

· 老年人冠心病介入治疗专栏 ·

老年女性急性ST段抬高型心肌梗死患者行急诊PCI的临床特点及冠状动脉病变特点分析

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【摘要】目的 探讨急性ST段抬高型心肌梗死(STEMI)行急诊经皮冠状动脉介入治疗(PCI)的老年女性患者临床及冠脉病变特点。**方法** 回顾性分析了2006年至2012年我院连续收入的首次诊断为STEMI并接受急诊PCI术的女性患者366例。根据年龄分为两组:老年组(≥ 65 岁; $n = 211$)和非老年组(< 65 岁; $n = 155$)。分析两组患者临床及冠脉病变特点。**结果** 与非老年组患者相比,老年组中糖尿病发生率和空腹血糖值均显著较高($P < 0.05$),吸烟者的比例和肾小球滤过率显著较低($P < 0.05$),老年组患者冠脉三支病变率显著增加($P < 0.05$),靶血管为左前降支(left anterior descending branch, LAD)的概率显著降低($P < 0.05$)。老年组和非老年组患者接受急诊PCI的成功率分别为98.58%和98.87%。**结论** 不同年龄阶段的女性STEMI患者具有不同的危险因素特点,老年女性STEMI患者较非老年女性患者,冠状动脉病变更为复杂。

【关键词】 老年人; 女性; 急性心肌梗死; 经皮冠脉介入治疗

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Clinical features and coronary lesion characteristics in elderly women with acute ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention

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【Abstract】Objective To explore the clinical features and coronary lesion characteristics in the elderly female patients diagnosed as acute ST-segment elevation myocardial infarction (STEMI) who underwent primary percutaneous coronary intervention (PCI). **Methods** A retrospective study was conducted on 366 consecutive female patients who were first diagnosed as acute STEMI and underwent primary PCI in our hospital from 2006 to 2012. The patients were divided into the aged group (≥ 65 years old, $n = 211$) and the non-aged group (< 65 years old, $n = 155$). The clinical features and coronary lesion characteristics of the 2 groups were analyzed. **Results** Compared with the non-aged group, the aged group had significantly higher incidence of diabetes, higher fasting blood glucose, lower percentage of smokers, lower glomerular filtration rate, larger amount of triple-vessel disease, and less involved lesions in the left anterior descending branch (LAD) (all $P < 0.05$). The success rates of PCI in the aged group and the non-aged group were 98.58% and 98.87%, respectively. **Conclusion** Female STEMI patients have different characteristics in risk factors among different ages. The aged female elderly patients have more complicated coronary lesions than the non-aged ones.

【Key words】 aged; femininity; acute myocardial infarction; percutaneous coronary intervention

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随着人口老龄化,以急性ST段抬高型心肌梗死(ST-segment elevation myocardial infarction, STEMI)入院的老年患者越来越多。在老年患者中,女性罹患心血管疾病的人数超过了男性,且女性患者具有危险因素多、冠状动脉病变复杂等特点^[1,2],

冠心病已成为威胁女性健康的“头号杀手”^[3]。本文回顾性分析沈阳军区总医院心内科行急诊经皮冠状动脉介入治疗(percutaneous coronary intervention, PCI)的STEMI女性患者,探讨老年女性急性心肌梗死临床及急诊PCI的特点。

1 对象与方法

1.1 研究对象

回顾性分析了2006年至2012年我院连续收入的首次诊断为STEMI并接受急诊PCI术的女性患者366例。纳入标准:(1)STEMI符合美国心脏病学会(American College of Cardiology, ACC)/美国心脏协会(American Heart Association, AHA)的诊断标准^[4];(2)于发病12h内行急诊PCI。排除标准:(1)既往具有PCI病史;(2)未于12h内行急诊PCI。根据年龄分为两组:老年组(≥ 65 岁; $n=211$)和非老年组(< 65 岁; $n=155$)。

1.2 研究方法

入院后立即行心电图、心肌酶学检查并确定诊断。术前顿服阿司匹林(aspirin)300mg、氯吡格雷(clopidogrel)600mg。急诊行冠状动脉造影判定梗死相关靶血管,若靶血管病变处狭窄 $\geq 70\%$ 和(或)心肌梗死溶栓试验(thrombolysis in myocardial infarction, TIMI) ≤ 2 级,根据病变情况参考血管直径选择器械、球囊、支架,迅速行PCI术。术后予以阿司匹林100mg口服,氯吡格雷75mg或150mg(2周后改为75mg)口服。

