· 临床病例(病理)讨论 ·

第 63 例——26 岁青年女性急性心肌梗死 1 例

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1　病例摘要

患者女性，26 岁，发作性胸痛 1 个月、加重伴出汗 11 h，于 2010 年 1 月 15 日 08:00 来本院急诊就诊。患者于 1 个月前夜间休息时出现胸痛，持续 30 min 左右，休息后症状好转，未给予任何治疗。1 月 14 日 23:00 患者睡眠时突感胸痛，呈压榨样，伴出汗，疼痛放射至左肩、臂，持续 5 h 不能缓解，1 月 15 日 04:00 就诊于当地医院，心电图显示 Ⅰ、aVL、V_3～V_5 导联 ST 段抬高，Ⅱ、aVF 导联 ST 段压低和 T 波倒置(图 1)，服用硝酸甘油后症状略有好转，仍然有剑突下疼痛。08:00 来本院急诊就诊。否认高血压、心脏病、糖尿病、脑血管疾病史，否认手术、外伤、输血、食物或药物过敏史，无吸毒、吸烟、饮酒史，有心肌梗死家族史。查体：体温 36.5 ℃，脉搏 76 次/min，呼吸频率 18 次/min，血压 125/80 mm Hg (1 mm Hg = 0.133 kPa)，身高 156 cm，体重 65 kg。双肺呼吸音清，未闻及干、湿啰音。心前区无隆起，心尖搏动正常，心尖部无抬举样搏动，无细震颤，心浊音界正常，心率 76 次/min，律齐，第一心音正常，各瓣膜听诊区未闻及杂音，未闻及心包摩擦音。腹平坦，肝、脾未触及。双下肢无水肿。入院后完善各项检查，根据患者心肌酶谱变化(表 1)和心电图演变情况，考虑 AMI。

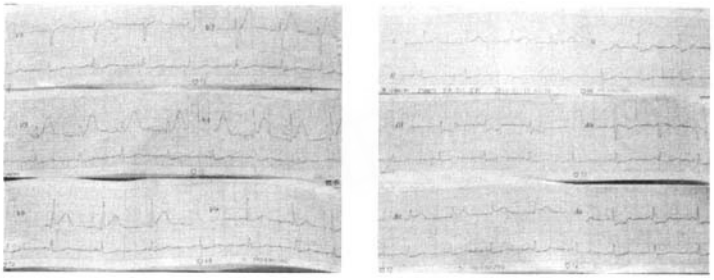

图 1　2010 年 1 月 15 日 26 岁女性急性心肌梗死患者心电图示 Ⅰ、aVL、V_3～V_5 导联 ST 段抬高，Ⅱ、aVF 导联 ST 段压低，T 波倒置

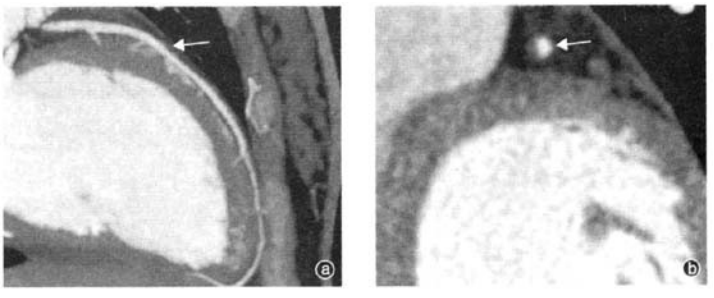

图 2　2010 年 1 月 15 日 26 岁女性急性心肌梗死患者冠状动脉多排螺旋 CT 横断面(a)与纵断面(b)检查示冠状动脉左前降支(箭头所示)近端斑块形成

表 1　26 岁女性 AMI 患者心肌酶谱变化

入院时间	CK (U/L)	CK-MB (U/L)	TnT (μg/L)	入院时间	CK (U/L)	CK-MB (U/L)	TnT (μg/L)
12 h	2 235	235	1.92	72 h	257	7	2.51
16 h	3 034	287	4.07	4 d	180	4	2.52
24 h	1 458	92	3.04	5 d	138	3	1.09
48 h	761	55	2.67	6 d	115	3	0.19

