs questionnaire for patients with dysphagia was used to assess the nursing needs of elderly PSD patients for dysphagia physiology, safety, skill, knowledge and social support. Multivariate logistic stepwise regression analysis was adopted to assess the risk factors of feeding training non-compliance in elderly PSD patients. Spearman rank correlation analysis was performed to evaluate the correlation between feeding training compliance and nursing needs of various dimensions in elderly PSD patients. SPSS statistics 25.0 was used for statistical analysis. Data comparison between two groups was performed using t test, One-way ANOVA or χ^2 test depending on data type. **Results** Among the 236 elderly PSD patients, there were 104 cases (44.07%) of complete compliance, 74 cases (31.35%) of partial compliance and 58 cases (24.58%) of non-compliance. Statistical differences were observed between non-compliance group and good compliance group in terms of age, education level, significant

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psychological distress and low family caring (all $P<0.05$). Multivariate logistic stepwise regression analysis showed that age ≥70 years ($OR=2.710$, 95%CI 1.456-5.046; $P<0.05$), significant psychological distress ($OR=3.593$, 95%CI 2.198-5.873; $P<0.05$), and low degree of family caring ($OR=3.815$, 95%CI 2.381-6.113; $P<0.05$) were risk factors for feeding training non-compliance in elderly PSD patients, and education level of junior college or above ($OR=0.360$, 95%CI 0.099-0.794; $P<0.05$) was a protective factor. The scores of dysphagia nursing needs for skill and knowledge in the patients with complete feeding training compliance were significantly higher than those in patients with partial compliance and non-compliance ($P<0.05$), and the scores were notably higher in patients with partial compliance than those with non-compliance ($P<0.05$). Spearman rank correlation analysis suggested that the feeding training compliance was positively correlated with dysphagia nursing needs for skill and knowledge in elderly PSD patients ($r=0.744$, 0.705; $P<0.05$). **Conclusion** The higher the skill and knowledge nursing needs of elderly PSD patients, the better the compliance of feeding training. The patients aged ≥70 years, with significant psychological distress, and low degree of family caring are more likely to have feeding training non-compliance, and the patients with education level of junior college or above are less likely to have non-compliance, which can provide reference for management of feeding training in elderly PSD patients.

【Key words】 aged; post-stroke dysphagia; feeding training; compliance; nursing needs

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脑卒中是全球范围内致死率及致残率最高的疾病之一,老年人群为脑卒中的好发群体,患者经积极救治后常遗留神经损伤后遗症,脑卒中后吞咽障碍(post-stroke dysphagia, PSD)为常见的后遗症之一[1]。PSD可引起营养不良、卒中相关性肺炎等严重并发症,规范的摄食训练是促进PSD转归的关键,但目前老年患者的训练依从性不理想[2]。有研究指出,老年脑卒中患者康复训练依从性不良现象较为常见,使康复效果下降,是导致转归不佳及预后差的重要原因,值得临床重视[3]。但目前对于老年PSD患者摄食训练依从性不佳的影响因素较多,缺乏统一定论,不利于老年PSD的康复管理。另有报道指出,对康复锻炼及疾病理论知识、技能等的需求越高者,越能主动接受康复锻炼,依从性更佳[4]。基于此,本研究对老年PSD患者摄食训练依从性的影响因素展开调查,并分析其与对吞咽障碍知识、技能等护理需求的相关性,为老年PSD患者的摄食训练管理提供参考数据。

1 对象与方法

1.1 研究对象

选取2023年1月至2023年12月在邯郸市第一医院行摄食训练的242例老年PSD患者为研究对象。纳入标准:首次发生脑卒中,脑卒中诊断符合《中国各类主要脑血管病诊断要点2019》[5],且经影像学检查确认处于恢复期(卒中后2~6个月);吞咽障碍参考《中国卒中吞咽障碍与营养管理手册》[6](以下简称管理手册),使用电视透视吞咽功能检查确诊,洼田饮水试验2级或3级;年龄≥60岁;意识清醒,无视听功能障碍,能配合摄食训练及问卷调查;获得患者知情同意且签署纸质版知情同意书。排除标准:脑卒中发病前存在进食障碍;存在严重口腔及咽喉疾病等非脑卒中相关吞咽障碍;合并心力衰竭、肾功能衰竭等重要器官功能不全;合并发热、肺部感染;行气管切开治疗;合并精神分裂症等精神疾病;认知功能障碍。剔除标准:不配合行问卷调查或填写问卷为无效问卷。对老年PSD患者共发放242份问卷,剔除2例所有选项均为单一项及4例正反问项矛盾的无效问卷,共收回有效问卷236份(97.52%)。本研究获得邯郸市第一医院医学伦理委员会审批(伦理批号:202210-HD-012)。

