·临床研究·

原发性高血压合并持续性心房颤动患者临床特征分析

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【摘 要】 目的 探讨原发性高血压合并持续性心房颤动(EHP-PeAF)患者的临床特征。**方法** 回顾性分析2010年1月至2019年12月于解放军总医院心血管内科及神经内科住院的384例EHP-PeAF患者的临床资料。根据年龄,将患者分为≤50岁组17例、50~60岁组59例、60~70岁组108例、70~80岁组144例及>80岁组56例。根据CHA_2DS_2-VASc评分四分位数,将患者分为Q1组43例(≤1分)、Q2组131例(2~3分)、Q3组71例(4分)及Q4组139例(5~9分)。分析患者人口学特征、实验室指标、共病及用药情况,比较不同性别、年龄及CHA_2DS_2-VASc评分组间指标的差异。采用R4.5.2统计软件进行数据分析。根据数据类型,两组间比较分别采用独立样本t检验、Mann-Whitney U检验、χ^2检验或Fisher确切概率法,多组间两两比较采用Bonferroni法校正。有序分类变量的趋势分析采用Cochran-Armitage趋势检验。**结果** 本研究患者年龄中位数为71.00(63.00,77.00)岁,体质量指数(BMI)平均数(26.21±3.86)kg/m^2,男性占比62.00%,有吸烟史者占比38.50%,有饮酒史者占比38.00%。性别分层分析显示,女性患者年龄、CHA_2DS_2-VASc评分、高密度脂蛋白胆固醇、D二聚体及冠心病(CAD)患病率均高于男性,身高、体质量、BMI、丙氨酸氨基转移酶、肌酐、血红蛋白及尿酸水平均低于男性,差异均有统计学意义(均P<0.05)。共病方面,CAD患病率最高(66.40%),其次为心力衰竭(HF,38.30%)和脑卒中(CS,32.80%);CAD、HF、CS及外周血管疾病(PAD)患病率随年龄增长呈显著上升趋势(均P for trend<0.05),且CAD在年龄70~80岁及>80岁组患病率显著高于年龄≤50岁组(P<0.005);HF、糖尿病、CS、CAD、慢性肾脏病及PAD患病率均随CHA_2DS_2-VASc评分升高显著递增(均P for trend<0.005),且高评分组多重共病负荷显著高于低评分组。用药方面,52.10%的患者至少使用1种降压药,其中单药治疗151例(39.30%),≥2种联合用药49例(12.80%);钙离子通道阻滞剂为临床最常用降压药物,使用率达31.50%,其次为血管紧张素Ⅱ受体拮抗剂(20.60%),口服抗凝药(OAC)使用率仅7.30%,降压及抗凝规范化治疗均存在明显不足;OAC使用率随年龄增长呈显著上升趋势,其他降压药使用率随年龄增长呈显著下降趋势(P for trend=0.024、0.012);利尿剂用药率随CHA_2DS_2-VASc评分升高呈上升趋势(P for trend=0.047),而OAC使用率未得到明显提升。**结论** EHP-PeAF患者心血管共病高发,抗凝与降压治疗均不足,临床需规范药物治疗并加强对共病的综合管理。

【关键词】 高血压;心房颤动;抗凝药物;降压药

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Clinical characteristics of patients with essential hypertension complicated with persistent atrial fibrillation

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【Abstract】 Objective To investigate the clinical characteristics of patients with essential hypertension complicated with persistent atrial fibrillation (EHP-PeAF). **Methods** A retrospective analysis was conducted of the clinical data of 384 EHP-PeAF patients who were hospitalized in the Department of Cardiology and Neurology of the Chinese PLA General Hospital from January 2010 to December 2019. Based on age, the patients were divided into five groups: ≤50 years (n=17), 50-60 years (n=59), 60-70 years (n=108), 70-80 years (n=144), and >80 years (n=56). The patients were also divided into quartiles based on the CHA_2DS_2-VASc score: Q1 group (≤1 point, n=43), Q2 group (2-3 points, n=131), Q3 group (4 points, n=71), and Q4 group (5-9 points, n=139). The demographic characteristics, laboratory indicators, comorbidities, and medication use were analyzed, and the patients were compared

