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高等医药院校教材

# 临床医学双语教材

内科学 儿科学



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## 内科学 儿科学

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# 前言

随着高等教育步伐的加快,双语教学日益成为培养国际化人才的重要手段。临床医学教育是医学院校的主体,其双语教学的开展和应用是高校办学水平的标志。为此我们组织一批有丰富临床医学教育经验的留学归国教师,共同编写了这本实用性较强的双语教材,为推进高等医学双语教学的教材建设尽微薄之力。

本书分为内科学、儿科学两大部分。内科学共分七节,涉及心内、呼吸、消化、肾内、内分泌、血液、风湿等七个系统。内容均以原版英文教材为基础,重点选择了常见病、多发病进行编写,难易适中,便于学生学习和理解,可供五年制、七年制医学生临床教学使用。

由于水平有限,书中错误之处在所难免,敬请读者指正。

编者

2007年3月



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while primary prevention has delayed the disease to later in life in all socioeconomic groups. Obesity, insulin resistance, and type 2 diabetes mellitus are increasing and are powerful risk factors for IHD. With urbanization in the developing world, the prevalence of risk factors for IHD is increasing rapidly in these regions. Large increases in IHD throughout the world are projected, and IHD is likely to become the most common cause of death worldwide by 2020.

### Pathophysiology

Although the large epicardial coronary arteries are capable of constriction and relaxation, in healthy persons they serve as conduits and are referred to as conductance vessels, while the intramyocardial arterioles normally exhibit changes in tone and are therefore referred to as resistance vessels. Abnormal constriction of the conductance vessels can cause severe ischemia in Prinzmetal's angina. Abnormal constriction or failure of normal dilation of the coronary resistance vessels can also cause ischemia. When it causes angina this condition is referred to as microvascular angina.

The normal coronary circulation is dominated and controlled by the heart's requirements for oxygen. This need is met by the ability of the coronary vascular bed to vary its resistance (and therefore blood flow) considerably while the myocardium extracts a high and relatively fixed percentage of oxygen. Normally, intramyocardial resistance vessels demonstrate an immense capacity for dilation. For example, the changing oxygen needs of the heart with exercise and emotional stress affect coronary vascular resistance and in this manner regulate the supply of oxygen and substrate to the myocardium (metabolic regulation). The coronary resistance vessels also adapt to physiologic alterations in blood pressure in order to maintain coronary blood flow at

生活方式), 并且在全部的社会经济人群中, 初级预防将该病推迟到生命的晚期。肥胖、胰岛素抵抗、2型糖尿病发病的增高, 对 IHD 而言都是强有力的危险因素。随着发展中国家的城市化, IHD 的危险因素的流行, 在这些地区快速增长。预测 IHD 将在全球范围内快速增长, 到 2020 年, IHD 可能成为全世界最主要的死亡原因。

### 二、病理生理

虽然大的心外膜的冠状动脉能够收缩和舒张, 在健康人, 这些血管起着输出管作用被认为是传输血管; 而心肌内小动脉通常在正常情况下可以调节血管张力, 因此被认为是阻力血管。传输血管异常的收缩可以引起严重的心绞痛, 称为变异性心绞痛 (Prinzmetal's angina)。冠状动脉阻力血管异常收缩或者不能正常的扩张同样能引起缺血。在该种情况下引起的心绞痛, 被称为微血管心绞痛。

正常的冠脉循环由心脏对氧的需求决定和控制。当心肌要吸收相对高饱和度的氧时, 可以通过冠脉血管床自身阻力大小改变 (因此而引起的血流变化) 来满足这种需求。正常情况下, 心肌内阻力血管具有巨大扩张能力。例如, 伴随着锻炼和情感压力, 心脏对氧的需求变化影响着冠脉血管阻力并且以这种方式调整氧供和分配给心肌 (代谢调节)。冠脉阻力血管同样适应血压的生理改变, 以能够满足冠脉血流在适宜心脏需求的水平 (自身调节)。

levels appropriate to myocardial needs

(autoregulation).