注：AMI：急性心肌梗死，CK：肌酸激酶，CK-MB：肌酸激酶同工酶，TnT：肌钙蛋白 T

给予抗血小板、降脂、抗凝等对症治疗。入院后血脂检查正常，超声心动图检查提示节段性室壁运动障碍(前壁、前间壁、左室心尖部)，左室整体功能轻度降低。冠状动脉(冠脉)多排螺旋 CT 检查提示冠脉粥样硬化，前降支近端斑块形成(图 2)，合并中度管腔狭窄。最终确诊为 AMI，患者住院治疗 7 d 后病情平稳出院。

2　讨　论

以往认为 AMI 主要见于中老年人，但近年来，由于膳食结构不合理，体力活动减少，肥胖或超重者增多，因此青年人 AMI 发病率呈逐年上升趋势。青年人已成为一个特殊的冠心病易患人群。调查显示：我国目前青年人冠心病占冠心病人群总发病率的 4.3%，AMI 越来越年轻化，且青年人 AMI 起病急骤，症状重，并发症少，病死率低，预后较好。大量资料显示，青年人 AMI 具有许多特殊性，如较轻的动脉粥样硬化、冠脉单支病变多见和较少的传统冠心病危险因素等。本例患者体重超重〔体质指数(BMI) 26.7 kg/cm²〕，有心肌梗死家族史，患者入院时 CT 检查提示冠脉前降支粥样斑块形成伴狭窄，最后诊断为 AMI。对于胸痛急诊就诊的青年患者需要考虑鉴别 AMI 的可能，通过动态监测心电图和心肌酶、超声心动图改变可以辅助鉴别诊断，冠脉 CT 和冠脉造影检查是确诊的最佳手段。医师应当提高青年人发生 AMI 的警惕性，争取早期诊断、早期治疗，减少误诊和漏诊，提高早期梗死相关动脉(IRA)再通率，可有效降低青年人发生 AMI 的病死率及致残率。

3　专家点评

尽管青年女性发生 AMI 极为罕见，一旦出现持续的胸痛需要认真鉴别诊断，虽然可能既往无危险因素、无症状、无典型心电图变化，只要有临床表现，连续心电图和心肌标记物监测对诊断是十分重要的，也有助于指导早期干预。

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A case of 26-year-old woman with ST elevation myocardial infarction and literature review

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Key Words: ST elevation myocardial infarction; Young woman; Troponins; Coronary computed tomography angiography

CASE REPORT

A 26-year-old woman presented to the emergency department General Hospital of PLA on January 15, 2010, because of episodes of chest pain for 1 month, and the symptom was aggravated for 11 hours.

The patient had suffered from chest pain 1 month ago. The symptom was relieved by having a rest for 30 minutes. On January 14, 2010, a crushing chest pain suddenly occurred during her sleeping at 23:00, and it was persistent and radiated to her left shoulder, associated with heavy sweating. So she went to the local hospital at 04: 00 next day. The electrocardiogram (ECG) showed a sinus rhythm at 76 bpm, normal axis and ST elevation in leads Ⅰ, aVL, V3-V5, with ST depression and T wave inversion in leads Ⅱ, aVF (Figure 1). The pain was relieved by nitroglycerin. She was transferred to emergency department of our hospital at 08: 00. There was no history of hypertension, diabetic mellitus, tuberculosis or connective tissue diseases. Her father had a history of myocardial infarction.

On physical examination, vital signs were stable. Her body mass index was 26.7 kg/cm^2 (weight: 65 kg, height: 1.56 m). Blood pressure was 125/80 mm Hg (1 mm Hg = 0.133 kPa), respirations 18 times/min, pulse 76 bpm, temperature 36.5 ℃. She was conscious with painful complexion, jugular veins not engorged, no rales in both lungs, heart not enlarged, heart rate 76 bpm with regular rhythm, no murmur heard, abdomen soft, liver and spleen not palpable. There was no edema on her lower extremities.