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in gender, age, and CHA_2DS_2-VASc score. Data analysis was performed using R 4.5.2 statistical software. Comparisons between two groups were conducted using independent sample t tests, Mann-Whitney U tests, χ^2 tests, or Fisher's exact probability method, and pairwise comparisons among multiple groups were corrected using the Bonferroni method. Trend analysis of ordinal categorical variables was performed using the Cochran-Armitage trend test. **Results** The median age of the patients was 71.00 (63.00, 77.00) years, the average body mass index (BMI) was (26.21±3.86) kg/m^2, 62.00% patients were male , 38.50% had a history of smoking, and 38.00% had a history of drinking. Gender-stratified analysis showed that female patients had higher age, CHA_2DS_2-VASc score, high-density lipoprotein cholesterol, D-dimer, and prevalence of coronary artery disease (CAD) than male patients. Height, Body weight, BMI, alanine aminotransferase, creatinine, hemoglobin, and uric acid levels were lower in female patients, and the differences were statistically significant (all $P<0.05$). Among comorbidities, the prevalence of CAD was the highest (66.40%), followed by heart failure (HF, 38.30%) and stroke (CS, 32.80%). The prevalence of CAD, HF, CS, and peripheral arterial disease (PAD) increased significantly with age (all P for trend <0.05), and the prevalence of CAD in the 70-80 years and >80 years groups was significantly higher than that in ≤50 years group ($P<0.005$). The prevalence of HF, diabetes mellitus, CS, CAD, chronic kidney disease, and PAD increased significantly with the increase in CHA_2DS_2-VASc score (all P for trend <0.005), and the multiple comorbidity burden in the high-score group was significantly higher than that in the low-score group. In terms of medication use, 52.10% of the patients used at least one antihypertensive drug, including 151 patients (39.30%) on monotherapy and 49 (12.80%) on combine therapy (≥2 medications). Calcium channel blockers were the most commonly used antihypertensive drugs (31.50%), followed by angiotensin Ⅱ receptor blocker (20.60%). The usage rate of oral anticoagulant (OAC) was only 7.30%, indicating significant insufficiency in both antihypertensive and anticoagulant standardized treatment. OAC usage rate increased significantly with age, and the usage rates of other antihypertensive drugs decreased significantly with age (P for trend = 0.024, 0.012). The usage rate of diuretics increased with the increase in CHA_2DS_2-VASc score (P for trend = 0.047), while OAC usage rate did not significantly increase. **Conclusion** EHP-PeAF patients have a high incidence of cardiovascular comorbidities and receive insufficient anticoagulation and antihypertensive treatments. Clinically, it is necessary to standardize drug therapy and strengthen comprehensive management of comorbidities.

【Key words】 hypertension; atrial fibrillation; anticoagulant drug; drugantihypertensive drug

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心房颤动(atrial fibrillation,AF)是21世纪全球重要的心血管疾病之一,目前全球患者约6 000万例[1],我国成人年龄标准化AF患病率为1.6%,据此估算国内成人AF患者约2 000万,但我国AF高危患者抗凝治疗率仅6.0%,规范化诊疗水平急需提升[2-4]。我国高血压患者高达2.45亿[5],约60%~80% AF患者合并高血压,两者共存会显著增加心血管事件及死亡风险[6]。然而当前研究多聚焦单一疾病的诊治,针对原发性高血压合并持续性心房颤动(essential hypertension complicated with persistent atrial fibrillation,EHP-PeAF)人群的共病负担、用药模式等临床特征尚缺乏系统研究。因此,本研究通过回顾性分析EHP-PeAF患者的临床资料,旨在探讨该人群的临床特征,为临床诊疗提供参考依据。