By reducing the lumen of the coronary arteries, atherosclerosis limits appropriate increases in perfusion when the demand for flow is augmented, as occurs during exertion or excitement. When the luminal reduction is severe, myocardial perfusion in the basal state is reduced. Coronary blood flow can also be limited by spasm, arterial thrombi, and, rarely, coronary emboli as well as by ostial narrowing due to luetic aortitis. Congenital abnormalities, such as origin of the left anterior descending coronary artery from the pulmonary artery, may cause myocardial ischemia and infarction in infancy, but this cause is very rare in adults. Myocardial ischemia can also occur if myocardial oxygen demands are markedly increased, and when coronary blood flow may be limited, as occurs in severe left ventricular hypertrophy due to aortic stenosis. The latter can present with angina that is indistinguishable from that caused by coronary atherosclerosis. A reduction in the oxygen-carrying capacity of the blood, as in extremely severe anemia or in the presence of carboxyhemoglobin, rarely causes myocardial ischemia by itself but it may lower the threshold for ischemia in patients with moderate coronary obstruction. Not infrequently, two or more causes of ischemia coexist, such as an increase in oxygen demand due to left ventricular hypertrophy secondary to hypertension and a reduction in oxygen supply secondary to coronary atherosclerosis and anemia.

## Clinical Manifestation

### Coronary Atherosclerosis

Epicardial coronary arteries are the major site of atherosclerotic disease. The major risk factors for atherosclerosis [high plasma low-density lipoprotein (LDL), low plasma high-density lipoprotein (HDL), cigarette smoking, hypertension, and diabetes mellitus

当对血流的需求增加,例如活动和激动时,冠状动脉粥样硬化造成管腔狭窄限制了灌注的相应增加。当管腔狭窄严重时,在基础状态下的心肌灌注也是减少的。冠状动脉血流也同样受到痉挛、动脉血栓和少见的冠脉栓塞,以及由于梅毒性主动脉炎引起的瓣口狭窄的原因所限制。先天异常,例如左前降支起源于肺动脉,在婴儿期也可以引起心肌缺血和梗塞,但是该种原因在成人相当少见。心肌缺血也发生在心肌对氧需求显著增加、而冠脉血流量增加有限的情况下,例如由于主动脉瓣狭窄时引起的严重的左室肥厚,后者可以出现心绞痛症状,但难以与由冠状动脉粥样硬化引起的心绞痛区别。血液携氧能力的下降,如在极重度贫血、一氧化碳肌红蛋白血症,本身很少引起心肌缺血,但是可以降低具有冠脉狭窄病人的缺血阈值。两种或两种以上缺血原因并存并非少见,例如由于继发于高血压的左心室肥厚对氧供需求增加,和由于冠状动脉粥样硬化、贫血时的氧供减少。

## 三、临床表现

### (一) 冠状动脉粥样硬化

心外膜冠状动脉是动脉粥样硬化疾病发生的主要位置。动脉粥样硬化的主要的危险因素 [高的血浆低密度脂蛋白 (LDL), 低的高密度脂蛋白 (HDL), 吸烟, 高血

disturb the normal functions of the vascular endothelium. These functions include local control of vascular tone, maintenance of an anticoagulant surface, and defense against inflammatory cells. The loss of these defenses leads to inappropriate constriction, luminal clot formation, and abnormal interactions with blood monocytes and platelets. The latter results in the subintimal collections of fat, smooth-muscle cells, fibroblasts, and intercellular matrix (i.e., atherosclerotic plaques), which develop at irregular rates in different segments of the epicardial coronary tree and lead eventually to segmental reductions in cross-sectional area. When a stenosis reduces the cross-sectional area by 75%, a full range of increases in flow to meet increased myocardial demand is not possible. When the luminal area is reduced by  $\geq 80\%$ , blood flow at rest may be reduced, and further minor decreases in the stenotic orifice can reduce coronary flow dramatically and cause myocardial ischemia.

Segmental atherosclerotic narrowing of epicardial coronary arteries is caused most commonly by the formation of a plaque, which is subject to fissuring, erosion, hemorrhage, and thrombosis. Any of these events can temporarily worsen the obstruction, reduce coronary blood flow, and cause clinical manifestations of myocardial ischemia, as described below. The location of the obstruction influences the quantity of myocardium rendered ischemic and determines the severity of the clinical manifestations. Thus, critical obstructions in vessels such as the left main coronary artery or the proximal left anterior descending coronary artery are particularly hazardous. Severe coronary narrowing and myocardial ischemia are frequently accompanied by the development of collateral vessels, especially when the narrowing develops gradually. When well developed, such vessels can, by themselves, provide sufficient blood flow to sustain the viability of the myocardium

压和糖尿病干扰血管内皮细胞的正常功能。血管内皮细胞功能包括控制局部血管张力,维持血管表面的抗凝状态以及抵御炎症细胞。防御功能的降低导致血管不适当收缩,腔内血栓形成,血液里单核细胞与血小板之间异常的相互作用。这些会进一步导致脂质、平滑肌细胞,成纤维细胞和细胞间基质(如,动脉粥样硬化斑块)在内膜下沉积,并在心外膜冠脉的不同部位以无规律的速度发展,最终导致横断面积的部分减少。当一个狭窄减少的横断面积达到75%时,血流增加到最大程度也不可能满足心肌的需求。当管腔面积减少到 $\geq 80\%$ ,在休息时血流也会减少,更为严重的是狭窄面积轻微少量增加,能够急剧减少冠脉血流引起心肌缺血。

