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慢性牙周炎与原发肝硬化的相关性分析*

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摘要 目的:探究慢性牙周炎与原发肝硬化之间的相关性。**方法:**选择2017年1月至2019年1月于我院接受治疗的60例原发性肝硬化患者为研究组,选择同期于我院接受体格检查的100例健康个体为对照组,对两组患者分别实施牙周检查,对比两组患者牙周炎发生率,分析吸烟、饮酒对牙周炎发生率影响,按照Child-改良分级法对肝硬化患者进行评分并分级,对比各级原发性肝硬化患者慢性牙周亚发生率,并就慢性牙周炎与肝硬化相关性进行分析。**结果:**(1)对照组慢性牙周炎发生率显著低于研究组慢性牙周炎发病率(44.00% vs. 71.67%, $P<0.05$);(2)研究组和对照组中吸烟者的慢性牙周炎患病率显著高于不吸烟者($P<0.05$),研究组中吸烟者发生慢性牙周炎患病率高于对照组,对比无统计学意义($P>0.05$);研究组和对照组饮酒者的慢性牙周炎患病率显著高于不饮酒者($P<0.05$),研究组中饮酒者发生慢性牙周炎患病率显著高于对照组($P<0.05$);(3)随着原发性肝硬化患者评分的升高,患者牙周炎患病率也随之上升,牙周附着丧失程度也出现加剧($P<0.05$)。**结论:**原发性肝硬化患者慢性牙周炎患病率高于健康个体,随着肝硬化患者病情的加剧,患者慢性牙周炎发生率也随之上升;另外,吸烟及饮酒会增加健康个体慢性牙周炎患病率。

关键词:慢性牙周炎;原发性肝硬化;相关性分析

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The Correlation Between Chronic Periodontitis and Primary Liver Cirrhosis*

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ABSTRACT Objective: To explore the correlation between chronic periodontitis and primary liver cirrhosis. **Methods:** Sixty patients with primary liver cirrhosis who were treated in our hospital from January 2017 to January 2019 were selected as the study group, and 100 healthy individuals who underwent physical examination in our hospital at the same time were selected as the control group. Periodontal examination was carried out in the two groups, and the incidence of periodontitis was compared between the two groups. The influence of smoking and drinking on the incidence of periodontitis was analyzed. The patients with cirrhosis were scored and graded according to Child-modified classification method. The incidence of chronic periodontal disease in patients with primary cirrhosis, and the correlation between chronic periodontitis and cirrhosis were analyzed. **Results:** (1) The incidence of chronic periodontitis in the control group was significantly lower than that in the study group (44.00% vs. 71.67%, $P<0.05$). (2) The prevalence of chronic periodontitis in smokers was significantly higher in the study group and the control group than that in the non-smokers ($P<0.05$). The prevalence of chronic periodontitis in the study group was higher than that in the control group, and the difference was not statistically significant ($P>0.05$). The prevalence of chronic periodontitis in drinkers was significantly higher in the study group and the control group than that in the non-drinkers ($P<0.05$). The prevalence of chronic periodontitis in the study group was significantly higher than that in the control group ($P<0.05$). (3) With the increase of the score of patients with primary cirrhosis, the prevalence of periodontitis also increased, and the degree of periodontal attachment loss also increased ($P<0.05$). **Conclusion:** The prevalence of chronic periodontitis in patients with primary cirrhosis is higher than that in healthy individuals, and the incidence of chronic periodontitis in patients with cirrhosis increases with the aggravation of the condition of patients with cirrhosis. Besides, smoking and drinking can increase the prevalence of chronic periodontitis in healthy individuals.