1.3 统计学处理

采用SPSS20.0软件进行数据处理。计量资料以均数 $\pm$ 标准差($\bar{x} \pm s$)表示,组间比较采用 t 检验。计数资料以百分率表示,组间比较采用 χ^2 检验。

$P < 0.05$ 为差异具有统计学意义。

2 结果

2.1 两组患者基线资料比较

老年组中糖尿病发生率和空腹血糖值均显著高于非老年组患者($P < 0.05$),吸烟者的比例和肾小球滤过率显著低于非老年组患者($P < 0.05$;表1)。

2.2 两组患者PCI术特点比较

与非老年组患者相比,老年组患者冠脉三支病变率显著增加($P < 0.05$),靶血管为左前降支(left anterior descending, LAD)的概率显著降低($P < 0.05$;表2)。老年组和非老年组PCI成功率分别为98.58%和98.87%。在老年组患者中,PCI未成功者3例:2例导丝未能通过病变;1例支架植入术后无复流。在非老年组患者中,PCI未成功者2例,均为支架植入术后无复流。

2.3 两组患者住院期间死亡率的比较

两组患者术中无死亡病例,术后住院期间(约7d)共死亡8例(2.19%):老年组5例(3例死于心源性休克或急性左心衰,1例死于心脏破裂,1例因介入术后脑出血死亡);非老年组3例(2例术后因心脏破裂死亡,1例死于心源性休克或急性左心衰)。两组患者住院期间死亡率无统计学差异($P > 0.05$)。

3 讨论

研究表明女性冠心病的发生、发展同体内雌激

表1 基线资料比较
Table 1 Comparison of baseline data between two groups

Item	Aged group ($n=211$)	Non-aged group ($n=155$)	P value
Smoker[n(%)]	60 (28.4)	61 (39.4)	0.033
Hypertension[n(%)]	108 (51.2)	81 (52.3)	0.106
Diabetes[n(%)]	68 (32.2)	34 (21.9)	0.034
Hyperlipemia[n(%)]	55 (26.1)	49 (31.6)	0.291
Stroke[n(%)]	41 (19.4)	13 (8.4)	0.086
Killip[n(%)]			
Class III-VI	21 (9.9)	11 (7.1)	0.357
Family history	7 (3.3)	10 (6.5)	0.209
LVEF($\bar{x} \pm s$)	0.57 ± 0.09	0.55 ± 0.12	0.311
TC(mmol/L, $\bar{x} \pm s$)	5.31 ± 3.68	5.22 ± 1.10	0.769
TG(mmol/L, $\bar{x} \pm s$)	2.05 ± 0.89	1.81 ± 0.89	0.843
HDL-C(mmol/L, $\bar{x} \pm s$)	1.49 ± 0.42	1.55 ± 0.44	0.216
LDL-C(mmol/L, $\bar{x} \pm s$)	2.81 ± 0.76	2.96 ± 0.84	0.089
FBG(mmol/L, $\bar{x} \pm s$)	7.70 ± 3.40	7.00 ± 3.00	0.044
PLT($\times 10^9/L$, $\bar{x} \pm s$)	211.79 ± 61.88	210.00 ± 59.81	0.370
CK-MB crest value(U/L, $\bar{x} \pm s$)	175.19 ± 215.92	155.23 ± 130.37	0.320
eGFR[ml/(min $\cdot$ 1.73m ²), $\bar{x} \pm s$]	64.69 ± 31.05	86.71 ± 38.02	< 0.001

LVEF: left ventricular ejection fraction; TG: triglycerides; TC: total cholesterol; LDL-C: low-density lipoprotein cholesterol; HDL-C: high-density lipoprotein cholesterol; FBG: fasting blood glucose; CK-MB: creatine kinase-MB; PLT: platelet; eGFR: estimated glomerular filtration rate