A presumptive diagnosis of acute coronary syndrome or myocarditis was considered. She was admitted to the coronary care unit (CCU) and treated with aspirin, clopidogrel, metoprolol, atorvastatin, unfractionated heparin. Echocardiogram displayed anterior wall hypokinesis. Coronary computed tomography angiography revealed atheromatous plaque in the left anterior descending artery which was narrowed by about 50% (Figure 2). Table 1 shows the values of cardiac biomarkers after admission. The patient refused to have percutaneous coronary intervention. She was discharged symptom-free on the seventh hospital day. The final diagnosis was acute myocardial infarction (AMI).

DISCUSSION

Myocardial infarction (MI) in young adults

AMI is rare in young individuals, occupying only 2% to 6% of all AMI occurring in adults under age 45 years. Approximately 20% of persons with AMI younger than 55 years are women.[1] About 80% of young MI patients have coronary atherosclerosis,[2] they are less likely to have severe coronary vessel obstruction than older adults. Men ≤35 years and women≤45 years have a higher prevalence of non-obstructive (<70% stenosis) or single-vessel coronary artery disease (CAD) in contrast to their older counterparts.[3] Apart from premature CAD in a first-degree relative, familial predisposition extends to coagulation disorders, diabetes, obesity, and dyslipidemias. Homozygous familial hypercholesterolemia and combined familial hyperlipidemia have been strongly associated with CAD at a young age.[2]

Compared to older patients with AMI, younger patients more often have angiographically "normal" (i. e. no atherosclerotic lesions) coronary arteries, much more in women than men.[3] Congenital coronary malformations, characterized by a rare coronary feature based on origin, number of ostia, course or termination, affect approximately 1% of the general population, but account for 18% of sudden death in young athletes.[4] Coronary dissection is another important cause of sudden cardiac death and MI in young persons, predominantly in women using hormonal contraceptives and during the peripartum period. It may occur spontaneously or secondary to aortic root dissection, coronary manipulation or chest trauma.[5] Embolization of septic vegetations in infective endocarditis has been known to cause MI, especially in young intravenous drug users.[6] Additionally, coronary artery aneurysms may result in MI through thrombus embolization or in association with Kawasaki disease.[2]

Inherited or acquired hypercoagulability carries an increased risk for thrombotic events. Platelet abnormalities, such as glycoprotein Ⅲa polypeptide polymorphism and primary thrombocytosis, have also been shown to cause MI in the young.[2] Another important condition is systemic lupus erythematosus (SLE), since the incidence of MI in women with SLE aged 35 to 44 years is 50-fold higher than in an age-matched cohort.[7] Pathogenetic mechanisms of SLE-related MI include antiphospholipid antibody / inflammation - mediated thrombosis and vasculitis.

Differential diagnoses of ST elevation in young adults

Because early recognition of MI relies heavily on ECG interpretation, it is important to describe other conditions, ranging from benign to fatal, which comprise the ECG differential diagnosis of ST-segment elevation in young patients.[8] A study of normal ECGs reported that the prevalence of normal male pattern, characterized by ST elevation ≥1 mm at the J point in at least 1 precordial lead, reached >90% in men aged 17 to 24 years.[9] The typical female pattern, marked by ST elevation <1 mm, was present in approximately 80% of women in all age groups. Benign early repolarization, on the other hand, may show ST elevation in the mid- to left precordial leads ranging between <2 to 5 mm and frequently with a notched J point; it is common in healthy African-American men aged 20 to 40 years.[10] While there is concave upsloping of the ST-segment in both early repolarization and pericarditis,

features such as PR-segment depression, diffuse ST elevation and dynamic ECG changes are more characteristic of pericarditis.[10] Hyperkalemia is often associated with wide QRS complexes, tented T-waves and downsloping ST segment.[11]

VIEW POINTS

AMI in young person is rare, but it should be considered as a differential diagnosis among those presenting with chest pain. This case illustrates that MI can affect young woman in the absence of traditional risk factors and coronary computed tomography angiography proof of atherosclerosis. Therefore, clinicians should gather a detailed clinical history that covers the main causes discussed above. Because numerous conditions can mimic the ECG features of AMI in the young, it is crucial to obtain serial ECGs and cardiac troponins to accurately diagnose AMI and guide appropriate management.