Key words: Chronic periodontitis; Primary cirrhosis of liver; Correlation analysis

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前言

牙周炎是一类由局部因素引起的牙周支持组织慢性感染性疾病,是口腔两大主要疾病之一,在世界范围内均有较高的

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患病率,国内牙周炎患病率在龋齿之上,是国内成人牙齿丧失的首位原因^[1]。据我国第3次口腔流行病学调查显示,我国90%以上的人群患有不同程度的慢性牙周炎,牙周炎在各年龄段均可发病,中老年人是慢性牙周炎的高发群体^[2]。牙周炎典型临床症状包括牙周溢脓、牙齿松动等,患者多伴有局部剧烈跳痛以及全身不适症状,会对个体正常生活造成较大影响,数据指出,随着我国社会老龄化趋势的不断显现,慢性牙周炎已经成为口腔健康的重要研究方向^[3,4]。原发性肝硬化是临床上常见的慢性进行性肝病,是在一种或多种因素反复作用下形成的弥漫型肝损伤,我国原发性肝硬化多为肝炎发展至后期所呈现的症状,原发性肝硬化患者可出现广泛性的肝细胞坏死、结缔组织增生和纤维隔,晚期肝硬化患者可出现上消化道出血、肝性脑病、脾功能亢进甚至癌变可能^[5,6]。对原发性肝硬化高危因素的认识和干预是提高患者预后的重要手段,也是延缓肝硬化进程的重要途径,近些年有研究指出,原发性肝硬化患者普遍存在微炎症状态,这种微炎症状态与肝脏病变存在密切联系,也是导致肝硬化的独立危险因素,已有数据表明,慢性牙周炎会增加机体的炎症负荷,牙周存在的细菌会加重机体炎症反应,激活免疫防御体系并导致免疫损伤,进而增加机体肝硬化发生几率^[7,8]。本文主要选择原发性肝硬化患者,研究其慢性牙周炎与原发性肝硬化之间的相关性,同时分析吸烟及饮酒对慢性牙周炎患病率的影响。

1 资料与方法

1.1 一般资料

选择2017年1月至2019年1月于我院接受治疗的60例原发性肝硬化患者为研究组,选择同期于我院接受体格检查的

100例健康个体为对照组,研究组患者中男性30例,女性30例,年龄37-59岁,平均年龄(43.26±3.15)岁,两组一般资料如性别、年龄等对比差异不具有统计学意义($P>0.05$),具有可比性。

纳入标准:(1)研究组患者均符合原发性肝硬化诊断标准^[9];(2)入组对象意识清晰能够配合进行调研;(3)年龄>30周岁;(4)病历资料齐全;(5)入组对象对本调研过程、方法、原理清楚明白并签署知情同意书;(6)调研经医院伦理学会批准实施。

排除标准:(1)合并精神疾病患者;(2)合并艾滋病、梅毒、糖尿病等疾病;(3)近6个月内接受牙周干预治疗者。

1.2 方法

采取现场调查问卷及口腔临床检查的方式对入组对象实施检查,采集两组一般临床资料,包括民族、文化程度、吸烟、饮酒情况等;对两组是否存在慢性牙周炎进行检测;按照Child-改良分级法对肝硬化患者进行评分并分级,将研究组患者分为5分、6分、7分、8分、9分、10分、11分和12分及以上几组,计算其牙周附着丧失程度及慢性牙周炎患病率^[10]。

1.3 观察指标及评测标准

1.3.1 两组慢性牙周炎患病率 对比两组慢性牙周炎患病率,慢性牙周炎参照如下诊断标准:牙龈有炎症。探诊出血,牙周袋≤4 mm,附着丧失1-2 mm,X线检查可示存在牙槽骨吸收,部分严重个体会出现牙齿松动或牙根分叉区域病变。

1.3.2 吸烟及饮酒对慢性牙周炎患病率影响 对比两组中吸烟、不吸烟、饮酒、不饮酒个体慢性牙周炎患病率。

1.3.3 不同程度原发性肝硬化患者慢性牙周炎患病率对比 按照Child-改良分级法对肝硬化患者进行评分并分级后,对比不同得分肝硬化个体慢性牙周炎患病率及牙周丧失程度,Child-改良分级法^[11]具体标准参照表1所示。