表2 两组患者PCI术特点比较
Table 2 Comparison of characteristics of PCI between two groups

Item	Aged group (n = 211)	Non-aged group (n = 155)	P value
Single-vessel disease[n(%)]	58 (27.5)	54 (34.8)	0.137
Double-vessel disease[n(%)]	91 (43.1)	57 (36.8)	0.237
Triple-vessel disease[n(%)]	81 (38.4)	43 (27.7)	0.043
Left main coronary artery[n(%)]	7 (3.0)	2 (1.1)	0.311
Left anterior descending branch[n(%)]	86 (39.0)	84 (49.7)	0.014
Left circumflex branch[n(%)]	22 (10.0)	24 (14.2)	0.201
Right coronary artery[n(%)]	105 (47.7)	59 (34.9)	0.204
Stent number[n(%)]			
1	135 (71.4)	104 (69.3)	0.583
2	41 (21.7)	31 (20.7)	
≥3	13 (6.9)	15 (10.0)	
Stent diameter(mm, $\bar{x} \pm s$)	2.84 ± 0.69	2.95 ± 0.55	0.130
Stent length(mm, $\bar{x} \pm s$)	25.66 ± 7.80	25.45 ± 6.30	0.787
Contrast dose(ml, $\bar{x} \pm s$)	167.93 ± 68.39	180.21 ± 100.63	0.166

PCI: percutaneous coronary intervention

素的变化紧密相关^[5,6]。国内既往的研究报道多着重于男性冠心病患者的临床表现及PCI术特点^[7,8]，但是缺乏不同年龄阶段女性的大样本相关研究报道。

文献报道了心血管疾病的9种可控危险因素，包括：吸烟、高血压、高血脂、糖尿病、腹型肥胖、缺乏锻炼、酗酒、食用水果或蔬菜过少和心理因素^[9,10]。本研究结果表明，不同年龄阶段女性患者冠心病危险因素不同：老年女性患者糖尿病的发生率较高，同时空腹血糖水平也高于非老年患者；而非老年组患者吸烟占有更高的比例，差异均具有统计学意义。由此可见，随着女性年龄的增加，应尽快改变不良生活方式，积极防治各种冠心病危险因素的发生、发展，针对不同年龄阶段特点展开综合防治。

本研究的冠状动脉造影及PCI结果显示，老年组患者发病时病情较重，三支血管病变所占比例38.4%，显著高于非老年组患者（ $P < 0.05$ ），这同国内外研究相似^[11-13]，说明老年女性患者急诊PCI术较为复杂。同时老年患者还具有症状发作不典型、就诊不及时、对急性心肌梗死的危险性认知不足、急诊PCI治疗接受程度差、全身基础状态差、合并多种疾病等特点，这也从另一方面反映了老年女性急性心肌梗死患者预后差的原因。

本研究显示，老年女性STEMI患者的住院病死率为2.19%，这一结果与国外报道的男性STEMI接受急诊PCI患者的住院死亡率相似^[14]。老年组和非老年组患者接受急诊PCI的成功率分别为98.58%和98.87%，说明在技术成熟的中心，老年女性STEMI患者行PCI术可取得较好的近期效果。

综上所述，与非老年女性STEMI患者相比，老年女性患者的冠状动脉病变更为复杂。提示对不同年龄

阶段的女性患者，防治冠心病危险因素存在一定的差异。本研究为回顾性资料且样本量较小，尚存在一定的局限性，有待于更大规模的前瞻性研究对女性STEMI患者的临床及冠状动脉病变特点进行分析。

【参考文献】

- [1] He J, Gu D, Wu X, *et al.* Major causes of death among men and women in China[J]. N Engl J Med, 2005, 353(11): 1124-1134.
- [2] Huang JH, Qiao SB, Wu YJ, *et al.* Clinical characters and outcomes of female patients with ST-segment elevation myocardial infarction undergoing percutaneous coronary intervention[J]. Chin Circ J, 2010, 25(5): 340-343. [黄静涵, 乔树宾, 吴永健, 等. 女性急性非ST段抬高型心肌梗死行经皮冠状动脉介入治疗患者的临床特点及近远期疗效分析[J]. 中国循环杂志, 2010, 25(5): 340-343.]
- [3] Mosca L, Benjamin EJ, Berra K, *et al.* Effectiveness-based guidelines for the prevention of cardiovascular disease in women—2011 update: a guideline from the American Heart Association[J]. J Am Coll Cardiol, 2011, 57(12): 1404-1423.
- [4] American College of Emergency Physicians, Society for Cardiovascular Angiography and Interventions, O’Gara PT, *et al.* 2013 ACCF/AHA guideline for the management of ST-elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines[J]. J Am Coll Cardiol, 2013, 61(4): e78-e140.
- [5] Wild RA, WU C, Curb JD, *et al.* Coronary heart disease events in the Women’s Health Initiative hormone trials: effect modification by metabolic syndrome: a nested