1 对象与方法

1.1 研究对象

本研究为横断面研究,回顾性分析2010年1月至2019年12月于解放军总医院心血管内科以及神经内科住院的384例EHP-PeAF患者的临床资料。纳入标准:符合《中国高血压防治指南(2024年修订版)》[7]中EHP诊断标准;符合《心房颤动:目前的认识和治疗建议(2021)》[8]中PeAF诊断标准。排除标准:非持续性AF;继发性高血压;中重度瓣膜病;重度肝肾功能不全;恶性肿瘤;妊娠;年龄<18岁。本研究经中国人民解放军总医院伦理委员会批准(HZKY-PJ-2021-5)。经伦理委员会批准豁免知情同意并于批准后开始回顾性收集数据。研究符合《赫尔辛基宣言》。

1.2 方法

从住院患者电子病历中采集入组患者信息,包括体质量指数(body mass index,BMI)、性别、年龄、吸烟史、饮酒史等人口学特征;白细胞、血红蛋白、血小板、丙氨酸氨基转移酶(alanine aminotransferase,ALT)、天门冬氨酸氨基转移酶、血肌酐、尿酸、血糖、低密度脂蛋白胆固醇、高密度脂蛋白胆固醇(high-density lipoprotein cholesterol,HDL-C)、D-二聚体等实验室指标;冠心病(coronary artery disease, CAD)、糖尿病(diabetes mellitus, DM)、心力衰竭(heart

failure, HF)、慢性肾脏病(chronic kidney disease, CKD)、脑卒中(cerebral stroke, CS)、外周血管疾病(peripheral vascular disease, PAD)和高脂血症等合并症;钙离子通道阻滞剂(calcium channel blockers, CCB)、血管紧张素Ⅱ受体拮抗剂(angiotensin Ⅱ receptor blocker, ARB)、血管紧张素转化酶抑制剂、利尿剂、其他降压药和口服抗凝药(oral anticoagulant, OAC)等用药信息。

采用 CHA_2DS_2-VASc 评分评估 AF 的血栓栓塞风险。采用 HAS-BLED 评分评估 AF 抗凝治疗的出血风险。CHA_2DS_2-VASc 评分是评估非瓣膜性 AF 患者血栓栓塞风险的工具,总分 0~9 分,包括充血性心力衰竭(1 分)、高血压(1 分)、年龄≥75 岁(2 分)或 65~75 岁(1 分)、DM(1 分)、既往卒中或短暂性脑缺血发作(2 分)、血管疾病(1 分)及性别(女性,1 分)等 7 个危险因素。根据 CHA_2DS_2-VASc 评分四分位数,将患者分为 Q1 组(≤1 分)、Q2 组(2~3 分)、Q3 组(4 分)及 Q4 组(5~9分)。HAS-BLED 评分是评估 AF 患者口服抗凝治疗出血风险的工具,总分 0~9分,包含高血压(1 分)、肾功能异常(1 分)、肝功能异常(1 分)、既往卒中史(1 分)、既往出血史(1 分)、国际标准化比值不稳定(1 分)、年龄≥65 岁(1 分)、药物(合用非甾体抗炎药或抗血小板药物,1 分)及嗜酒(1 分)等 7 个危险因素。

1.3 统计学处理

采用 R4.5.2 统计软件进行数据分析。缺失值<10%者不做处理,10%~20%的计数资料采用众数填补,计量资料采用全条件定义法进行多重填补。符合正态分布的方差齐性计量资料以均数±标准差($\bar{x}\pm s$)表示,两组间比较采用独立样本 t 检验;非正态分布或方差不齐的计量资料以中位数(四分位数间距)[$M(Q_1, Q_3)$]表示,两组间比较采用 Mann-Whitney U 检验。计数资料以例数(百分率)表示,组间比较采用 χ^2 检验;当不满足 χ^2 检验条件(理论频数<5 的单元格数超过 20%)时,采用 Fisher 确切概率法,此时仅报告 P 值;当多组间总体比较 P<0.05 时,进一步进行两两比较,为控制多重比较导致的Ⅰ类错误膨胀,采用 Bonferroni 法校正显著性水平,按年龄分为 5 组(≤50 岁、50~60 岁、60~70 岁、70~80岁、>80 岁,共 10 次两两比较),校正后的显著性水平设定为 $\alpha'=0.005$,P<0.005 为差异有统计学意义。按 CHA_2DS_2-VASc 评分四分位数分为 4 组(Q1、Q2、Q3、Q4,共 6 次两两比较),校正后的显著性水平设定为 $\alpha'=0.008\,3$,P<0.008 3 为差异有统计学意义。有序分类的趋势分析采用 Cochran-Armitage 趋势检验,其他分析以 P<0.05 为差异有统计学意义。