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· 国际学术动态 ·

2010 年国际心肺复苏与心血管急救共识会议在美国达拉斯举行

五年一度的国际心肺复苏(CPR)与心血管急救(ECC)推荐方案科学共识会议于 2010 年 2 月 1 日在美国德克萨斯州达拉斯市举行。作为国际红十字联合会学术指导委员会成员, 1 月 31 日到会进行了为期 2 d 的国际急救(First aid)指南循证共识报告, 推荐的内容将编入 2010 年学术共识。2010 年 11 月将正式发表国际急救指南基本框架内容, 并进行广泛讨论。

此次共识会议恰值现代 CPR 学科创立 50 周年之际, 大会从 2 月 1 日晚宴开始正式拉开帷幕, 来自世界各地复苏领域的最著名专家、循证文献作者以及应邀参会者 300 余人汇集一堂, 共同庆祝 CPR 学科诞辰 50 周年。所有在场者分享了华盛顿大学医学教授 Mickey Eisenberg 所作"CPR 动人的故事: 庆祝 50 年拯救的生命"的主题报告, 报告人在生动精彩的演讲中展示了鲜为人知的历史珍贵图片, 以及仍能够让当今人类震撼的创始者工作影片。与会者回顾了这项能让数以亿计人学习、实际应用过千万次、使数百万人获救重生的 CPR 技术, 以及相伴 CPR 走过的光辉 50 年, 让我们铭记 James Elam、Peter Safar、William Kouwanhovan 等创始者的名字。此次庆典的形式虽显得比较节俭, 但传达出对 CPR 的兴致和执著, 也未受到美国金融危机带来的萧条的影响, 可见科学的魅力与精神是永恒的。2010 年的会议还授予 Lance Becker 等 5 位世界著名专家以最高荣誉, 以表彰他们在复苏研究、指南制定、地区组织、教学培养以及学术观点方面所做出了杰出的贡献。

会议分为基本生命支持(BLS)、高级生命支持(ALS)、小儿与新生儿生命支持(BPLS)、培训、器械、团队(EIT), 以及急性冠脉综合征/心肌梗死(ACS/MI)几个主题并展开讨论。围绕 2005 年以来以上各方面新取得的学术进展, 由每名工作单(worksheet)作者采用相同循证医学方法, 对可能检索发表的临床和实验研究结果进行文献回顾, 评价文献的证据等级, 对科学共识内容进行阐述, 最后提出新增、修改或删除的推荐方案。每个提案报告后再经过与会者提问或发表意见修改, 并提交会议工作组(task force)讨论撰写成文。突出的内容还是集中在: ①BLS: 仅行心脏按压不通气, 心脏按压幅度、频率、按压释放, 按压/通气比(30∶2), 除颤前按压的效果, 对质量控制能否改变 CPR 预后; ②ALS: 复苏药物的应用, CPR 中的机械通气模式, CPR 质量的生理反馈, 呼气末二氧化碳分压对复苏效果的检测, 低温治疗; ③ACS/MI: 院前阿司匹林的使用及救治方案, 如何检测和溶栓治疗等。在对国际 CPR 流程讨论中, 汇集了国际各复苏联合会的意见, 大家采用通俗、富于艺术的形式来表述, 主要集中在流程要简略、实用、不片面、易学、易教, 要使 CPR 过程简单化。也有组织指出不要将某个研究结果当作新闻炒作, 更不要因为"CPR"而使患者致死。

2010 国际 CPR 及 ECC 科学共识将于 11 月正式发表在《循环》和《复苏》杂志上。由于会议的保密规定, 参会者不得在正式发表前透露修改后的共识内容。但笔者认为, 了解指南制定过程及方法, 掌握其倡导的科学精神, 关注和参与对我国 CPR 事业的推进与发展更为重要。 (沈洪)

第63例——26岁青年女性急性心肌梗死1例

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