1.2 方法

1.2.1 摄食训练 参考管理手册[6],对老年PSD患者行摄食训练,训练时需以30°~60°半坐卧位或端坐位,偏瘫侧肩部加软枕,使头偏向健侧;指导患者行低头、仰头、侧方等不同吞咽姿势练习,使用柠檬酸或白醋刺激软腭、咽后壁及舌根,促进吞咽感觉;并给予头颈部肌肉放松训练、舌肌康复训练、咽部康复训练、咳嗽训练、呼吸训练及气道保护训练等吞咽辅助训练;每次摄食训练30~60 min,2次/d(上午及下午各1次),连续训练4周。

1.2.2 依从性评估 目前国内外并无针对吞咽障碍患者摄食训练依从性的评估标准,本研究参考既往文献[7],以完成摄食训练时间及次数评估依从性,摄食训练时间及次数参考电子病历系统中的护理日志及患者自我报告,记录过去4周训练完成的时间及次数,每次摄食训练达到60 min且每日训练次数达到2次为100%,基于既往研究以完成时间及次数将依从性分级[7],分为完全依从(完成时间及次数≥70%)、部分依从(40%≤完成时间及次数<70%)及不依从(完成时间及次数<40%),将完全依从及部分依从患者纳入良好依从组,不依从患者纳入不依从组。

1.2.3 心理痛苦调查 使用心理痛苦温度计法[8]测量心理痛苦,该测量方法为视觉模拟直尺式的单条目自评量表,评分范围为0~10分,≥4分被认为

存在显著心理痛苦。

1.2.4 家庭关怀度调查 使用家庭关怀度指数问卷(adaptation partnership growth affection and resolve index, APGAR)[9]调查,该问卷包含 5 个项目,采用 0(几乎很少)~2 分(经常这样)计分,总分 0~10 分,量表Cronbach′s α 系数为 0.89,重测信度为 0.73,得分≤3 分被认为家庭关怀度低。

1.2.5 认知功能评估 使用蒙特利尔认知评估量表(Montreal cognitive assessment, MoCA)[10]评估认知功能,MoCA 总分 30 分,其中受教育年限≤12 年者在实际 MoCA 总分的基础上加 1 分,得分越低提示认知功能损害越严重。

1.2.6 吞咽障碍护理需求调查 使用《吞咽障碍患者护理需求问卷》[11],该问卷由我国学者官小莉编制,包含对吞咽障碍的生理需求、安全需求、技能需求、知识需求及社会支持需求共 5 个维度,20 个条目,各条目以 1(不需要)~5 分(非常需要)计分,各维度总得分/维度条目数为各维度最终得分,问卷的 Cronbach′s α 系数为 0.73,重测信度为 0.96,具有较高信效度。

1.2.7 资料收集 查阅电子病历系统,记录老年 PSD 患者性别、年龄、脑卒中类型等基线资料。

1.3 统计学处理

采用 SPSS 25.0 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,两组间比较采用独立样本 t 检验,多组间比较采用单因素方差分析,检验有意义者,组间两两比较采用 *SNK-q* 检验;计数资料用例数(百分率)表示,采用 χ^2 检验。采用多因素 logistic 逐步回归分析老年 PSD 患者摄食训练不依从的影响因素,采用 Spearman 秩相关分析评估老年 PSD 患者摄食训练依从性与各维度护理需求的相关性。P<0.05 为差异有统计学意义。

2 结 果

2.1 老年 PSD 患者摄食训练依从性

236 例老年 PSD 患者完全依从 104 例(44.07%),部分依从 74 例(31.35%),不依从 58 例(24.58%)。完全依从+部分依从共 178 例患者纳入良好依从组,58 例不依从者纳入不依从组。

