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### 【临床研究】

# 舌三针联合中药冰棒咽部冷刺激治疗脑卒中后吞咽障碍疗效观察

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**摘要:** 目的 观察舌三针联合中药冰棒咽部冷刺激治疗脑卒中后吞咽障碍的疗效。方法 选择2018年6月至2021年6月南阳医学高等专科学校第二附属医院收治的106例脑卒中后吞咽障碍患者为研究对象,根据治疗方法将患者分为对照组( $n=53$ )和观察组( $n=53$ )。对照组患者给予常规药物配合吞咽功能训练治疗,观察组患者在对照组治疗基础上给予舌三针联合中药冰棒咽部冷刺激,2组患者均治疗1个月。比较2组患者治疗前后的中医症候积分、吞咽功能、舌骨喉复合体动度、生活质量及治疗后的临床疗效和并发症发生率。**结果** 治疗前2组患者的中医症候积分比较差异无统计学意义( $P>0.05$ );2组患者治疗后的中医症候积分均显著低于治疗前( $P<0.05$ );治疗后,观察组患者的中医症候积分显著低于对照组( $P<0.05$ )。治疗前2组患者吞咽功能分级分布比较差异无统计学意义( $Z=-0.824, P>0.05$ );2组患者治疗后吞咽功能分级分布情况较治疗前改善( $Z=-5.165, -7.463, P<0.05$ );治疗后,观察组患者吞咽功能分级分布情况优于对照组( $Z=-3.167, P<0.05$ )。治疗前2组患者舌骨喉复合体动度比较差异无统计学意义( $P>0.05$ );2组患者治疗后舌骨喉复合体动度显著大于治疗前( $P<0.05$ );治疗后,观察组患者舌骨喉复合体动度显著大于对照组( $P<0.05$ )。治疗前2组患者的吞咽生活质量(SWAL-QOL)评分比较差异无统计学意义( $P>0.05$ );2组患者治疗后SWAL-QOL评分显著高于治疗前( $P<0.05$ );治疗后,观察组患者SWAL-QOL评分显著高于对照组( $P<0.05$ )。对照组和观察组患者治疗总有效率分别为73.58%(39/53)、92.45%(49/53),观察组患者总有效率显著高于对照组( $\chi^2=6.692, P<0.05$ )。对照组与观察组患者并发症总发生率分别为20.75%(11/53)、5.66%(3/53),观察组患者并发症总发生率显著低于对照组( $\chi^2=5.267, P<0.05$ )。**结论** 舌三针联合中药冰棒咽部冷刺激治疗脑卒中后吞咽障碍可更有效地改善患者的临床症状,提高患者的临床疗效、吞咽功能和生活质量,加快舌骨喉复合体动度,降低并发症发生率。

**关键词：** 舌三针；中药冰棒咽部冷刺激；脑卒中；吞咽障碍

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## Therapeutic effect of tongue three acupuncture combined with cold stimulation of the pharynx of Chinese medicine popsicle for dysphagia after stroke

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**Abstract:** **Objective** To observe the therapeutic effect of tongue three acupuncture combined with cold stimulation of the pharynx of Chinese medicine popsicle for dysphagia after stroke. **Methods** A total of 106 patients with dysphagia after stroke admitted to the Second Affiliated Hospital of Nanyang Medical College from June 2018 to June 2021 were selected as the study subjects, and the patients were divided into the control group ( $n = 53$ ) and the observation group ( $n = 53$ ) according to the treatment method. The patients in the control group were treated with conventional drugs combined with swallowing function training. On the basis of treatment of the control group, the patients in the observation group were treated with tongue three acupuncture combined with cold stimulation of the pharynx with Chinese medicine popsicle. All patients were treated for one month. The traditional Chinese medicine (TCM) symptom scores, swallowing function, mobility of hyoid laryngeal complex, quality of life of patients were compared between the two groups before and after treatment; the clinical efficacy after treatment and the incidence of complications were compared between the two groups. **Results** There was no significant difference in

