

鄂伦春自治旗男性老年人群生活方式危险因素与慢性病共病的关系

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摘要: **目的** 了解内蒙古鄂伦春自治旗男性老年人群生活方式危险因素与慢性病共病的关系, 为改善男性老年人群生活方式和预防慢性病共病提供依据。**方法** 于2020年7—12月, 采用多阶段整群随机抽样方法抽取鄂伦春自治旗2个乡镇16个村(居委会)参加社区体检的≥65岁男性居民为调查对象。通过问卷调查收集人口学信息、生活方式危险因素和疾病史, 通过社区卫生服务中心基层医疗卫生服务信息系统收集体检信息, 包括腰围、血压、空腹血糖和血脂等。采用多因素有序logistic回归模型分析≥65岁男性生活方式危险因素与慢性病共病的关系。**结果** 纳入调查761人, 年龄为(73.61±6.74)岁。中心性肥胖216例, 占28.38%; 吸烟179人, 占23.52%; 饮酒194人, 占25.49%; 身体活动频率低412人, 占54.14%; 有1种和≥2种生活方式危险因素分别347人和268人, 占45.60%和35.22%。高血压404例, 糖尿病170例, 血脂异常321例; 患1、2、3种慢性病分别347、199和50例, 占45.60%、26.15%和6.57%; 慢性病共病患病率为32.72%。多因素有序logistic回归分析结果显示, 中心性肥胖者慢性病共病风险升高($OR=2.442$, 95% CI : 1.804~3.307); <2种生活方式危险因素(1种, $OR=0.607$, 95% CI : 0.451~0.820; 0种, $OR=0.675$, 95% CI : 0.460~0.990)者慢性病共病风险降低。**结论** 中心性肥胖和生活方式危险因素数量是鄂伦春自治旗≥65岁男性群慢性病共病的影响因素。

关键词: 慢性病; 共病; 生活方式; 老年人

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Relationship between lifestyle risk factors and comorbidity of chronic diseases among male elderly populations in Oroqen Autonomous Banner

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Abstract: Objective To investigate the association between lifestyle risk factors and comorbidity of chronic diseases among male elderly populations in Oroqen Autonomous Banner, Inner Mongolia Autonomous Region, so as to provide insights into improvements of lifestyles and prevention of comorbidity of chronic diseases among male elderly populations. **Methods** Male residents at ages of 65 years and older that participated in community healthy examinations were sampled from 16 villages (communities) in Oroqen Autonomous Banner using a multi-stage cluster random sampling method from July to December, 2020. Participants' demographic data, lifestyle risk factors and disease history were collected using questionnaire surveys, and healthy examinations data were collected through the grassroots healthcare service information system for community health service centers, including waist circumference, blood pressure, fasting blood glucose and blood lipid. The correlation between lifestyle risk factors and comorbidity of chronic diseases were examined among males at ages of 65 years and older using a multivariable ordered logistic regression model. **Results** Totally 761 male

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elderly populations were included, with a mean age of (73.61 ± 6.74) years. There were 216 participants with central obesity (28.38%), 179 with smoking (23.52%), 194 with alcohol consumption (25.49%), 412 with a low frequency of physical activities (54.14%), 347 with one type of lifestyle risk factor (45.60%) and 268 with two and more types of lifestyle risk factors (35.22%), 404 with hypertension, 170 with diabetes and 321 with dyslipidemia. There were 347 participants with one type of chronic disease (45.60%), 199 with two types of chronic diseases (26.15%) and 50 with three types of chronic diseases (6.57%), and the prevalence of comorbidity of chronic diseases was 32.72% among the participants. Multivariable ordered logistic regression analysis showed an increased risk of developing comorbidity of chronic diseases among participants with central obesity ($OR=2.442$, 95%CI: 1.804–3.307), and a reduced risk of comorbidity of chronic diseases among participants with less than two types of lifestyle risk factors (one type, $OR=0.607$, 95%CI: 0.451–0.820; none, $OR=0.675$, 95%CI: 0.460–0.990). **Conclusion** Central obesity and number of lifestyle risk factors are factors affecting comorbidity of chronic diseases among the male elderly populations at ages of 65 years and older in Oroqen Autonomous Banner.