2.2 两组患者一般资料

两组患者年龄、受教育程度、显著心理痛苦及家庭关怀度低比较,差异均有统计学意义(P<0.05;表 1)。

2.3 老年 PSD 患者摄食训练不依从的影响因素

以不依从作为因变量,上述有统计学意义的指标作为自变量,其中受教育程度为多分类变量,设置小学及以下为哑变量,行多因素 logistic 逐步回归分析,结果显示,年龄≥70 岁、显著心理痛苦、家庭关怀度低均为老年 PSD 患者摄食训练不依从的危险因素(P<0.05),受教育程度为大专及以上则为保护因素(P<0.05;表 2)。

2.4 不同摄食训练依从性患者对吞咽障碍的护理需求

老年 PSD 患者中,摄食训练完全依从者对技能及知识的吞咽障碍护理需求评分均显著高于部分依从及不依从者(P<0.05),部分依从者评分则高于不依从者(P<0.05;表 3)。

2.5 老年 PSD 患者摄食训练依从性与吞咽障碍护理需求的相关性

Spearman 秩相关分析显示,老年 PSD 患者摄食训练依从性与技能及知识吞咽障碍护理需求均呈显著正相关(r=0.744,0.705;P<0.05)。

3 讨 论

PSD 在脑卒中的患病率为 50%~67%,是造成卒中后肺炎的主要原因,使患者死亡风险增加[12]。摄食训练是促进患者吞咽功能恢复的有效措施,而依从性是影响摄食训练效果的关键,老年 PSD 患者由于身体素质相对较差、心理压力大,训练依从性不及中青年患者[13]。本研究 236 例老年 PSD 患者摄食训练完全依从率未过半(44.07%),不依从率为 24.58%,提示其摄食训练依从性值得临床重视。

据文献报道,年龄是影响康复锻炼依从性的主要因素之一,高龄患者常受记忆力减退、接受能力较差、悲观情绪较重等因素影响,依从性较差[14]。本研究结果也发现,年龄≥70 岁为老年 PSD 患者摄食训练不依从的危险因素,可能与年龄较高的老年患者对摄食训练的接受度较低、或对日后吞咽功能转归的期待较低有关[15]。心理痛苦是指包含沮丧、孤独、绝望等一系列负性情绪的心理反应,为个体在心理层面经历的不适及痛苦,老年慢性疾病患者受生理机能下降及医疗经济负担加重等影响,常担忧对子女及家庭造成沉重负担,而出现较为强烈的心理痛苦[16]。本研究结果显示,显著心理痛苦是老年 PSD 患者摄食训练不依从的危险因素。分析其原因可能为心理痛苦强烈的老年 PSD 患者可因悲观、绝望等负性情绪对康复锻炼及预后转归丧失期待与信心,并出现自我排斥感,而不愿接受摄食训练,导致依从性不佳[17]。不仅如此,本研究中,家庭关怀度低也是摄食训练不依从的危险因素,考虑是因为家庭关怀度较高的家庭氛围以积极、正向为主,家庭成员常督促患者积极治疗及康复锻炼,对提升依从性有利,家庭关怀度低的老年 PSD 患者失去家庭

表1 两组患者一般资料比较

Table 1 Comparison of general data between two groups

Item	Non-compliance group (n=58)	Good compliance group (n=178)	χ^2/t	Pvalue
Gender[n(%)]			3.447	0.063
Male	32(55.17)	122(68.54)		
Female	26(44.83)	56(31.46)		
Age[n(%)]			13.678	<0.001
60-70 years	24(41.38)	122(68.54)		
≥70 years	34(58.62)	56(31.46)		
Body mass index[n(%)]			0.532	0.766
≤18.5 kg/m^2	12(20.69)	30(16.85)		
18.5-23.9 kg/m^2	40(68.97)	126(70.79)		
>23.9 kg/m^2	6(10.34)	22(12.36)		
Education level[n(%)]			9.504	0.009
Primary school or below	20(34.48)	52(29.21)		
Junior and senior high school	31(53.45)	80(44.94)		
Junior college or above	7(12.07)	46(25.84)		
Marital status[n(%)]			1.277	0.258
Married	40(68.97)	136(76.40)		
Unmarried/divorced/widowed	18(31.03)	42(23.60)		
Payment method of medical expenses[n(%)]			2.495	0.476
Medical insurance for urban employees/residents	22(37.93)	58(32.58)		
New rural cooperative medical system	20(34.48)	52(29.21)		
Commercial insurance	8(13.79)	40(22.47)		
Self-paying	8(13.79)	28(15.73)		
Hypertension[n(%)]	30(51.72)	80(44.94)	0.808	0.369
Diabetes mellitus[n(%)]	10(17.24)	18(10.11)	2.126	0.145
Dyslipidemia[n(%)]	8(13.79)	14(7.87)	1.819	0.177
Stroke type[n(%)]			0.183	0.669
Hemorrhagic	22(37.93)	62(34.83)		
Ischemic	36(62.07)	116(65.17)		
Water swallow test[n(%)]			1.115	0.291
Grade 2	26(44.83)	94(52.81)		
Grade 3	32(55.17)	84(47.19)		
Significant psychological distress[n(%)]	36(62.07)	52(29.21)	20.194	<0.001
Low degree of family caring[n(%)]	32(55.17)	38(21.35)	23.989	<0.001
MoCA(points, $\bar{x}\pm s$)	27.47±0.85	27.65±0.81	1.452	0.148

