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颈动脉粥样硬化斑块发生的危险因素及与脑梗死的关系

凌雪辉 吴晓华 韩 瑛 陆红梅 秦 勇

(上海市第七人民医院神经内科 上海 200137)

摘要 目的:研究颈动脉粥样硬化斑块发生的危险因素及与脑梗死的关系。**方法:**选取 2013 年 7 月到 2014 年 7 月我院收治的脑梗死患者 120 例(研究组),另选取非脑梗死患者或者健康体检者 120 例(对照组),对所有入选者实施颈部血管超声检查,并检测其血糖、血浆纤维蛋白原和血脂,比较两组颈动脉粥样硬化斑块的数目、部位、颈动脉内径并分析脑梗死危险因素。**结果:**研究组斑块检出率和斑块数显著高于对照组,两组比较差异具有统计学意义($P < 0.05$);颈总动脉内径显著小于对照组,两组比较差异具有统计学意义($P < 0.05$);斑块存在于颈总动脉者最多,且与脑梗死部位存在同侧相关性($P < 0.05$);研究组年龄、高血压、糖尿病和血脂、纤维蛋白原(FIB)也显著高于对照组,两组比较差异具有统计学意义($P < 0.05$)。**结论:**颈动脉粥样硬化斑块发生和脑梗死存在密切关系,年龄、糖尿病、高血压、FIB 和血脂均是其危险因素。

关键词:颈动脉粥样硬化;危险因素;脑梗死

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The Risk Factors for Carotid Atherosclerotic Plaque Occurrence and their Relationship with Cerebral Infarction

LING Xue-hui, WU Xiao-hua, HAN Ying, LU Hong-mei, QIN Yong

(Department of Neurology, Shanghai Seventh People's Hospital, Shanghai, 200137, China)

ABSTRACT Objective: To study the risk factors for carotid atherosclerotic plaque occurrence and the relationship with cerebral infarction. **Methods:** 120 cases (the study group) with infarction were selected in our hospital from July 2013 to July 2014, 120 cases (the control group) of non cerebral infarction or healthy were also selected, the inductees of all were given neck intravascular ultrasound, the blood glucose, plasma fibrinogen and blood lipids of all inductees were detected, the number and location of carotid atherosclerotic plaques, carotid artery diameter of two groups were compared and risk factors of cerebral infarction were analyzed. **Results:** The plaque detection rate and the number of patches of the study group were significantly higher than that of the control group, the difference was statistically significant ($P < 0.05$); Carotid artery diameter of the study group were significantly shorter than in the control group, the difference was statistically significant ($P < 0.05$); The plaque present in the common carotid artery were the most, and had ipsilateral correlation with infarction site($P < 0.05$); The age, hypertension, diabetes and lipids, fibrinogen (FIB) of the study group were significantly higher than the control group, the difference was statistically significant ($P < 0.05$). **Conclusion:** There is a close relationship between carotid atherosclerotic plaques, and the cerebral infarction, age, diabetes, hypertension, FIB and lipids were the risk factors for carotid atherosclerotic plaque occurrence.

Key words: Carotid atherosclerosis; Risk factors; Infarction

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前言

脑梗死是临床上的常见疾病,给患者生命健康带来较大威胁,该病具有较高的致死率,其致残率也相对较高。颈动脉粥样硬化发生和多种危险因素有关^[1],且有研究显示,颈动脉粥样硬化是脑梗死发生的主要原因。因此,分析危险因素是防止颈动脉粥样硬化和脑梗死的主要预防措施^[2]。行颈部的血管超声检测能了解颈动脉管壁是否存在病理变化,且检测的准确率极高^[3]。本研究旨在分析颈动脉粥样硬化斑块发生的危险因素及与

脑梗死的关系,现将结果报告如下。

1 资料与方法

1.1 一般资料

选取 2013 年 7 月到 2014 年 7 月我院收治的脑梗死患者 120 例(研究组),所有患者均符合脑梗死的诊断标准^[4],并且均经脑部 CT 或者 MRI 确诊,男性 75 例,女性 45 例;腔隙性脑梗死 67 例,大面积脑梗死者 30 例,脑干脑梗死者 23 例。另选取非脑梗死患者或者健康体检者 120 例(对照组),男性 73 例,女性 47 例;正常体检者 69 例,急性或者慢性呼吸系统疾病者 30 例,胃肠疾病者 19 例,心率失常者 2 例;均不存脑血管病史。研究经伦理委员会批准,所有入选者均知情同意并签订知情同意

作者简介:凌雪辉(1975-),男,本科,主治医师,从事脑血管病、癫痫方面的研究,E-mail:sehxl2006@21cn.com

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书。

1.2 方法

应用美国 GE LOGIQE9 彩色多普勒超声诊断仪,其探头的频率为 7.5 MHz,检测入选者双侧颈总动脉、颈总动脉分叉处以及颈内动脉,并测量记录颈动脉内膜-中层的厚度、颈动脉内径、粥样硬化斑块的数量和部位。并抽取所有入选者空腹静脉血,检测入选者的血糖、甘油三酯(TG)、总胆固醇(TC)、低密度脂蛋白(LDL-C)以及纤维蛋白原(FIB)的水平。血压,糖尿病和高血压的诊断标准均根据 WHO 制定的诊断标准^[9]。分析入选者的一般资料分析动脉粥样硬化斑块发生的危险因素。

1.3 统计学方法

全部数据均在 SPSS17.0 软件上统计,其中计量资料用($\bar{x} \pm s$)表示,应用 t 检验,计数资料应用 χ^2 检验,应用 Pearson 进行相关性分析,检验标准以 $P < 0.05$ 表示有统计学意义。