表1 Child-改良分级法
Table 1 Child-modified classification method

Clinical biochemical index	1 fraction	2 fraction	3 fraction
Hepatic encephalopathy (phase)	No	1-2	3-4
Ascites	No	Mild	Moderate to severe
Total bilirubin (μmol/L)	<34	34-51	>51
Albumin (g/L)	>35	28-35	<28
Prothrombin time extension (seconds)	<4	4-6	>6

1.4 统计学方法

使用SPSS19.0对采集的数据实施分析,计数资料以率(%)的形式表示,采用卡方检验,计量资料以($\bar{x} \pm s$)的形式表示,采用t检验,以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 两组个体慢性牙周炎患病率对比

经评估对比,对照组慢性牙周炎发生率为44.00%(44/100),研究组慢性牙周炎发病率为71.67%(43/60),两组对比差异具有统计学意义($\chi^2=11.57, P<0.05$)。

2.2 吸烟及饮酒对慢性牙周炎患病率影响

分析显示,研究组和对照组中吸烟者的慢性牙周炎患病率显著高于不吸烟者($P<0.05$),研究组中吸烟者发生慢性牙周炎

患病率高于对照组,对比无统计学意义($P>0.05$);研究组和对照组饮酒者的慢性牙周炎患病率显著高于不饮酒者($P<0.05$),研究组中饮酒者发生慢性牙周炎患病率显著高于对照组($P<0.05$),如表2所示。

2.3 不同程度原发性肝硬化患者慢性牙周炎患病率对比

按照Child-改良分级法对肝硬化患者进行评分并分级后发现,随着原发性肝硬化患者评分的升高,患者牙周炎患病率也随之上升,牙周附着丧失程度也出现加剧($P<0.05$),如表3所示。

3 讨论

牙周病是指发生于有牙周支持组织(如牙龈、牙槽骨、牙骨质)等部位的疾病,包括牙龈病和牙周炎两大类,其中牙龈病是

指局限于牙龈组织的疾病,好发于未出现附着丧失的牙周组织或虽出现附着丧失但附着水平稳定的牙周组织,故牙龈病一般不会对机体造成全身系统性的炎症负荷^[12,13]。而牙周炎则主要指累及牙周支持组织的炎症改变,一般会对牙周结缔组织或牙槽骨造成一定损伤,也会引起机体炎症负荷升高。患有牙周炎的患者多存在牙周膜、牙骨质的慢性感染,其血管通透性升高,

在刷牙或咀嚼时病菌易进入血液,形成一过性的菌血症,加重机体炎性反应,同时慢性牙周炎患者血清炎症因子诸如白细胞介素、肿瘤坏死因子等水平也显著高于健康个体^[14,15]。已有的研究证实,慢性牙周炎与机体多种疾病存在关联,会增加诸如肺部感染、类风湿性关节炎、慢性肾病等系统性疾病的发生率,但该病与原发性肝硬化之间的关系尚不明确,较少有文献报道^[16,17]。

表 2 吸烟及饮酒对两组慢性牙周炎患病率影响(例,%)

Table 2 Effect of smoking and drinking on the prevalence of chronic periodontitis in the two groups (n,%)

Groups	Index	n	Chronic periodontitis	No chronic periodontitis	Prevalence rate
The study group	Smoking	41	36	5	87.80%*
	No smoking	19	15	4	78.95%
	Drinking	32	30	2	93.75% ^{##}
	No drinking	28	21	7	75.00%
The control group	Smoking	53	43	10	81.13%*
	No smoking	47	21	26	44.68%
	Drinking	46	34	12	73.91% [#]
	No drinking	54	28	26	51.85%

Note: Compared with the same group of non-smoking, * $P<0.05$, compared with the same non-drinking group, [#] $P<0.05$, compared with the control group, & $P<0.05$.

