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北京市 2 型糖尿病患者抑郁状况的横断面调查及其危险因素分析 *

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摘要 目的:探讨北京市 2 型糖尿病(T2DM)患者抑郁症发病情况及其危险因素,为 T2DM 合并抑郁症的防治提供依据。**方法:**采取横断面调查的方法对 2016 年 1 月-2016 年 12 月中国人民解放军总医院健康管理研究院体检中患 T2DM 的 3000 例患者随机抽取 1200 例进行调查,所有患者进行 Zung 抑郁自评量表(SDS)测评,根据 SDS 结果分为 T2DM 合并抑郁症组和 T2DM 非抑郁症组。应用单因素和多因素 Logistic 回归法分析 T2DM 合并抑郁症的危险因素。**结果:**北京市 T2DM 患者抑郁症患病率为 21.93%,不同性别 T2DM 患者抑郁症患病率比较无统计学差异($P>0.05$)。单因素分析显示,北京市 T2DM 患者抑郁症发病与糖尿病病程、运动情况、胰岛素治疗、并发症情况、糖化血红蛋白有关($P<0.05$),与饮食控制、血糖监测情况、收缩压、舒张压、胆固醇、甘油三酯无关($P>0.05$)。多因素 Logistic 回归分析显示糖尿病病程 ≥ 10 年、胰岛素治疗、并发症 ≥ 3 个、糖化血红蛋白 $\geq 8.0\%$ 是北京市 T2DM 患者抑郁症发病的危险因素($P<0.05$),经常运动是北京市 T2DM 患者抑郁症发病的保护性因素($P<0.05$)。**结论:**北京市 T2DM 患者抑郁症患病率为 21.93%,糖尿病病程 ≥ 10 年、胰岛素治疗、并发症 ≥ 3 个、糖化血红蛋白 $\geq 8.0\%$ 是北京市 T2DM 患者抑郁症发病的危险因素,经常运动是北京市 T2DM 患者抑郁症发病的保护性因素。

关键词:2 型糖尿病;抑郁症;危险因素;调查

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Cross-Sectional Study and Risk Factors of Depression in Patients with Type 2 Diabetes Mellitus in Beijing*

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ABSTRACT Objective: To analyze the incidence of depression and its risk factors in patients with type 2 diabetes mellitus (T2DM) in Beijing, and to provide evidence for the prevention and treatment of T2DM associated with depression. **Methods:** A cross-sectional survey was conducted in 1200 patients randomly selected from 3000 patients with T2DM, who accepted the physical examinations in Health Management Institute of the General Hospital of PLA during January 2016 to December 2016. All the patients were evaluated by the Zung self rating Depression Scale (SDS), according to the results of SDS, the patients were divided into T2DM group with depression and T2DM group without depression. The risk factors of T2DM associated with depression were analyzed by Univariate and multivariate Logistic regression analysis. **Results:** The prevalence of depression in T2DM patients in Beijing city was 21.93%, and there was no significant difference in the prevalence of depression among T2DM patients with different genders ($P>0.05$). Univariate analysis showed that the incidence of depression in T2DM patients in Beijing city was related to the course of diabetes, exercise, insulin treatment, complications and glycosylated hemoglobin ($P<0.05$), and it was not related to diet control, blood glucose monitoring, systolic blood pressure, diastolic blood pressure, cholesterol and triglyceride ($P>0.05$). Logistic regression analysis showed that the duration of diabetes more than 10 years, insulin treatment, complications of more than 3, glycated hemoglobin with more than 8.0% were risk factors of depression in T2DM patients in Beijing city ($P<0.05$). For T2DM patients in Beijing, regular exercise was a protective factor for the incidence of depression in T2DM patients in Beijing city ($P<0.05$). **Conclusion:** The prevalence of depression in T2DM patients in Beijing city was 21.93%, the duration of diabetes more than 10 years, insulinize treatment, complications of more than 3, glycated hemoglobin with more than 8.0% were risk factors of depression in T2DM patients in Beijing city, regular exercise was a protective factor of the incidence of depression in T2DM patients in Beijing city.