2 结 果

2.1 EHP-PeAF 患者基线资料

所有患者年龄 71.00(63.00,77.00)岁,BMI(26.21±3.86)kg/m^2,男性占比 62.00%,有吸烟史者占比 38.50%,有饮酒史者占比 38.00%。共病方面,CAD 患病率最高(66.40%),其次为 HF(38.30%)和 CS(32.80%)。用药方面,52.10%的患者至少使用 1 种降压药,其中单药治疗 151 例(39.30%),≥2 种联合用药 49 例(12.80%);CCB 使用率最高(31.50%),其次为 ARB(20.60%),仅 28 例(7.30%)规律使用 OAC(表 1)。

表 1 EHP-PeAF 患者基线资料

Table 1 Baseline data of patients with essential hypertension complicated with persistent atrial fibrillation (n=384)

Item	Data
Age[years, $M(Q_1, Q_3)$]	71.00(63.00,77.00)
Height[cm, $M(Q_1, Q_3)$]	168.00(160.00,173.00)
Body weight[kg, $M(Q_1, Q_3)$]	73.00(65.00,81.00)
BMI[kg/m^2, $M(Q_1, Q_3)$]	26.21±3.86
Male[n(%)]	238(62.00)
CHA_2DS_2-VASc score[points, $M(Q_1, Q_3)$]	4(2,5)
HAS-BLED score[points, $M(Q_1, Q_3)$]	2(2,3)
Smoking history[n(%)]	148(38.50)
Drinking history[n(%)]	146(38.00)
Comorbidity[n(%)]	
HF	147(38.30)
DM	107(27.90)
CS	126(32.80)
CAD	255(66.40)
HL	120(31.30)
CKD	43(11.20)
PAD	21(5.50)
Number of antihypertensive medications[n(%)]	
0	184(47.92)
1	151(39.32)
2	46(11.98)
3	3(0.80)
4	0(0.00)
Medication[n(%)]	
CCB	121(31.51)
ARB	79(20.57)
ACEI	28(7.29)
Diuretic	17(4.43)
Other antihypertensive drugs	7(1.82)
OAC	28(7.29)

BMI: body mass index; HF: heart failure; DM: diabetes mellitus; CS: cerebral stroke; CAD: coronary artery disease; HL: hyperlipidemia; CKD: chronic kidney disease; PAD: peripheral arterial disease; CCB: calcium channel blocker; ARB: angiotensin Ⅱ receptor blocker; ACEI: angiotensin-converting enzyme inhibitor; OAC: oral anticoagulant.

2.2 不同性别患者临床资料

女性患者年龄、CHA_2DS_2-VASc 评分、HDL-C、D-二聚体及 CAD 患病率均高于男性，身高、体质量、BMI、ALT、肌酐、血红蛋白及尿酸水平均低于男性，差异均有统计学意义（均 $P<0.05$；表 2）。

2.3 不同年龄组患者共病及用药情况

共病方面，HF、CS、CAD 及 PAD 患病率随年龄增长呈显著上升趋势（均 P for trend<0.05），其中年龄 70～80 岁及>80 岁组患病率显著高于年龄≤50 岁组（$P<0.005$）。用药方面，不同年龄组间各类药物使用率比较，差异均无统计学意义（均 $P>0.05$）。OAC 使用率随年龄增长呈显著上升趋势，其他降压药使用率随年龄增长呈显著下降趋势（均 P for trend<0.05；表 3）。