表 3 不同程度原发性肝硬化患者慢性牙周炎患病率对比

Table 3 Comparison of the prevalence of chronic periodontitis in patients with different degrees of primary cirrhosis

Child-score	n	Prevalence of chronic periodontitis	Degree of periodontal attachment
		[n(%)]	loss(mm)
5	6	2(33.33)	2.62± 0.15
6	6	4(66.66)	4.03± 0.21*
7	5	4(80.00)	5.03± 0.11*
8	7	6(85.71)	6.05± 0.13*
9	9	9(100.00)*	6.65± 0.21*
10	11	10(90.91)*	7.43± 0.21*
11	10	10(100.00)*	7.98± 0.12*
12 and above	6	6(100.00)*	8.26± 0.23*

Note: Compared with the 5 score, * $P<0.05$.

原发性肝硬化状态的病因较多,包括病毒感染、酒精刺激、代谢紊乱、胆汁淤积、肝静脉回流受阻、自身免疫系统疾病、营养不良等^[18],都会诱发该病的出现,原发性肝硬化患者早期临床症状主要为上腹部不适、肝区疼痛、乏力等,发展至晚期可出现肝性脑病、癌变等可能,因而及早干预具有重要意义^[19,20]。关于慢性牙周炎与肝脏疾病之间的关联也有部分研究,国外一项大样本横断面调查结果显示,牙周袋深度 >4 mm的牙周炎患者其血清丙氨酸氨基转移酶(Alanine aminotransferase, ALT)和天门冬氨酸氨基转移酶(Aspartic acid aminotransferase, AST)水平明显高于健康个体,而进一步的研究则显示,血清ALT水平与牙周袋深度呈正相关联系^[21,22]。另一项研究则指出,通过对慢性牙周炎患者的抗炎治疗,如对其实施双氧水冲洗或口腔保健等,能够显著改善非酒精性脂肪肝个体的血清ALT及AST水平,治疗前后对比差异具有统计学意义^[23]。另一项研究则显示,病程3年以上的肝硬化患者其牙周附着丧失程度要明显高于

病程3年以下的肝硬化患者,且3年以上患者肝功能各项指标也劣于3年以下个体^[24]。

本文结果显示,研究组慢性牙周炎患病率明显高于对照组。两组中吸烟者、饮酒者的慢性牙周炎患病率显著高于不吸烟者和不饮酒者,研究组中饮酒者发生慢性牙周炎患病率显著高于对照组;研究组患者Child—改良分级法显示,随着评分的升高,慢性牙周炎的患病率也有升高趋势,即随着肝硬化病情的加重,患者慢性牙周炎的患病率不断攀升^[25,26]。慢性牙周炎是机体较为常见的感染性疾病,细菌感染也是诱发慢性牙周炎的重要原因,如伴放线杆菌、牙龈卟啉单胞菌等^[27,28]。结合本研究结果,分析其原因为细菌感染引发的微感染状态对机体产生了较强烈的刺激,增加了各类炎症细胞因子如IL-6、TNF- α 、CRP等的释放,这些因子均参与到了肝硬化的疾病进程中,起到了加快病程发展的作用。也有研究对病毒性肝炎患者的分析发现,病毒性肝炎患者其机体内丙二醛(Malondialdehyde, MDA)

水平明显升高, 而该物质在机体氧化应激反应中发挥重要作用, 过量分泌会影响机体肝脏代谢, 使 ALT、AST 等指标出现紊乱, 该学者认为慢性牙周炎与病毒性肝炎间存在较为密切的联系^[29,30], 这与本文研究结论相一致。另外, 研究表明, 吸烟及饮酒会增加健康个体慢性牙周炎患病率, 提示应尽量减少吸烟饮酒频率, 这对保护肝脏具有积极意义。

总而言之, 原发性肝硬化患者慢性牙周炎患病率高于健康个体, 随着肝硬化患者病情的加剧, 患者慢性牙周炎发生率也随之上升; 另外, 吸烟及饮酒会增加健康个体慢性牙周炎患病率。

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