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某部机关中老年干部代谢综合征现况调查

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摘要 目的:了解某部机关中老年干部代谢综合征(Metabolic syndrome, MS)的患病情况,为该类人群疾病的防治提供依据。**方法:**收集 2013 年 4~5 月在解放军第 309 医院体检的 452 例某部机关中老年干部查体资料,按 2007 年《中国成人血脂异常防治指南》提出的代谢综合征诊断标准进行诊断,分析代谢综合征及代谢指标异常患病情况。**结果:**受检人群 MS 患病率 11.73%,男性高于女性($P<0.05$)。年龄组患病率以 60~69 岁组最高(23.08%)。单项代谢异常检出率从高至低依次为血脂异常(41.15%)、超重和/肥胖(38.5%)、血压升高(25.0%)和血糖升高(9.73%)。不同年龄组代谢指标异常分布情况不同。代谢异常类型以血压升高+血脂升高+超重/肥胖模式人数最多。除 MS 外,仍有 34.52% 的人群存在 1-2 种代谢指标异常。**结论:**MS 可防可控,应注重以胰岛素抵抗(Insulin Resistance, IR)为靶点的多危险因素综合治疗。

关键词:代谢综合征;患病率;代谢指标异常

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Survey on Prevalence of Metabolic Syndrome among the Middle-aged and Aged Cadres

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ABSTRACT Objective: To investigate the prevalence of metabolic syndrome(MS) among the middle-aged and the aged cadres, and to provide evidence for prevention and treatment of the disease. **Methods:** The physical examination data of 452 middle-aged and aged cadres who had taken the health examination in our hospital were performed. The patients were diagnosed based on the diagnosis standard of MS proposed in Guidelines on "Prevention and Treatment of Blood Lipid Abnormality in Chinese Adults" issued in 2007. The general prevalence rate of MS and metabolic abnormalities were analyzed. **Results:** Among the examinees, the general incidence of MS was 11.73%. The MS prevalence of the males was higher than that of the females ($P<0.05$). The prevalence of MS was the highest in the age group of 60-69 years old. The single metabolic disorder tests in ascending order were dyslipidemia (41.15%), obesity and/or overweight(38.5%), hypertension(25.0%) and impaired glucose regulation (9.73%). The prevalence of metabolic disorder differed among different ages. The MS patients with "hypertension+ dyslipidemia+obesity/overweight" had the highest prevalence rate (34.52%) of the non-MS people had one or two kinds of metabolic disorder. **Conclusions:** The preventive and therapeutic measures should be adopted as early as possible in order to reduce the prevalence of MS. The emphasis should be placed on the multiple risk factors and the comprehensive therapy centered around insulin resistance.

Key words: Metabolic syndrome; Prevalence rate; Metabolic abnormalities

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前言

代谢综合征(Metabolic syndrome, MS)是一组以中心性肥胖、高血糖(糖尿病或糖调节受损)、血脂异常(包括高甘油三酯血症,低、高密度脂蛋白胆固醇血症)以及高血压等聚集发病,严重影响机体健康的临床症候群,以多种代谢性疾病合并出现

为临床特点,是一组病理症状而非一种疾病^[1-3]。MS 曾被国外学者称为死亡四重奏,它所导致的心血管疾病严重危害人类健康。引起代谢综合征的危险因子主要包括高血压、血脂异常、糖尿病、肥胖以及高尿酸与凝血因子不正常等。近年来,随着人们生活水平的提高和生活方式的改变,人们大量摄入高热量、高脂肪、高蛋白等食物,缺乏运动,MS 及其危险因子患病率明显上升,已成为我国一些地区的常见病和多发病。近年国内和军内的流行病学调查均发现 MS 及其危险因子患病率均较前上升^[4-6],为更好地做好干部医疗保健工作,现对 2013 年 4-5 月机关中老年干部 MS 患病情况作出调查分析,为预防和矫治工作

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提供临床依据。

1 资料与方法

1.1 临床资料

收集 2013 年 4-5 月在解放军第 309 医院体检的部机关中老年干部体检数据,共 452 例。检查项目包括身高、体重、血压、空腹血糖、甘油三酯(TG),高密度脂蛋白胆固醇(HDL-C)等,分析患病情况。