表 2 不同性别患者临床资料比较

Table 2 Comparison of clinical data between patients of different genders

Item	Male(n=238)	Female(n=146)	$t/\chi^2/Z$	P value
Age[years, $M(Q_1, Q_3)$]	66.5(60.0,75.0)	74.5(69.0,79.0)	−6.569	<0.001
Height[cm, $M(Q_1, Q_3)$]	172(168,176)	160(155,162)	−15.029	<0.001
Body weight[kg, $M(Q_1, Q_3)$]	77.00(70.00,86.00)	63.25(57.00,71.88)	−9.926	<0.001
BMI(kg/m^2, $\bar{x}\pm s$)	26.52±3.66	25.70±4.140	1.975	0.049
CHA_2DS_2-VASc score[points, $M(Q_1, Q_3)$]	3(2,4)	5(4,6)	−9.069	<0.001
HAS-BLED score[points, $M(Q_1, Q_3)$]	2(2,3)	2(2,3)	−0.946	0.344
Biochemical indicator[$M(Q_1, Q_3)$]				
ALT(U/L)	19(13.67,26.17)	5.8(12.25,21.87)	−2.567	0.010
AST(U/L)	18.45(14.40,22.78)	19.30(15.62,25.28)	−1.897	0.058
Cr(μmol/L)	91.90(80.03,105.92)	71.45(61.05,88.80)	−8.146	<0.001
WBC($\times10^9$/L)	6.20(5.06,7.46)	6.18(4.85,7.30)	−0.737	0.461
LDL-C(mmol/L)	2.18(1.67,2.81)	2.33(1.75,2.79)	−0.469	0.639
Ca(mmol/L)	2.24(2.17,2.31)	2.25(2.18,2.34)	−1.662	0.097
TG(mmol/L)	1.13(0.80,1.58)	1.23(0.88,1.57)	−1.224	0.221
HDL-C(mmol/L)	1.04(0.89,1.21)	1.14(0.99,1.41)	−4.148	<0.001
Potassium(mmol/L)	3.90(3.69,4.19)	3.88(3.61,4.23)	−0.668	0.504
Glucose(mmol/L)	5.38(4.74,6.44)	5.56(4.86,7.16)	−1.597	0.110
Hb(g/L)	148.50(136.25,158.00)	128.00(117.00,137.75)	−9.394	<0.001
D-D(mg)	0.37(0.26,0.75)	0.52(0.31,0.98)	−3.108	0.002
UA(μmol/L)	404.20(325.55,473.70)	338.00(278.15,422.32)	−4.457	<0.001
PLT($\times10^9$/L)	182.00(151.00,213.75)	192.50(155.25,227.50)	−1.619	0.105
Comorbidity[n(%)]				
HF	94(39.50)	53(36.30)	0.391	0.532
CKD	32(13.45)	11(7.53)	3.180	0.075
HL	72(30.25)	48(32.88)	0.290	0.590
DM	62(26.05)	45(30.82)	1.025	0.311
CS	70(29.41)	56(38.36)	3.284	0.070
CAD	149(62.61)	106(72.60)	4.054	0.044
PAD	11(4.62)	10(6.85)	0.868	0.351
Medication[n(%)]				
CCB	68(28.57)	53(36.30)	2.505	0.113
ARB	46(19.33)	33(22.60)	0.594	0.441
ACEI	18(7.56)	10(6.85)	0.068	0.794
Diuretic	8(3.36)	9(6.16)	1.680	0.195
OAC	18(7.56)	10(6.85)	0.068	0.794
Other antihypertensive drugs	3(1.26)	4(2.74)		0.434*