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TCM symptom scores of patients between the two groups before treatment ( $P > 0.05$ ); the TCM symptom scores of patients after treatment were significantly lower than those before treatment in the two groups ( $P < 0.05$ ); the TCM symptom scores of patients in the observation group were significantly lower than those in the control group after treatment ( $P < 0.05$ ). There was no significant difference in the distribution of swallowing function grading of patients between the two groups before treatment ( $Z = -0.824, P > 0.05$ ); the distribution of swallowing function grading of patients after treatment was better than that before treatment in the two groups ( $Z = -5.165, -7.463; P < 0.05$ ); after treatment, the distribution of swallowing function grading of patients in the observation group was better than that in the control group ( $Z = -3.167, P < 0.05$ ). There was no significant difference in the mobility of the hyoid laryngeal complex of patients between the two groups before treatment ( $P > 0.05$ ); the mobility of the hyoid laryngeal complex of patients after treatment was significantly higher than that before treatment in the two groups ( $P < 0.05$ ); the mobility of the hyoid laryngeal complex of patients in the observation group was significantly higher than that in the control group after treatment ( $P < 0.05$ ). There was no significant difference in swallowing-quality of life (SWAL-QOL) scores of patients between the two groups before treatment ( $P > 0.05$ ); the SWAL-QOL score of patients after treatment was significantly higher than that before treatment in the two groups ( $P < 0.05$ ); the SWAL-QOL score of patients in the observation group was significantly higher than that in the control group after treatment ( $P < 0.05$ ). The total effective rates of patients in the control group and the observation group were 73.58% (39/53) and 92.45% (49/53), respectively; the total effective rate of patients in the observation group was significantly higher than that in the control group ( $\chi^2 = 6.692, P < 0.05$ ). The total incidence of complications of patients in the control group and the observation group were 20.75% (11/53) and 5.66% (3/53), respectively; the total incidence of complications of patients in the observation group was significantly lower than that in the control group ( $\chi^2 = 5.267, P < 0.05$ ). **Conclusion** Tongue three acupuncture combined with cold stimulation of popsicle pharynx in the treatment of dysphagia after stroke can effectively improve the clinical symptoms, the clinical efficacy, swallowing function and quality of life of patients, accelerate the mobility of hyoid laryngeal complex, and reduce the incidence of complications.

**Key words:** tongue three acupuncture; Chinese medicine popsicle throat cold stimulation; stroke; dysphagia

脑卒中是一种发病率高、预后差的脑血管疾病, 50% 以上的患者伴有吞咽障碍后遗症<sup>[1]</sup>。吞咽障碍是指患者舌部及下颚等部位功能配合出现障碍, 导致经口进食困难, 可影响患者食物摄取及营养物质吸收, 严重者可导致患者发生误吸, 引起肺部感染, 增加死亡发生风险, 已成为影响脑卒中患者生活质量严重的后遗症之一<sup>[2-3]</sup>。目前, 西医关于脑卒中后吞咽障碍暂无有效治疗药物, 常采用常规药物、重复经颅刺激、吞咽功能训练等治疗措施, 但治疗效果有限<sup>[4]</sup>。舌三针是一种取穴少而精确的针灸方式, 疗效显著, 已成为治疗脑卒中后吞咽障碍的有效方式之一<sup>[5]</sup>。中药冰棒咽部冷刺激在脑卒中后吞咽障碍的治疗中具有操作简便、患者痛苦小的优势, 且可改善患者的吞咽功能<sup>[6]</sup>。但临床上关于舌三针联合中药冰棒咽部冷刺激治疗脑卒中后吞咽障碍的研究较少, 故本研究探讨舌三针联合中药冰棒咽部冷刺激对脑卒中后吞咽障碍患者的疗效, 以期对脑卒中后吞咽障碍患者治疗方案的制定提供参考。