Keywords: chronic disease; comorbidity; lifestyle; elderly population

2018 年中国健康与养老追踪调查显示,老年人是慢性病共病的高发人群,患慢性病种类越多,健康损失越大^[1]。高血压、糖尿病和血脂异常是常见的慢性病共病组合^[2],也是心血管疾病发病和死亡的既定危险因素^[3-4]。研究显示,患 2 种及以上和 3 种及以上慢性病人群的死亡风险分别是其他人群的 1.73 倍和 2.72 倍^[5],慢性病共病已成为日益严峻的临床和公共卫生挑战^[6-7]。

内蒙古自治区鄂伦春自治旗位于高纬度地区,冬季寒冷漫长,居民室外活动减少。受鄂伦春族饮食习惯影响,居民喜食肉类,能量摄入较多,易形成中心性肥胖,且当地盛行饮酒,男性饮酒频率较高。研究显示,吸烟、饮酒、肥胖和缺乏运动等生活方式危险因素与个体从健康到慢性病共病再到死亡的疾病过程密切相关^[8]。本研究分析鄂伦春自治旗男性老年人群生活方式危险因素与高血压、糖尿病和血脂异常共病的关系,为改善男性老年人群生活方式和预防慢性病共病提供依据。

1 对象与方法

1.1 对象 选择鄂伦春自治旗 ≥ 65 岁男性居民为调查对象。调查对象均知情同意。

1.2 方法 采用现况调查样本量计算公式,慢性病共病患率取 44.46%^[9],计算样本量至少为 500 人。采用多阶段整群随机抽样方法,选择鄂伦春自治旗人口规模最大的 2 个乡镇(大杨树镇和阿里河镇)为调查点,按常住人口比例分别随机抽取 13 和 3 个村(居委会),每个村(居委会)随机抽取至少 30 名参加社区体检的 ≥ 65 岁男性居民。于 2020 年 7—12 月,通过问卷调查收集:(1)人口学信息,包括年龄、民族和文化程度;(2)生活方式危险因素,包

括吸烟、饮酒、身体活动和中心性肥胖;(3)高血压和糖尿病疾病史。通过社区卫生服务中心基层医疗卫生服务信息系统收集居民体检资料,包括腰围(WC)、血压、空腹血糖(FPG)、胆固醇(TC)、三酰甘油(TG)、高密度脂蛋白胆固醇(HDL-C)和低密度脂蛋白胆固醇(LDL-C)。

1.3 定义 根据《中国高血压防治指南(2018 年修订版)》^[10],收缩压 ≥ 140 mm Hg (1 mm Hg=0.133 kPa)和(或)舒张压 ≥ 90 mm Hg,或既往有高血压史为高血压。根据《中国 2 型糖尿病防治指南(2020 年版)》^[11],FPG ≥ 7.0 mmol/L,或既往有糖尿病史为糖尿病。根据《中国成人血脂异常防治指南(2016 年修订版)》^[12],TC ≥ 6.2 mmol/L, TG ≥ 2.3 mmol/L, HDL-C < 1.0 mmol/L, LDL-C ≥ 4.1 mmol/L,符合以上任一项为血脂异常。根据《中国成人超重和肥胖症预防控制指南》^[13],男性 WC ≥ 90 cm 为中心性肥胖。吸烟指连续或累计吸烟 > 6 个月^[14],包括正在吸烟和已戒烟。饮酒指每周饮酒 ≥ 1 次,持续 12 个月。身体活动频率低指过去 1 年持续 30 min 以上的活动频率小于每周 1 次或不运动^[15]。

1.4 统计分析 采用 SPSS 25.0 软件统计分析。定量资料服从正态分布,采用均数 \pm 标准差($\bar{x} \pm s$)描述,组间比较采用单因素方差分析。定性资料采用相对数描述,组间比较采用 χ^2 检验。生活方式危险因素与慢性病共病的关系分析采用多因素有序 logistic 回归模型。检验水准 $\alpha=0.05$ 。

2 结果

2.1 基本情况 调查 761 人,年龄为 (73.61 ± 6.74) 岁,少数民族 37 人,占 4.86%。初中及以上学历 412 人,占 54.14%。中心性肥胖 216 例,占

28.38%。吸烟 179 人,占 23.52%。饮酒 194 人,占 25.49%。身体活动频率低 412 人,占 54.14%。有 1 种生活方式危险因素 347 人,占 45.60%;有 ≥ 2 种生活方式危险因素 268 人,占 35.22%。

2.2 慢性病患病情况 高血压 404 例,患病率为 53.09%;糖尿病 170 例,患病率为 22.34%;血脂异

常 321 例,患病率为 42.18%。仅患高血压、糖尿病或血脂异常中 1 种慢性病 347 例,占 45.60%;患 2 种慢性病 199 例,占 26.15%;患 3 种慢性病 50 例,占 6.57%;慢性病共患病率为 32.72%。中心性肥胖、饮酒和生活方式危险因素数量不同者慢性病患者数量比较,差异均有统计学意义 ($P<0.05$)。见表 1。