BMI: body mass index; ALT: alanine aminotransferase; AST: aspartate aminotransferase; Cr: creatinine; WBC: white blood cell; LDL-C: low-density lipoprotein cholesterol; Ca: calcium; TG: triglyceride; HDL-C: high-density lipoprotein cholesterol; Hb: hemoglobin; D-D: D-dimer; UA: uric acid; PLT: platelet; HF: heart failure; CKD: chronic kidney disease; HL: hyperlipidemia; DM: diabetes mellitus; CS: cerebral stroke; CAD: coronary artery disease; PAD: peripheral arterial disease; CCB: calcium channel blocker; ARB: angiotensin Ⅱ receptor blocker; ACEI: angiotensin-converting enzyme inhibitor; OAC: oral anticoagulant. * Fisher's exact probability test.

表 3 不同年龄组患者共病及用药情况比较

Table 3 Comparison of comorbidity and medication use among patients of different age groups [n(%)]

Item	≤50 years group(n=17)	50-60 years group(n=59)	60-70 years group(n=108)	70-80 years group(n=144)	>80 years group(n=56)	χ^2	P value	P for trend
Comorbidity								
HF	3(17.6)	19(32.2)	41(38.0)	58(40.3)	26(46.4)	5.807	0.214	0.024
DM	3(17.6)	14(23.7)	33(30.6)	44(30.6)	13(23.2)		0.616#	0.621
CS	3(17.6)	12(20.3)	33(30.6)	57(39.6)	21(37.5)	9.740	0.045	0.005
CAD	5(29.4)	34(57.6)	67(62.0)	106(73.6)*	43(76.8)*	19.447	0.001	<0.001
CKD	2(11.8)	4(6.8)	13(12.0)	18(12.5)	6(10.7)		0.828#	0.565
HL	7(41.2)	18(30.5)	37(34.3)	40(27.8)	18(32.1)	2.079	0.721	0.468
PAD	0(0.0)	1(1.7)	3(2.8)	10(6.9)	7(12.5)		0.061#	0.003
Medication								
CCB	5(29.4)	18(30.5)	29(26.9)	48(33.3)	21(37.5)	2.301	0.681	0.267
ACEI	1(5.9)	6(10.2)	7(6.5)	8(5.6)	6(10.7)		0.593#	0.983
ARB	6(35.3)	14(23.7)	22(20.4)	28(19.4)	9(16.1)		0.486#	0.105
Diuretic	0(0.0)	1(1.7)	7(6.5)	4(2.8)	5(8.9)		0.214#	0.173
OAC	0(0.0)	1(1.7)	8(7.4)	13(9.0)	6(10.7)		0.221#	0.024
Other antihypertensive drugs	1(5.9)	3(5.1)	2(1.9)	1(0.7)	0(0.0)		0.090#	0.012

HF: heart failure; DM: diabetes mellitus; CS: cerebral stroke; CAD: coronary artery disease; CKD: chronic kidney disease; HL: hyperlipidemia; PAD: peripheral arterial disease; CCB: calcium channel blocker; ACEI: angiotensin-converting enzyme inhibitor; ARB: angiotensin Ⅱ receptor blocker; OAC: oral anticoagulant. Compared with ≤50 years group, *P<0.005. #Fisher's exact probability test.

2.4 不同 CHA_2DS_2-VASc 评分区间患者共病及用药情况

Bonferroni 校正后的两两比较显示,在共病方面,HF 患病率在 Q2、Q3 及 Q4 组均高于 Q1 组,Q3 及 Q4 组均高于 Q2 组;DM 患病率在 Q2、Q3 及 Q4 组均高于 Q1 组,Q4 组高于 Q2 组及 Q3 组;CS 患病率在 Q3 及 Q4 组均高于 Q1 组及 Q2 组,Q4 组高于 Q3 组;CAD 患病率在 Q4 组高于 Q1 组及 Q2 组;PAD 患病率在 Q4 组高于 Q2 组,差异均有统计学意义(均 P<0.008 3)。趋势性检验表明,HF、DM、CS、CAD、CKD 及 PAD 患病率均随 CHA_2DS_2-VASc 评分升高呈显著上升趋势(均 P for trend<0.005)。在用药方面,CCB 用药率在 Q3 组高于 Q2 组(P<0.008 3),但不同组间使用率无明显趋势(P for trend>0.05)。趋势性检验表明,利尿剂用药率随 CHA_2DS_2-VASc 评分升高呈上升趋势(P for trend<0.05;表 4)。