## 1 资料与方法

**1.1 一般资料** 选择南阳医学高等专科学校第二附属医院 2018 年 6 月至 2021 年 6 月收治的 106 例脑卒中后吞咽障碍患者为研究对象, 根据治疗方法

将患者分为对照组 ( $n = 53$ ) 和观察组 ( $n = 53$ )。病例纳入标准: (1) 符合《中国脑血管病防治指南》<sup>[7]</sup>、《中风病中医诊断、疗效评定标准》<sup>[8]</sup> 中脑卒中后吞咽障碍的诊断标准; (2) 吞咽障碍发生在脑卒中发病后 3 个月内; (3) 患者神志清楚, 无发热及肺部感染, 生命体征平稳; (4) 首次发病; (5) 患者能理解医护人员的指令, 简易智力测试量表<sup>[9]</sup> 评分  $> 7$  分; (6) 年龄 40 ~ 80 岁; (7) 患者及家属签署知情同意书。排除标准: (1) 有严重出血性功能障碍者; (2) 存在认知障碍; (3) 针刺晕针; (4) 伴有咽喉部肌肉疾病或咽喉炎症者; (5) 伴有咽喉占位或咽喉部机械性狭窄疾病; (6) 存在精神疾病者; (7) 存在严重脏器衰竭者。对照组: 男 37 例, 女 16 例; 年龄 48 ~ 78 ( $63.84 \pm 9.43$ ) 岁; 病程 10 ~ 45 ( $25.43 \pm 5.26$ ) d; 合并基础疾病: 糖尿病 6 例, 高血压 8 例, 高脂血症 12 例。观察组: 男 39 例, 女 14 例; 年龄 48 ~ 78 ( $63.84 \pm 9.43$ ) 岁; 病程 10 ~ 45 ( $25.35 \pm 5.19$ ) d; 合并基础疾病: 糖尿病 7 例, 高血压 8 例, 高脂血症 11 例。2 组患者的性别、年龄、病程、合并基础疾病比较差异无统计学意义 ( $P > 0.05$ ), 具有可比性。本研究获得医院医学伦理委员会审核批准。

**1.2 治疗方法** 对照组患者给予清除氧自由基、促进脑代谢、营养神经等药物治疗, 并配合吞咽功能训

练,包括深呼吸、进食、唇舌肌运动等训练,每次训练40 min,每周训练6次,连续治疗1个月。观察组患者在对照组治疗基础上给予舌三针联合中药冰棒咽部冷刺激治疗。舌三针的具体操作如下:患者取仰卧位,身体呈放松状态,取患者上廉泉穴及其左右各2.5 cm的地方进行针刺,每次20 min,每周5次。中药冰棒咽部冷刺激在患者空腹或餐后2 h时进行,中药处方为石菖蒲、茯苓各15 g,红花、枳实各12 g,半夏、橘红、桃仁、制南星、竹茹各9 g,甘草3 g。上述中药熬制成浓煎剂,将无菌棉棒在药汁中浸湿,然后放入冰箱制成冰棉棒,然后在患者软腭、悬雍垂、舌后跟、双侧腭咽弓处这5个部位进行涂擦刺激,依次涂擦刺激这5个部位为1组,1组结束后更换另1组冰棉棒,共10组,每次15 min,每日2次,连续治疗1个月。