1.2 诊断标准

根据最新 2007 年《中国成人血脂异常防治指南》提出的代谢综合征诊断标准,符合 3 项以上可诊断为代谢综合征:(1) BMI ≥ 25 kg/m²; (2)血清 TG ≥ 1.7 mmol/L; (3)血清 HDL-C 男 <0.91 mmol/L,女 <1.01 mmol/L; (4)血压 $\geq 140/90$ mmHg; (5)空腹血糖 ≥ 6.1 mmol/L 及 / 或糖负荷后 2h 血糖 ≥ 7.8 mmol/L,或有糖尿病史。

1.3 检测方法

应用电子体重仪测量脱鞋后身高及脱去外衣后的体重;静息 5 min 后应用校正过的器械监测血压 2 次,测量前 30 min 内

避免吸烟、饮酒、饮用含有咖啡因的饮料以及剧烈体育活动;于清晨静息状态下抽取空腹静脉血测量生化指标。

1.4 统计学处理

采用 CHISS 软件及 EXCEL 软件对数据进行统计学处理,计数资料采用 χ^2 检验, $P<0.05$ 为差异显著。

2 结果

2.1 一般情况

参加体检中老年干部共 452 人,年龄最大 68 岁,最小 32 岁,年龄中位数 43 岁,其中男性 406 人,女性 46 人。

2.2 MS 患病率情况

本次体检中,符合 MS 诊断共 53 例,总患病率 11.73%。男性患病率为 12.78%,女性患病率为 2.22%,男性明显高于女性($\chi^2=4.3606$, $P<0.0368$)。男性以 50-59 岁年龄组,60-69 岁年龄组 MS 患病率为高(19.18%, 18.18%),女性 60-69 岁年龄组患病率最高(50%),总体患病率也是 60-69 岁年龄组最高(23.08%)。在大多数年龄组中(60-69 岁除外),男性 MS 患病率高于女性。表 1。

表 1 不同性别不同年龄 MS 患病率统计(%)

Table 1 MS prevalence rate in different gender and age group (%)

Age(years)	Male			Female			Total		
	n	MS	Prevalence%	n	MS	Prevalence%	n	MS	Prevalence%
30-39	121	8	6.16	13	0	0	134	8	5.97
40-49	202	28	13.86	17	0	0	219	28	12.79
50-59	73	14	19.18	13	0	0	86	14	16.28
60-69	11	2	18.18	2	1	50	13	3	23.08
Total	407	52	12.78	45	1	2.22	452	53	11.73

2.3 不同年龄组单项代谢异常检出率

在 30-39 岁年龄组检出率最高指标为超重和 / 肥胖;40-49 岁年龄组检出率最高指标为血脂异常;50-59 岁年龄组检出率

最高指标为血压升高;60-69 岁年龄组检出率最高位血压升高;总体单项代谢异常检出率从高至低依次为血脂异常(41.15%),超重和 / 肥胖(38.5%),血压升高(25.0%),血糖升高(9.73%)。表 2。

表 2 不同年龄组单项代谢异常检出率(%)

Table 2 Abnormality rate of single metabolic risk factor in different age group

Items	30-39		40-49		50-59		60-69		Total	
	Case	Rate%	Case	Rate%	Case	Rate%	Case	Rate%	Case	Rate%
Overweight/ obesity	56	41.79	82	37.44	31	36.05	5	38.46	174	38.50
Impaired glucose regulation	5	3.73	19	8.68	16	18.60	4	30.77	44	9.73
Hypertension	17	12.69	52	23.74	33	38.37	11	84.61	113	25.00
Dyslipidemia	50	37.31	101	46.12	31	36.05	4	30.77	186	41.15

2.4 代谢指标异常类型在人群中的分布

全部受检者中,仅有一项代谢指标异常者为 143 人,占 31.64%,其中肥胖 50 例,糖耐量受损 9 例,血压升高 29 例,血脂异常 56 例。仅有两项代谢指标异常者为 103 人,占 22.79%,其中以超重 / 肥胖 + 血脂升高模式人数最为突出(表 3)。有三项代谢指标异常符合 MS 诊断者为 53 人,占 11.73%,以血压升高 + 血脂升高 + 超重 / 肥胖模式人数最多(表 4)。此外,无代