表 4 不同 CHA_2DS_2-VASc 评分区间患者共病及用药情况比较

Table 4 Comparison of comorbidity and medication use among patients with different CHA_2DS_2-VASc score ranges

Item	Q1(n=43)	Q2(n=131)	Q3(n=71)	Q4(n=139)	χ^2	P value	P for trend
Comorbidity							
HF	0(0.0)	35(26.7)*	36(50.7)*#	76(54.7)*#	54.537	<0.001	<0.001
DM	0(0.0)	26(19.8)*	17(23.9)*	64(46.0)*#△	44.195	<0.001	<0.001
CS	0(0.0)	9(6.9)	16(22.5)*#	101(72.7)*#△	164.514	<0.001	<0.001
CAD	23(53.5)	76(58.0)	48(67.6)	108(77.7)*#	15.341	0.002	<0.001
CKD	1(2.3)	12(9.2)	6(8.5)	24(17.3)		0.026▲	0.004
HL	11(25.6)	37(28.2)	22(31.0)	50(36.0)	2.638	0.451	0.108
PAD	0(0.0)	2(1.5)	2(2.80)	17(12.2)#		<0.001▲	<0.001
Medication							
CCB	13(30.2)	32(24.4)	32(45.1)#	44(31.7)	9.128	0.028	0.270
ARB	9(20.9)	33(25.2)	11(15.5)	26(18.7)	3.131	0.372	0.283
ACEI	4(9.3)	4(3.1)	8(11.3)	12(8.6)		0.075▲	0.289
Diuretic	0(0.0)	4(3.1)	4(5.6)	9(6.5)		0.254▲	0.047
OAC	2(4.7)	6(4.6)	7(9.9)	13(9.4)		0.337▲	0.106
Other antihypertensive drugs	13(30.2)	32(24.4)	32(45.1)	44(31.7)	9.128	0.028	0.270

HF: heart failure; DM: diabetes mellitus; CS: cerebral stroke; CAD: coronary artery disease; CKD: chronic kidney disease; HL: hyperlipidemia; PAD: peripheral arterial disease; CCB: calcium channel blocker; ARB: angiotensin Ⅱ receptor blocker; ACEI: angiotensin-converting enzyme inhibitor; OAC: oral anticoagulant. Compared with Q1 group, *P<0.008 3; compared with Q2 group, #P<0.008 3; compared with Q3 group, △P<0.008 3. ▲Fisher's exact probability test.

3 讨 论

高血压与AF常合并存在,二者共存会显著增加不良事件风险。现有研究多聚焦于单一疾病的独立分析,针对EHP-PeAF患者群体的临床特征研究较为缺乏。本研究对384例EHP-PeAF住院患者的临床资料展开回顾性分析,结果发现该类患者共病负担重、抗凝治疗率低等问题突出。