表 1 鄂伦春自治旗 ≥ 65 岁男性慢性病患者数量比较

Table 1 The number of chronic diseases among men at ages of 65 years and older in Oroqen Autonomous Banner

| 项目 Item | 调查人数 Respondents | 慢性病数量 Number of chronic diseases | | | | F/χ^2 值 | P 值 |
|---|---------------------|----------------------------------|------------------|------------------|------------------|--------------|--------|
| | | 0 | 1 | 2 | 3 | | |
| 年龄 Age/Year * | 761 | 74.12 \pm 7.15 | 73.58 \pm 6.72 | 73.26 \pm 4.53 | 73.58 \pm 7.00 | 0.496 | 0.685 |
| 民族 Ethnicity | | | | | | 2.896 | 0.408 |
| 汉族 Han | 724 | 160 (22.10) | 331 (45.72) | 187 (25.83) | 46 (6.35) | | |
| 少数民族 Minority | 37 | 5 (13.51) | 16 (43.24) | 12 (32.43) | 4 (10.81) | | |
| 文化程度 Educational level | | | | | | 4.634 | 0.592 |
| 文盲 Illiteracy | 68 | 9 (13.24) | 34 (50.00) | 21 (30.88) | 4 (5.88) | | |
| 小学 Primary school | 281 | 67 (23.84) | 127 (45.20) | 67 (23.84) | 20 (7.12) | | |
| 初中及以上 Junior high school and above | 412 | 89 (21.60) | 186 (45.15) | 111 (26.94) | 26 (6.31) | | |
| 中心性肥胖 Central obesity | | | | | | 39.944 | <0.001 |
| 是 Yes | 216 | 27 (12.50) | 87 (40.28) | 74 (34.26) | 28 (12.96) | | |
| 否 No | 545 | 138 (25.32) | 260 (47.71) | 125 (22.94) | 22 (4.04) | | |
| 吸烟 Smoking | | | | | | 3.033 | 0.386 |
| 是 Yes | 179 | 32 (17.88) | 90 (50.28) | 47 (26.26) | 10 (5.59) | | |
| 否 No | 582 | 133 (22.85) | 257 (44.16) | 152 (26.12) | 40 (6.87) | | |
| 饮酒 Drinking | | | | | | 6.658 | 0.084 |
| 是 Yes | 194 | 31 (15.98) | 100 (51.55) | 48 (24.74) | 15 (7.73) | | |
| 否 No | 567 | 134 (23.63) | 247 (43.56) | 151 (26.63) | 35 (6.17) | | |
| 身体活动频率低 Low frequency of physical activities | | | | | | 2.364 | 0.500 |
| 是 Yes | 412 | 97 (23.54) | 187 (45.39) | 101 (24.51) | 27 (6.55) | | |
| 否 No | 349 | 68 (19.48) | 160 (45.85) | 98 (28.08) | 23 (6.59) | | |
| 生活方式危险因素数量 Number of lifestyle risk factors | | | | | | 23.019 | 0.001 |
| 0 | 146 | 31 (21.23) | 73 (50.00) | 39 (26.71) | 3 (2.05) | | |
| 1 | 347 | 96 (27.67) | 145 (41.79) | 83 (23.92) | 23 (6.63) | | |
| ≥ 2 | 268 | 38 (14.18) | 129 (48.13) | 77 (28.73) | 24 (8.96) | | |

注: a 表示采用 $\bar{x}\pm s$ 描述, 组间比较采用单因素方差分析; 其他项均采用 n (%) 描述, 组间比较采用 χ^2 检验。Note: a, described with $\bar{x}\pm s$, compared by one-way analysis of variance; other items, described with n (%), compared by chi-square test.

2.3 生活方式危险因素与慢性病共病的关系

2.3.1 不同生活方式危险因素与慢性病共病的关系 以慢性病数量为因变量 (0=0 种, 1=1 种, 2=2 种, 3=3 种), 以中心性肥胖、吸烟、饮酒和身体活动频