- case-control study within the Women's Health Initiative hormone trials[J]. *Menopause*, 2013, 20(3): 254–260.
- [6] Antoniucci D, Valenti R, Moschi G, *et al.* Sex-based differences in clinical and angiographic outcomes after primary angioplasty or stenting for acute myocardial infarction[J]. *Am J Cardiol*, 2001, 87(3): 289–293.
- [7] Wang G, Han YL, Jing QM, *et al.* Efficacy of emergency percutaneous coronary intervention in elderly patients with acute myocardial infarction: clinical analysis of 771 elderly and 566 younger cases[J]. *Chin J Mult Org Dis Elderly*, 2007, 6(5): 302–304. [王 耿, 韩雅玲, 荆全民, 等. 老年急性心肌梗死住院患者临床特点及急诊介入治疗的近期疗效[J]. 中华老年多器官疾病杂志, 2007, 6(5): 302–304.]
- [8] Yang GT, Han YL, Wang ZL, *et al.* Long term efficacy in elderly female patients with acute myocardial infarction with percutaneous coronary intervention[J]. *Chin J Gerontol*, 2013, 33(9): 2032–2033. [杨桂棠, 韩雅玲, 王祖禄, 等. 老年女性急性心肌梗死患者经皮冠状动脉介入的长期疗效[J]. 中国老年学杂志, 2013, 33(9): 2032–2033.]
- [9] Jackson G. Gender differences in cardiovascular disease prevention[J]. *Menopause Int*, 2008, 14(1): 13–17.
- [10] Danchin N, Benetos A, Lopez-Sublet M, *et al.* Aortic pulse pressure is related to the presence and extent of coronary artery disease in men undergoing diagnostic coronary angiography: a multicenter study[J]. *Am J Hypertens*, 2004, 17(2): 129–133.
- [11] Liu HW, Han YL, Ma YY, *et al.* Relative relationship between clinical and angiographic characteristic for coronary heart disease in 2303 female patients[J]. *Med Philosophy*, 2013, 34(9B): 35–37. [刘海伟, 韩雅玲, 马颖艳, 等. 2303例女性冠心病患者临床表现及冠状动脉造影病变特点的相关性分析[J]. 医学与哲学, 2013, 34(9B): 35–37.]
- [12] Oqueli E, Tian W, Reed R, *et al.* Percutaneous coronary intervention in women: in-hospital clinical outcome[J]. *Heart Lung Circ*, 2007, 16(4): S55–S62.
- [13] Wang XH, Wang SW, Yan MY, *et al.* The relationship between cardiovascular risk factors and pathological changes of coronary artery in patients with acute coronary syndrome[J]. *Chin J Mult Org Dis Elderly*, 2008, 7(2): 95–98. [王新华, 王士雯, 晏沐阳. 急性冠脉综合征患者冠状动脉病变与心血管危险因素的相关性分析[J]. 中华老年多器官疾病杂志, 2008, 7(2): 95–98.]
- [14] Zheng X, Dreyer RP, Hu S, *et al.* Age-specific gender differences in early mortality following ST-segment elevation myocardial infarction in China[J]. *Heart*, 2015, 101(5): 349–355.
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· 消 息 ·

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为加快重大医学研究成果的交流推广, 促进医学事业的发展, 本刊对符合下列条件的论文开设快速通道, 优先发表: (1) 国家、军队、省部级基金资助项目; (2) 其他具有国内领先水平的创新性科研成果论文; (3) 相关领域各类最新指南解读。凡要求以“快速通道”发表的论文, 作者应提供关于论文科学性和创新性的说明。本刊对符合标准的稿件, 可快速审核及刊用。

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