**1.3 观察指标** (1)分别于治疗前后参考《中药新药临床研究指导原则(试行)》<sup>[10]</sup>评估2组患者的中医症候积分,患者得分越高代表症状越严重。(2)临床疗效:治疗后参考文献[11]中的标准评估2组患者的临床疗效。治愈:症候积分减少 $\geq 95\%$ ,吞咽障碍消失或基本消失;显效:患者证候积分减少70%~94%,吞咽障碍明显改善;有效:患者证候积分减少30%~69%,吞咽障碍有所好转;无效:患者证候积分减少 $< 30\%$ ,吞咽障碍未改善或加重。(3)吞咽功能:分别于治疗前后采用洼田饮水试验<sup>[12]</sup>评估2组患者的吞咽功能。患者取坐位或半卧位,取30 mL温开水,根据患者将温水吞下的过程将吞咽功能分为I~V级。I级:患者1次就顺利将水饮下,无呛咳;II级:患者将水分2次顺利饮下,无呛咳;III级:患者将水1次饮下,但发生呛咳;IV级:患者将水分2次及以上饮下,且发生呛咳;V级:患者无法将水吞下,且频繁发生呛咳。(4)舌骨喉复合体动度:分别于治疗前后采用吞咽造影检查患者舌骨喉复合体动度。患者取直立体位,直视前方,测量患者舌骨前移、舌骨上移、甲状软骨前移、甲状软骨上移情况。(5)生活质量:分别于治疗前后采用吞咽生活质量量表(swallowing-quality of life, SWAL-QOL)<sup>[13]</sup>评估患者的生活质量,得分越高,代表生活质量越好。(6)并发症:记录2组患者治疗期间并发症发生情况,计算并发症发生率。

**1.4 统计学处理** 应用SPSS 27.0软件进行数据处理与分析。计数资料以例数和百分率表示,组间比较采用 $\chi^2$ 检验;等级计数资料比较采用秩和检验;计量资料以均数 $\pm$ 标准差( $\bar{x} \pm s$ )表示,组间比较采用 $t$ 检验; $P < 0.05$ 为差异有统计学意义。

2 结果

**2.1 2组患者中医症候积分比较** 结果见表1。治疗前2组患者的中医症候积分比较差异无统计学意义( $P > 0.05$ )。2组患者治疗后的中医症候积分均显著低于治疗前,差异有统计学意义( $P < 0.05$ )。治疗后,观察组患者的中医症候积分显著低于对照组,差异有统计学意义( $P < 0.05$ )。

表1 2组患者中医症候积分比较  
Tab.1 Comparison of traditional Chinese medical symptom scores of patients between the two groups ( $\bar{x} \pm s$ )

组别	n	中医症候积分			
		吞咽困难	肢体偏瘫	舌强语謇	饮水呛咳
对照组	53				
治疗前		3.41 ± 0.52	3.26 ± 0.46	3.45 ± 0.47	3.52 ± 0.43
治疗后		1.78 ± 0.31 <sup>a</sup>	1.81 ± 0.21 <sup>a</sup>	1.87 ± 0.36 <sup>a</sup>	1.97 ± 0.38 <sup>a</sup>
观察组	53				
治疗前		3.43 ± 0.48	3.31 ± 0.51	3.42 ± 0.44	3.49 ± 0.46
治疗后		0.89 ± 0.24 <sup>ab</sup>	1.01 ± 0.16 <sup>ab</sup>	0.98 ± 0.23 <sup>ab</sup>	1.08 ± 0.25 <sup>ab</sup>

注:与治疗前比较<sup>a</sup> $P < 0.05$ ;与对照组比较<sup>b</sup> $P < 0.05$ 。

**2.2 2组患者临床疗效比较** 对照组患者治愈6例,显效17例,有效16例,无效14例,总有效率为73.58% (39/53);观察组患者治愈15例,显效20例,有效14例,无效4例,总有效率为92.45% (49/53)。观察组患者总有效率显著高于对照组,差异有统计学意义( $\chi^2 = 6.692, P < 0.05$ )。

**2.3 2组患者吞咽功能比较** 结果见表2。治疗前2组患者吞咽功能分级分布情况比较差异无统计学意义( $Z = -0.824, P > 0.05$ )。2组患者治疗后吞咽功能分级分布情况较治疗前改善( $Z = -5.165, -7.463, P < 0.05$ )。治疗后,观察组患者吞咽功能分级分布情况优于对照组( $Z = -3.167, P < 0.05$ )。

表2 2组患者治疗前后吞咽功能分级  
Tab.2 Grade of swallowing function of patients in the two groups before and after treatment