率低为自变量, 调整年龄、民族和文化程度, 进行多因素有序 logistic 回归分析。结果显示, 中心性肥胖者慢性病共病风险升高。见表 2。

表2 鄂伦春自治旗≥65岁男性生活方式危险因素与慢性病共病关系的多因素有序 logistic 回归分析

Table 2 Multivariable ordered logistic regression analysis of lifestyle risk factors and comorbidity of chronic diseases among men at ages of 65 years and older in Oroqen Autonomous Banner

| 变量 Variable | 参照组 Reference | β | $s\bar{x}$ | Wald χ^2 值 | P 值 | OR 值 | 95%CI |
|----------------------------------|---------------|---------|------------|-----------------|--------|-------|--------------|
| 慢性病数量 Number of chronic diseases | | | | | | | |
| 0 | 3 | -2.316 | 0.862 | 7.223 | 0.007 | 0.099 | 0.018~0.534 |
| 1 | | -0.229 | 0.858 | 0.072 | 0.789 | 0.795 | 0.148~4.267 |
| 2 | | 1.766 | 0.864 | 4.178 | 0.041 | 5.847 | 1.076~31.817 |
| 中心性肥胖 Central obesity | | | | | | | |
| 是 Yes | 否 No | 0.893 | 0.155 | 33.381 | <0.001 | 2.442 | 1.804~3.307 |

2.3.2 生活方式危险因素数量与慢性病共病关系 以慢性病数量为因变量 (0=0 种, 1=1 种, 2=2 种, 3=3 种), 以生活方式危险因素数量为自变量, 调整年

龄、民族和文化程度, 进行多因素有序 logistic 回归分析。结果显示, <2 种生活方式危险因素者慢性病共病风险降低。见表 3。

表3 鄂伦春自治旗≥65岁男性生活方式危险因素数量与慢性病共病关系的多因素有序 logistic 回归分析

Table 3 Multivariable ordered logistic regression analysis of the number of lifestyle risk factors and comorbidity of chronic diseases among men at ages of 65 years and older in Oroqen Autonomous Banner

| 变量 Variable | 参照组 Reference | β | $s\bar{x}$ | Wald χ^2 值 | P 值 | OR 值 | 95%CI |
|---|---------------|---------|------------|-----------------|-------|-------|--------------|
| 慢性病数量 Number of chronic diseases | | | | | | | |
| 0 | 3 | -2.648 | 0.817 | 10.496 | 0.001 | 0.071 | 0.014~0.351 |
| 1 | | -0.607 | 0.811 | 0.560 | 0.454 | 0.545 | 0.111~2.672 |
| 2 | | 1.342 | 0.818 | 2.691 | 0.101 | 3.827 | 0.770~18.992 |
| 生活方式危险因素数量 Number of lifestyle risk factors | | | | | | | |
| 1 | ≥2 | -0.498 | 0.153 | 10.626 | 0.001 | 0.607 | 0.451~0.820 |
| 0 | | -0.393 | 0.196 | 4.035 | 0.045 | 0.675 | 0.460~0.990 |

3 讨论

本研究结果显示, 鄂伦春自治旗≥65岁男性高血压、糖尿病和血脂异常共病患病率为 32.72%, 与全国水平 (33.7%)^[16] 相近, 低于内蒙古中西部地区老年人血脂异常合并高血压或糖尿病患病率 (42.14% 和 53.88%)^[17]。

肥胖与糖尿病、高血压和血脂异常密切相关, 中心性肥胖被认为是代谢机制异常的标志^[18]。本次调查中 28.38% 的≥65岁男性患中心性肥胖, 中心性肥胖者患慢性病数量增加的风险升高。肥胖是从不良生活方式到疾病发生的中间过程, 身体活动频率低和不健康饮食均会导致肥胖, 进而增加代谢性疾病和慢性病共病的患病风险。鄂伦春地区居民受气候条件和饮食结构的影响, 肥胖人群较多。因此, 应重点关注当地肥胖人群健康, 在慢性病健康管理中强调体重控制, 实施针对性干预。

既往研究显示, 生活行为方式与疾病的发生发展密切相关, 肥胖、吸烟、饮酒和慢性病家族史是慢性病共病的影响因素^[19-20], 存在 2 个以上生活方式危险因素的老年男性慢性病共病患病率升高^[21]。本次调查结果显示, 吸烟、饮酒、身体活动频率低与慢性病数量无统计学关联, 但≥2 种生活方式危险因素使慢性病数量增加的风险升高。提示吸烟、饮酒、身体活动频率低和中心性肥胖的共同作用与慢性病共病发生发展相关。生活方式干预是降低慢性病风险的有效、安全和经济的措施^[22], 可通过倡导合理膳食、适量运动、控制体重和戒烟限酒促进老年男性形成健康生活方式, 预防慢性病共病。

本研究存在以下不足: 利用体检调查资料分析, 不能确定生活方式危险因素数量与慢性病共病的因果关系; 由于研究资料缺少膳食数据而未分析该生活方式因素; 仅纳入男性体检资料, 结论外推存在局限性。

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