MoCA: Montreal cognitive assessment.

表2 摄食训练不依从的logistic回归分析

Table 2 Logistic regression analysis of feeding training non-compliance

Factor	β	SE	$Wald\ \chi^2$	P value	OR	95%CI
Age≥70 years	0.997	0.316	9.954	0.002	2.710	1.456-5.046
Education level of junior college or above	-1.022	0.287	12.681	<0.001	0.360	0.099-0.794
Significant psychological distress	1.279	0.339	14.234	<0.001	3.593	2.198-5.873
Low degree of family caring	1.339	0.345	15.063	<0.001	3.815	2.381-6.113

表3 依从性不同者各维度吞咽障碍护理需求评分比较

Table 3 Comparison of dysphagia nursing needs scores among patients with different compliance status (points, $\bar{x}\pm s$)

Compliance	n	Physiology	Safety	Skill	Knowledge	Social support
Complete compliance	104	4.40±0.37	4.23±0.42	4.51±0.39	4.50±0.37	4.06±0.45
Partial compliance	74	4.31±0.39	4.19±0.44	3.92±0.50*	4.01±0.49*	3.99±0.51
Non-compliance	58	4.29±0.41	4.07±0.45	3.27±0.53$^{*\#}$	3.32±0.51$^{*\#}$	3.97±0.52
F		1.945	2.573	136.079	130.591	0.789
P value		0.145	0.079	<0.001	<0.001	0.456

Compared with complete compliance, $^*P$<0.05; compared with partial compliance, $^\#P$<0.05.

成员的关怀及支持,易出现依从性下降[18]。受教育程度是影响患者对医疗手段接受度的重要原因,受教育程度较高者更易理解康复锻炼的优点及重要性,而主动完成康复锻炼[19]。本研究结果发现,受教育程度为大专及以上是摄食训练不依从的保护因素,可能与大专及以上的老年 PSD 患者对摄食训练的理解及接受度较高从而依从性良好有关。

研究发现,患者对疾病及诊疗理论知识、技能等的需求水平可影响其诊疗积极性与主动性,需求越高者自主学习动机越强,渴望疾病转归的意愿迫切,对诊疗的主动性越强,与医护配合度良好[20]。本研究结果发现,老年 PSD 患者摄食训练依从性与技能及知识吞咽障碍护理需求均呈显著正相关,提示对技能及知识需求水平越高者摄食训练主动性越好,依从性越高,与上述报道相似。因此,临床可根据“因需施教”原则,若老年 PSD 患者调查显示对技能及知识护理需求水平较低,应避免高强度地单向输出式教育,可先通过心理干预及(或)联合家属的家庭支持,纠正其对摄食训练的排斥、消积等负性情绪,待患者需求水平升高后,再为其提供技能及知识相关教育,且注意对受教育程度较低者使用通俗易懂的语言宣教,避免难懂、难记等造成患者对训练及健康教育的排斥情绪,对技能及知识护理需求水平较高者则可直接提供技能及知识相关的摄食训练操作及理论知识。然而,本研究作为单中心小样本量研究,代表性有所欠缺,未来还需联合其他医疗机构,开展多中心大样本量研究,对本研究结果加以验证。

综上,年龄、心理痛苦、家庭关怀度及受教育程度是影响老年 PSD 患者摄食训练依从性的关键因素,技能及知识护理需求水平也与其摄食训练依从性具有相关性,可为老年 PSD 的临床管理提供参考数据。

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