组别	n	吞咽功能分级				
		I级/例	Ⅱ级/例	Ⅲ级/例	Ⅳ级/例	V级/例
对照组	53					
治疗前		0	0	4	27	22
治疗后		2	20	9	13	9
观察组	53					
治疗前		0	0	5	30	18
治疗后		7	29	10	3	4

**2.4 2组患者舌骨喉复合体动度比较** 结果见表3。治疗前2组患者舌骨喉复合体动度比较差异无统计学意义( $P > 0.05$ )。2组患者治疗后舌骨喉复合体动度显著大于治疗前,差异有统计学意义( $P < 0.05$ )。治疗后,观察组患者的舌骨喉复合体动度显著大于对照组,差异有统计学意义( $P < 0.05$ )。

表 3 2 组患者舌骨喉复合体动度比较

Tab. 3 Comparison of hyoid laryngeal complex motion of patients between the two groups ( $\bar{x} \pm s$ )

组别	<i>n</i>	舌骨前移/mm	舌骨上移/mm	甲状软骨前移/mm	甲状软骨上移/mm
对照组	53				
治疗前		8.82 ± 2.13	10.39 ± 2.67	9.98 ± 2.53	14.89 ± 3.25
治疗后		27.24 ± 4.61 <sup>a</sup>	23.15 ± 5.02 <sup>a</sup>	20.84 ± 4.32 <sup>a</sup>	27.34 ± 5.46 <sup>a</sup>
观察组	53				
治疗前		8.57 ± 2.21	10.35 ± 2.74	10.03 ± 2.39	14.78 ± 3.18
治疗后		32.15 ± 4.83 <sup>ab</sup>	27.86 ± 4.87 <sup>ab</sup>	25.76 ± 4.13 <sup>ab</sup>	32.76 ± 5.22 <sup>ab</sup>

注:与治疗前比较<sup>a</sup> $P < 0.05$ ;与对照组比较<sup>b</sup> $P < 0.05$ 。

2.5 2 组患者生活质量比较 结果见表 4。治疗前 2 组患者的 SWAL-QOL 评分比较差异无统计学意义 ( $P > 0.05$ )。2 组患者治疗后 SWAL-QOL 评分显著高于治疗前,差异有统计学意义 ( $P < 0.05$ )。治疗后,观察组患者 SWAL-QOL 评分显著高于对照组,差异有统计学意义 ( $P < 0.05$ )。

表 4 2 组患者 SWAL-QOL 评分比较

Tab. 4 Comparison of SWAL-QOL scores of patients between the two groups ( $\bar{x} \pm s$ )

组别	n	SWAL-QOL 评分		t	P
		治疗前	治疗后		
对照组	53	116.74 ± 18.95	148.31 ± 19.71	8.406	<0.05
观察组	53	114.28 ± 17.64	162.55 ± 20.32	13.059	<0.05
t		0.692	3.662		
P		>0.05	<0.05		

2.6 2 组患者并发症发生率比较 对照组患者发生消化功能紊乱 4 例,营养不良 5 例,吸入性肺炎 2 例,并发症总发生率为 20.75% (11/53);观察组患者发生消化功能紊乱 1 例,营养不良 1 例,吸入性肺炎 1 例,并发症总发生率为 5.66% (3/53)。观察组患者并发症总发生率显著低于对照组,差异有统计学意义 ( $\chi^2 = 5.267, P < 0.05$ )。

3 讨论

脑卒中是一种由脑部血液循环障碍导致的脑组织损伤的一组疾病,患者可出现肢体麻木、口舌歪斜、视物模糊、言语不清等一系列症状,严重影响患者的生活质量<sup>[14]</sup>。吞咽障碍是脑卒中后常见的并发症,临床表现为构音障碍、吞咽困难、饮水呛咳等症状,影响患者正常进食,或患者进食时发生误吸,增加了营养不良、消化功能紊乱、吸入性肺炎等并发症发生风险,亦增加患者死亡风险<sup>[15]</sup>。目前,西医主要采用一些营养神经、清除自由基、促进脑代谢等药物促进神经功能恢复,再通过吞咽功能训练刺激患者感觉神经,提高患者吞咽部位神经敏感性,逐步恢复吞咽反射功能。但吞咽功能训练价格较为昂贵,很多患者负担不起,使其在临床中的应用受到限制<sup>[4]</sup>。近年来,中医学得到了快速发展,其将疾病