Key words: Type 2 diabetes mellitus; Depression; Risk factors; Investigation

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前言

糖尿病是临床上常见的内分泌疾病。近年来,随着我国人

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口老龄化和人们生活方式的改变,我国糖尿病患者人数急剧上升^[1]。有报道显示,目前我国糖尿病患者超过 9300 万,糖尿病患病率高达 9.65%,是世界上糖尿病患者人数最多的国家^[2]。2 型糖尿病(Type 2 diabetes mellitus,T2DM)是糖尿病最常见的类型,约占糖尿病的 90%以上,这部分患者大多后天发病,不仅给患者带来了极大痛苦,也给家庭和社会带来了沉重的负担^[3-5]。随着医学模式从传统的生物医学模式向生物-社会-心理医学模式转变,人们对疾病和健康的概念也相应的发生了转变。WHO 提出心理健康与身体健康同样重要。国内外学者发现,T2DM 患者抑郁症发病率远高于非 T2DM 患者,而抑郁症不仅增加了患者的精神压力,也降低了患者治疗的依从性,对糖尿病防治不利^[6-8]。本研究分析了北京市 T2DM 患者抑郁症发病情况及其危险因素,旨在为 T2DM 合并抑郁症的防治提供依据,现报道如下。

1 资料和方法

1.1 临床资料

从 2016 年 1 月-2016 年 12 月中国人民解放军总医院健康管理研究院体检中患 T2DM 患者 3000 例中随机抽取 1200 例进行调查。纳入标准:(1)所有患者均符合 WHO 制定的 T2DM 诊断标准^[9];(2)无精神疾病家族史,既往无精神疾病病史;(3)入组前未曾服用精神类药物;(4)认知情况良好,自愿参加本研究,家属知情同意。排除标准:(1)酮症酸中毒、急性感染等糖尿病急性并发症患者;(2)患有恶性肿瘤,严重心、肺、肝、肾功能障碍者;(3)伴有思维障碍、痴呆的患者;(4)无法正常交流及 Zung 抑郁自评量表(Self rating Depression Scale,SDS)不合格者。1200 例患者中男性 715 例,女性 485 例,年龄 28~82 岁,平均年龄(57.8±10.9)岁。本研究经医院伦理委员会同意。

1.2 研究方法

1.2.1 问卷调查及体格检查 采用自制问卷调查的形式对患者病程、饮食情况、运动情况、血糖监测情况、是否进行胰岛素

治疗、并发症情况进行调查,并进行体格检查,检查内容包括收缩压、舒张压、胆固醇、甘油三酯、糖化血红蛋白等。饮食控制标准:良好:过去 1 年中能坚持按照医嘱控制碳水化合物摄入;一般:过去 1 年中能基本按照医嘱控制碳水化合物摄入;较差:过去 1 年中不能按照医嘱控制碳水化合物摄入。

1.2.2 SDS 测评患者填写 SDS 问卷 SDS 问卷包括 20 个项目,根据患者最近一星期实际感觉如实填写,满分 100 分,临界值为 53 分,超过 53 分表明有抑郁症,分数越高表明抑郁症状越严重。并根据 SDS 结果分为 T2DM 合并抑郁症组和 T2DM 非抑郁症组^[10]。

1.3 统计学方法

应用 SPSS25.0 统计学软件进行统计学分析,计量资料以均数±标准差表示,并实施 t 检验,计数资料以率表示,并实施卡方检验,应用多因素 Logistic 回归分析分析危险因素,P<0.05 为差异有统计学意义。

2 结果

2.1 北京市 T2DM 患者抑郁症发病情况

本次调查 1200 例患者中剔除不合格问卷 78 份,有效问卷 1122 份,有效率 93.50%。1122 例 T2DM 患者中男性 680 例,女性 442 例,年龄 28~82 岁,平均年龄(56.4±9.2)岁。其中 T2DM 合并抑郁症患者 246 例,患病率为 21.93%。T2DM 合并抑郁症患者中男性 156 例,患病率为 22.94%,女性 90 例,患病率为 20.36%,不同性别 T2DM 患者抑郁症患病率比较无统计学差异($\chi^2=0.176$,P=0.621)。