谢指标异常者共 153 人,占全体人数的 33.85%。

3 讨论

目前 MS 已成为世界范围内十分严重的卫生问题,它由代谢上相互关联的危险因素相组合,直接促进了动脉粥样硬化行心血管疾病的发生,也增加了 2 型糖尿病的发病风险^[7]。Mek-sawan 等^[8]在美国心脏学会上根据对美国 ARIC 研究人群 MS

表 3 两项代谢指标异常检出情况

Table 3 Testing results of two abnormal metabolic risk factors

Items	Cases	Proportion (%)	Rate (%)
Overweight/obesity + hypertension	18	17.48	3.98
Overweight/obesity + impaired glucose regulation	2	1.94	0.45
Overweight/obesity + dyslipidemia	60	58.25	13.27
Hypertension + impaired glucose regulation	2	1.94	0.45
Hypertension + dyslipidemia	18	17.48	3.98
Impaired glucose regulation + dyslipidemia	3	2.91	0.66
Total	103	100	22.79

表 4 三种代谢异常检出情况及组合模式比较

Table 4 Situations of testing results about three abnormal metabolic risk factors

Items	Cases	Proportion (%)	Rate (%)
Hypertension + dyslipidemia + Overweight/obesity	28	52.83	6.19
Hypertension + impaired glucose regulation + dyslipidemia	12	22.64	2.66
Impaired glucose regulation + dyslipidemia + Overweight/obesity	7	13.21	1.55
Hypertension + impaired glucose regulation + Overweight/obesity	6	11.32	1.33
Total	53	100	11.73

调查结果,预测 MS 在位来的十年中,MS 将占人类 35-71 岁人群的 35%,而这些患病人群中每 8 人就会有一人因 MS 而死亡;MS 患者心脑血管病几率是正常人的 75 倍,肿瘤几率比正常人高出 45 倍^[9,10]。而根据最新的流行病学调查结果,在中国 20 岁的人群里,MS 患病率为 10-14%,成人超重率为 22.8%,肥胖率为 7.1%^[11-13]。同时也有报道^[14,15] MS 患者中有 42.6~82.1% 的冠心病事件可以通过控制血压预防。由此可见 MS 是一种可防可治的病症,早期的诊断和干预具有显著的公共卫生学意义^[16,17]。

在本次的调查研究中,中老年干部 MS 总体患病率为 11.73%。同时,MS 随年龄的增长有明显升高的趋势,以 60~69 年龄组患病率最高。为进一步摸清病症进展规律,本研究对危险因素进行了详细分析。在不同年龄组单项代谢异常检出率分析中 MS 患病率最低的 30-39 年龄组,超重和肥胖检出人数有 41.79%,可见肥胖可能是 MS 发生的始发因素,是预防保健的第一道防线。随着年龄的增长,血压升高趋势增长较快,在 60-69 岁年龄组尤为突出,有 84.61% 的同年龄段人群存在此危险因素。而血脂升高贯穿各年龄段,均保持 30.77~46.12% 的检出率。

在代谢指标异常类型在人群中的分布中可以看出,虽然 MS 的患病率只有 11.73%,但存在一到两种危险因素的人群占到 34.52%,只有 33.85% 的人群各项检查结果均正常。仍有相当比例的人群如不进行干预将很快进展成为 MS。

根据如上调查结果,应对 MS 及代谢指标的异常采取积极的防控措施。首先应加强健康教育,普及 MS 高危因素、患病率、危害性等方面知识,提高患者防范的自觉性及药物治疗依从性;同时倡导良好的生活方式,包括合理膳食,适当运动、戒烟限酒,规律作息。在代谢指标控制方面,应着重关注体重,将超重/肥胖做为首道防线,因从本次调查结果可以看出在低年

龄组即出现显著比例的体重超标患者,故防控人群也应前移至中年人群^[18]。并且,Harrington 等^[19]研究亦发现,在 MS 患者中,腹型肥胖是影响血压水平最重要的因素。并且大量资料表明,肥胖是 2 型糖尿病、心血管疾病、血脂紊乱的重要危险因素。肥胖尤其是中心性肥胖被认为是引起胰岛素抵抗的始动因素^[20]。除此以外,随着年龄增长应更加注意血压检查及血脂的定期检测,根据本次调查人群的特点,建议各单位增加课间体育锻炼时间并指导各单位集体食堂的膳食搭配及烹饪用油。总之,防治 MS 应注重以 IR 为靶点的多危险因素综合防治,结合药物综合治疗,进而降低相关疾病的发病率和病死率。

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