进行辨证论治,能做到标本兼治,且治疗方式具有针对性,操作简单,临床效果较好,为脑卒中后吞咽障碍的治疗带来新的契机。

脑卒中后吞咽障碍是现代医学理念,中医认为脑卒中后吞咽障碍属于“中风”、“喉痹”范畴,其病机在于外邪侵袭咽喉,痰瘀阻滞经络,导致舌部经络不通,喉舌功能受阻,属于痰瘀阻窍之证<sup>[16]</sup>;故采用舌三针联合中药冰棒咽部冷刺激治疗。舌三针是靳三针的一种,取患者上廉泉穴及其左右两穴,3 个穴位均位于咽喉部,针刺上述穴位能够调节阴阳、疏通经络、利咽通窍、活血益气<sup>[5]</sup>。中药冰棒咽部冷刺激方中石菖蒲具有醒神益智、开窍豁痰、活血祛湿的功效,红花能发挥活血通络、祛瘀的作用,枳实破气、化痰,半夏、橘红、制南星、竹茹燥湿化痰,桃仁活血祛瘀,茯苓与甘草益气、健脾,杜绝痰生,同时甘草能调和诸药,诸药合用共凑成利咽通窍、健脾益气、活络通经之效<sup>[6]</sup>。冰棒刺激患者软腭、悬雍垂、舌后跟、双侧腭咽弓等部位能增强脑皮质与脑干感知,且冷刺激能促进舌、咽部、口唇、软腭敏感度,有效强化吞咽反射,提高摄食-吞咽注意力,减少误吸<sup>[6]</sup>。本研究结果显示,治疗后,2 组患者的中医症候积分均显著低于治疗前,且观察组患者的中医症候积分显著低于对照组;另外,观察组患者的治疗总有效率显著高于对照组。该结果提示,舌三针联合中药冰棒咽部冷刺激治疗脑卒中后吞咽障碍可改善患者的临床症状,提高临床疗效。

欧秀君等<sup>[17]</sup>研究显示,舌三针辅助重复经颅刺激能有效改善患者的吞咽障碍,促进吞咽功能的恢复。陈可<sup>[18]</sup>研究显示,针灸联合中药冰刺激能有效改善吞咽障碍患者的神经功能,提高吞咽功能,且能明显改善患者的生活质量。本研究结果显示,治疗后,2 组患者的吞咽功能、舌骨喉复合体动度、生活质量均优于治疗前,且观察组优于对照组。提示舌三针联合中药冰棒咽部冷刺激治疗脑卒中后吞咽障碍可提高患者的吞咽功能和生活质量,加快舌骨喉复合体动度。其原因可能在于上廉泉及其左右穴位处分布有舌下神经感觉纤维、舌咽神经、迷走神经等,针刺能直接刺激上述神经组织,从而起到刺激中枢神经,促进吞咽反射恢复,提高吞咽功能的作用。中药冰棒冷刺激能加强吞咽过程中必需的神经肌肉活动及神经敏感性。吞咽功能的提高可进一步促进患者生活质量的改善。此外,本研究结果还显示,观察组患者并发症发生率显著低于对照组,提示舌三针联合中药冰棒咽部冷刺激治疗脑卒中后吞咽障碍能有效降低并发症发生率,这可能与吞咽功能的提

高有关。

综上所述,舌三针联合中药冰棒咽部冷刺激治疗脑卒中后吞咽障碍能更好地改善患者临床症状,提高患者的临床疗效、吞咽功能及生活质量,加快舌骨喉复合体动度,降低并发症发生率。

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