2.2 北京市 T2DM 患者抑郁症发病的单因素分析

单因素分析显示,北京市 T2DM 患者抑郁症发病与糖尿病病程、运动情况、胰岛素治疗、并发症情况、糖化血红蛋白有关(P<0.05),与饮食控制、血糖监测情况、收缩压、舒张压、胆固醇、甘油三酯无关(P>0.05),见表 1。

表 1 北京市 T2DM 患者抑郁症发病的单因素分析

Table 1 Single factor analysis of depression in T2DM patients in Beijing

Factors		n	Number of depressed persons (cases)	Prevalence of depression (%)	χ^2	P
Course of diabetes (years)	<5	388	55	14.18	26.104	0.000
	5~10	418	96	22.97		
	≥ 10	316	95	30.06		
	Good	378	78	20.63		
Diet control	Commonly	588	140	23.81	3.028	0.220
	Poor	156	28	17.95		
	Often	522	93	17.82		
Movement condition	Occasionally	436	104	23.85	12.115	0.002
	Nothing	164	49	29.88		
	Good	800	166	20.75	2.249	0.134
Blood glucose monitor	Bad	322	80	24.84		
Insulin treatment	Yes	386	116	30.05	22.703	0.000
	No	736	130	17.66		

	0	486	96	19.75		
Complications (unit)	1~2	527	114	21.63	9.215	0.010
	≥ 3	109	36	33.03		
Systolic pressure (mmHg)	<140	804	171	21.27	0.714	0.938
	≥ 140	318	75	23.58		
Diastolic pressure (mmHg)	<90	798	166	20.80	2.036	0.154
	≥ 90	324	80	24.69		
Cholesterol (mmol/L)	<6.0	812	176	21.67	0.108	0.743
	≥ 6.0	310	70	22.58		
Triglyceride (mmol/L)	<1.7	710	154	21.69	0.062	0.803
	≥ 1.7	412	92	22.33		
Glycosylated hemoglobin(%)	<6.5	385	50	12.99		
	6.5~8.0	533	130	24.39	32.819	0.000
	≥ 8.0	204	66	32.35		

2.3 北京市 T2DM 患者抑郁症发病的多因素 Logistic 回归分析

以 T2DM 患者是否患有抑郁症为因变量,以糖尿病病程、运动情况、胰岛素治疗、并发症情况、糖化血红蛋白为自变量纳入多因素 Logistic 回归分析,显示糖尿病病程≥ 10 年、胰岛素

治疗、并发症≥ 3 个、糖化血红蛋白≥ 8.0%是北京市 T2DM 患者抑郁症发病的危险因素($P<0.05$),经常运动是北京市 T2DM 患者抑郁症发病的保护性因素($P<0.05$),见表 2。

表 2 北京市 T2DM 患者抑郁症发病的多因素 Logistic 回归分析

Table 2 Multivariate Logistic regression analysis of depression in T2DM patients in Beijing

Variable	B	SE	Wald χ^2	P	OR	95%CI
Course of diabetes≥ 10 years	0.639	0.256	23.564	0.000	1.236	0.873~1.757
Regular exercise	-0.457	0.275	8.74	0.005	0.784	0.421~0.998
Insulin treatment	0.775	0.318	12.338	0.002	1.339	1.005~1.768
Complications≥ 3	0.638	0.256	13.812	0.000	1.137	0.962~1.562
Glycated hemoglobin ≥ 8%	0.474	0.28	26.128	0.000	1.421	1.023~1.852

3 讨论

T2DM 是糖尿病的常见类型,患者一般成年发病,病情隐匿,进展缓慢,一旦患病需长期治疗。近年来,由于 T2DM 的患病率不断增高,人们对 T2DM 的认知也不断提高,但对于 T2DM 的治疗仍缺乏科学的认识,尤其是患病后需要长期控制饮食、坚持运动、服用药物等,导致患者异常心理变化发生率较高^[11,12]。目前已有报道显示,大约有 21.4%~45.6%的 T2DM 患者存在不同程度心理问题,其中约有 25.6%的 T2DM 存在抑郁症^[13-15]。抑郁症不仅给患者带来痛苦,还可以通过活化下丘脑-垂体-肾上腺轴,加重内分泌功能紊乱,导致患者血糖急剧升高,增加糖尿病并发症发生风险^[16]。本研究通过对我院接受体检的 1122 例 T2DM 调查发现,T2DM 合并抑郁症患者 246 例,患病率为 21.93%,与赵晶等报道基本相符^[17],表明 T2DM 合并抑郁症患病率较高,临床应予以重视。不同性别 T2DM 患者抑郁症患病率无统计学差异,说明 T2DM 患者抑郁症患病率与性别无关。