本研究显示,EHP-PeAF患者以中老年为主,男性比例较高,与国外报道一致[9,10]。男性在身高、体质量、BMI、ALT、肌酐、血红蛋白及尿酸水平均显著高于女性,而女性患者年龄、CHA_2DS_2 VASc评分、HDL-C、D-二聚体及CAD患病率均显著高于男性。值得注意的是,虽然本研究中男性EHP-PeAF患病占比更高,但女性患者CHA2DS2-VASc评分更高,这可能与本研究中女性平均年龄(74.5岁)显著高于男性(66.5岁)有关。从CHA_2DS_2-VASc评分构成来看,年龄是该评分体系中权重较高的危险因素之一(65~75岁计1分,≥75岁计2分),女性性别亦单独计1分。本研究中女性患者平均年龄已达74.5岁,接近≥75岁的计分节点,同时叠加性别本身的1分,这两个因素共同推高了女性患者的总体评分水平,使其血栓栓塞风险分层显著高于男性。此外,受更高的BMI、体质量及代谢相关指标(如尿酸、ALT)水平的影响,男性高血压患者更易罹患PeAF。而女性受年龄、血管退行性病变及合并基础疾病等因素影响,卒中风险综合评估水平更高,是卒中高危人群。临床中切勿因男性患病率更高,而忽视对女性患者的抗凝干预。EHP-PeAF患者吸烟史(38.50%)和饮酒史(38.00%)比例较高,与既往研究结论一致[11,12],提示生活方式干预应作为综合管理的基础环节。EHP-AF患者共病负担突出是本研究的重要发现。CAD患病率高达66.40%,为最常见合并症,其次为HF(38.30%)和CS(32.80%),三者均随年龄增长呈显著上升趋势,提示增龄是EHP-AF患者多病共存的共性驱动因素。此外,HF、DM、CS、CAD、CKD、PAD患病率均随CHA2DS2-VASc评分升高而递增。CHA_2DS_2-VASc评分是目前临床常用的AF患者卒中风险分层工具,总分越高提示卒中发生风险越高,这也提示该评分不仅可用于评估卒中风险,对识别需开展全面共病管理的高危患者也具有重要参考价值。

血压管理方面,高血压与AF发生发展密切相关,有研究表明,高血压可使AF发生风险增加50%[13],新发AF患者血压水平更高[14]。本研究中患者至少服用1种降压药的比例为52.10%,高于PEACE百万人项目中33%的服药率[15],这可能得益于近年高血压防治工作的普及与患者用药依从性的提高。然而仍有47.90%的患者未服用任何降压药,且联合用药率仅为12.80%,提示血压管理的规范性和治疗强度仍有较大提升空间。

抗凝治疗严重不足是本研究患者最突出的问题之一。尽管指南明确推荐中高危非瓣膜性AF患者需长期抗凝[16,17],但本研究中OAC使用率仅7.3%,远低于临床需求。亚洲AF患者年卒中发生风险约3.0%[18],早期检出并启动抗凝治疗对卒中预防至关重要[19,20]。同时,高出血风险不应成为拒绝OAC的理由,尤其对CHA_2DS_2-VASc评分≥1分(男性)或≥2分(女性)的患者,抗凝治疗可显著降低不良事件风险[21]。本研究患者OAC使用率低的原因可能包括:(1)基层医师对CHA_2DS_2-VASc评分及抗凝规范的掌握不足;(2)传统华法林应用习惯及对出血风险的顾虑限制了临床用药;(3)一些新型OAC于2019年才陆续纳入我国医保乙类目录,报销比例存在地区差异,部分患者经济负担较重。今后需通过加强基层培训、提高临床认知和优化医保政策等多维举措,切实提高我国抗凝治疗率。

综上,EHP-AF患者心血管合并症高发,抗凝与降压治疗均存在明显不足。我国此类人群基数庞大、共病负担重,需进一步规范药物治疗方案,并强化共病及相关危险因素的综合管理,以降低心血管事件及死亡发生风险。本研究存在一些局限性。首先,作为单中心回顾性研究,样本以中国北方为主,来源单一,未覆盖门诊、其他地域及更年轻群体,存在选择偏倚,结论外推性受限。其次,近十年的数据收集周期虽然提供了长期视角,但也见证了临床指南和诊疗策略的演进,这种时间带来的异质性是回顾性研究的固有挑战,可能对结果的同质性产生影响。此外,未记录入院原因、血流动力学状态及非药物干预细节且缺乏随访,限制了对患者的稳定期特征和长期预后的全面评估。未来需开展多中心、前瞻性研究,覆盖多学科人群及更广泛的年龄区间,并记录非药物干预情况,加强长期随访以综合评估。

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