2 结果

2.1 两组斑块数、斑块检出率比较

由表 1 可知,研究组斑块检出率和斑块数显著高于对照组,两组比较差异具有统计学意义($P < 0.05$);颈总动脉内径显著小于对照组,两组比较差异具有统计学意义($P < 0.05$)。

表 1 两组斑块情况和颈总动脉内径比较($\bar{x} \pm s$)

Table 1 Comparison of the plaque and carotid artery diameter in two groups($\bar{x} \pm s$)

组别 Groups	斑块数 Number of patches	斑块检出率(%) Plaque detection rate(%)	颈总动脉内径(mm) Carotid artery diameter	
			左 Left	右 Right
对照组 Control group	0.35± 0.03	34(28.3)	7.92± 0.13	7.99± 0.32
研究组 Study group	1.93± 0.04	94(78.3)	7.28± 0.16	7.48± 0.18
t/ χ^2	8.967	13.892	9.058	8.996
P	0.032	0.021	0.025	0.029

2.2 斑块部位及与脑梗死的关系

斑块存在于颈总动脉者最多,占 77.5%(93/120),位于颈总动脉分叉处者次之,占 15.0%(18/120),位于颈内动脉颅外段者最少,占 7.5%(9/120),经 Pearson 分析发现,斑块部位与脑梗

死的部位存在同侧相关性($R=3.087, P=0.015$)。

2.3 两组一般情况比较

由表 2 可知,研究组年龄、高血压、糖尿病、FIB 和血脂也显著高于对照组,两组比较差异具有统计学意义($P < 0.05$)。

表 2 两组一般资料比较

Table 2 Comparison of the general data in two groups

指标 Indexes	对照组 Control group	研究组 Study group	t/ χ^2	P
年龄(岁) Age(years)	59.5± 0.5	69.9± 0.4	7.983	0.038
高血压(n) Hypertension	49(40.8)	84(70.0)	13.084	0.017
糖尿病(n) Diabetes	22(18.3)	57(47.5)	12.782	0.024
TG(mmol/L)	1.52± 0.01	1.79± 0.32	8.956	0.025
TC(mmol/L)	4.62± 0.28	5.83± 0.17	9.058	0.024
LDL-C(mmol/L)	2.12± 0.05	3.38± 0.25	8.698	0.027
FIB(g/L)	4.93± 1.03	6.83± 0.18	9.883	0.023

3 讨论

脑部动脉粥样硬化是脑梗死疾病发生的病理性基础,颈动脉血液供应大约占脑部血液供应的 70%-85%^[6]。因此,颈动脉粥样硬化斑块发生会应用脑部的血液供应,与脑梗死的发生存在较密切的关系^[7]。有研究显示,颈动脉斑块对脑部血管的病变预测的敏感性大约为 84%,而其特异性则为 79%^[8]。本研究表明,研究组斑块检出率显著高于对照组,斑块存在于颈总动脉者最多,占 77.5%(93/120),位于颈总动脉分叉处者次之,占 15.0%(18/120),位于颈内动脉颅外段者最少,占 7.5%(9/120),经 Pearson 分析发现,斑块部位和脑梗死的部位存在同侧相关性,提示颈动脉粥样硬化斑块发生和脑梗死存在较大的关系。颈动脉硬化导致脑梗死的机制可能为:(1)颈动脉出现粥样斑块,且随着斑块的增大,其阻塞血管的能力也增强,进而

减少脑部的血液供应,引起脑部疾病发生^[9,10];(2)粥样斑块可能会出现破裂,而破裂的斑块会随血液循环而流动,进而阻塞脑部血管^[11];(3)破裂或者未发生破裂的斑块表面比较粗糙,凝血机制会被激活,引起血栓形成^[12];(4)颈动脉出现狭窄会引起远端的灌注压降低,致使分水岭区的血液供应减少,造成梗死^[13]。

本研究表明,研究组年龄、高血压、糖尿病、FIB 和血脂也显著高于对照组,证实年龄、糖尿病、高血压、FIB 和血脂是颈动脉粥样硬化斑块形成的危险因素。而其中年龄为独立性的危险因素,有研究指出,年龄超过 55 岁脑梗死的患病率大约为 10%,随着年龄增长其发生率也随之增加^[14]。高血压患者一般存在血管壁损害,会分泌一些前列腺素和血栓素,引起血小板粘附,受损的内皮细胞还会脱落,导致内膜下的组织暴露,血小板也会出现粘附,进而形成附壁血栓,最终出现斑块。糖尿病患者存在血糖代谢紊乱^[15,16],而血糖的代谢也会影响血脂代谢,血脂

是动脉粥样硬化的危险因素^[17-19]。FIB 的升高是颈动脉粥样硬化的独立危险因素,纤维蛋白原可以促进血小板聚集,使凝血反应进行,纤维斑块出现沉积、血管平滑肌细胞增加,导致血管的通透性增加,进而使动脉粥样硬化斑块组成发生改变,并且可以促进斑块破裂,进而引起颈动脉血栓形成^[20]。各种危险因素相互作用,出现叠加效应,最终导致患病率显著增加。

综上所述,颈动脉粥样硬化和其狭窄程度有助于脑梗死的诊断,年龄、高血压、糖尿病、FIB 和血脂均是颈动脉粥样硬化的危险因素,对危险因素进行有效控制有助于控制颈动脉粥样硬化的发生和发展,进而减少脑梗死的发生率。同时,也可以为脑梗死的治疗提高一条新的途径。

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