目前关于 T2DM 患者合并抑郁症的危险因素国外研究较

多,国内报道较少。Rajput R 等研究发现年龄、性别、胰岛素治疗和糖尿病并发症是 T2DM 患者合并抑郁症的危险因素^[18]。Slyepchenko A 等则发现糖尿病病程、患者血糖控制情况是 T2DM 患者合并抑郁症的危险因素^[19]。本研究通过分析发现,北京市 T2DM 患者抑郁症发病与糖尿病病程、运动情况、胰岛素治疗、并发症情况、糖化血红蛋白有关。多因素 Logistic 回归分析显示糖尿病病程≥ 10 年、胰岛素治疗、并发症≥ 3 个、糖化血红蛋白≥ 8.0%是北京市 T2DM 患者抑郁症发病的危险因素,经常运动是北京市 T2DM 患者抑郁症发病的保护性因素。T2DM 是一种慢性疾病,患者一旦患病需要长期治疗,给患者心理带来了一定压力。随着患者治疗时间的延长,患者承受的压力加大,因此糖尿病病程≥ 10 年的患者抑郁症发病率更高。血糖控制是糖尿病治疗最核心的问题,T2DM 患者治疗方案的制定、患者并发症的出现均与血糖控制不佳有关。无论采取运动疗法、饮食控制、药物治疗还是胰岛素治疗,糖尿病患者最关注的也是血糖控制情况。因此当患者血糖控制不佳时可造成巨大的心理负担,并引起焦虑、抑郁等负性情绪。李晨虎等研究发现^[20],T2DM 患者血糖控制不佳可以导致患者前额叶皮质区厚

度降低,并引发抑郁症的发生。本研究中糖化血红蛋白 $\geq 8.0\%$ 患者出现抑郁症的风险是其他 T2DM 的 1.421 倍,证实血糖控制情况是 T2DM 患者合并抑郁症的危险因素。并发症发生情况是 T2DM 患者发生抑郁症的影响因素之一。众所周知,随着病情的进展,T2DM 可发生一系列并发症,这些并发症给患者机体带来了痛苦,也严重影响了患者的生活质量^[21]。不少患者担心自己并发症的发生是否会影响自己的生活质量,从而对治疗失去信心,增加了抑郁症发生的风险^[22]。胰岛素治疗是 T2DM 患者抑郁症发病的又一危险因素。目前胰岛素治疗仍是治疗 T2DM 的重要方法,通过胰岛素治疗可以迅速的降低患者血糖,起到治疗作用,然而胰岛素疗法需要长期坚持进行,同时需采取皮下注射的方式给患者带来了困扰^[23-25]。部分接受胰岛素治疗的患者对疾病预后情况担忧,增加了抑郁症发病风险。经常运动是 T2DM 患者抑郁症发病的保护性因素。运动不仅可以降低血脂、体重,还有助于减轻胰岛素抵抗,起到控制血糖的作用^[26-28]。近年来有学者发现,运动可以提升脑组织单胺类神经递质含量,有助于缓解脑部疲劳,改善抑郁情绪^[29,30]。本研究中经常运动 T2DM 患者抑郁症发病率低也与运动缓解脑部疲劳,改善抑郁情绪有关。

综上所述,北京市 T2DM 患者抑郁症患病率为 21.93%,糖尿病病程 ≥ 10 年、胰岛素治疗、并发症 ≥ 3 个、糖化血红蛋白 $\geq 8.0\%$ 是北京市 T2DM 患者抑郁症发病的危险因素,经常运动是北京市 T2DM 患者抑郁症发病的保护性因素。

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