心外膜冠脉节段性的动脉硬化狭窄通常是由斑块形成造成的,斑块可以出现裂纹、侵蚀、出血以及血栓。任何一种情况能加重梗阻,减少冠脉血流,并且引起心肌缺血的临床表现。梗阻的部位影响缺血心肌的数量和决定临床表现的严重程度。关键部位的血管阻塞如左主干或左前降支近段具有极大的危险性。严重的冠脉狭窄和心肌缺血通常伴随侧支血管形成,特别是当狭窄缓慢发生时。当侧支血管形成较好时,侧支本身能提供足够的血流以维持静息时心肌细胞需求,但是在需求量增加时,则不能满足血流供应。

at rest but not during conditions of increased demand.

Once stenosis of a proximal epicardial artery has reduced the cross-sectional area by  $\geq 70\%$ , the distal resistance vessels (when they function normally) dilate to reduce vascular resistance and maintain coronary blood flow. A pressure gradient develops across the proximal stenosis, and poststenotic pressure falls. When the resistance vessels are maximally dilated, myocardial blood flow becomes dependent on the pressure in the coronary artery distal to the obstruction. In these circumstances ischemia, manifest clinically by angina or electrocardiographically by ST-segment depression, can be precipitated by increases in myocardial oxygen demands caused by physical activity, emotional stress, and/or tachycardia. Changes in the caliber of the stenosed coronary artery due to physiologic vasomotion, loss of endothelial control of dilation, pathologic spasm (Prinzmetal's angina), or small platelet plugs can also upset the critical balance between oxygen supply and demand and thus precipitate myocardial ischemia.

### Effects of Ischemia

During episodes of inadequate perfusion caused by coronary atherosclerosis, myocardial tissue oxygen tension falls and may cause transient disturbances of the mechanical, biochemical, and electrical functions of the myocardium. The abrupt development of severe ischemia, as occurs with total or subtotal coronary occlusion, is associated with almost instantaneous failure of normal muscle contraction and relaxation. The relatively poor perfusion of the subendocardium causes more intense ischemia of this portion of the wall. Ischemia of large portions of the ventricle causes transient left ventricular failure, and if the papillary muscles are involved, mitral regurgitation can complicate this event. When ischemia is transient, it may be associated with angina pectoris;

一旦近端心外膜的动脉狭窄横断面的面积减少到  $\geq 70\%$  时, 远端的阻力血管 (当它们功能正常时) 扩张以减少血管阻力以维持冠脉血流。狭窄近端部位的压力梯度是增高的, 而狭窄远端的压力是下降的。当阻力血管极度扩张时, 心肌血流变为依赖于阻塞远端冠状动脉的压力。在这种情形下, 体力活动、情感压力、和/或心动过速引起心肌的氧需求增加导致心肌缺血的情况就以心绞痛症状或者是心电图 ST 段压低表现出来。由于生理上的血管舒缩致狭窄冠脉管径变化, 内皮扩张控制能力的丧失, 病理性痉挛 (Prinzmetal 心绞痛), 或者小的血小板栓子均能够打破供氧和需氧之间的临界平衡并且加重心肌缺血。

**缺血影响**

在由冠状动脉粥样硬化引起的低灌注发生时, 心肌组织的氧分压下降, 并且可以引起心肌短暂的电生理、生化、机械功能的紊乱。当发生完全或次全闭塞时, 突然严重的缺血, 立刻会导致心肌收缩和舒张受损。相对于灌注低下的心内膜下, 缺血情况则更加严重。大面积室壁缺血可引起短暂的左室衰竭, 并且如果累及乳头肌, 二尖瓣返流可加重左心衰竭。当缺血时间短暂, 可以表现为心绞痛发作; 当缺血时间延长, 就可以引起心肌坏死和形成伴有或不伴有急性心梗临床表现的疤痕形成。冠状动脉粥样

when it is prolonged, it can lead to myocardial necrosis and scarring with or without the clinical picture of acute myocardial infarction. Coronary atherosclerosis is a focal process that usually causes nonuniform ischemia. Regional disturbances of ventricular contractility cause segmental akinesia or, in severe cases, bulging (dyskinesia), which can greatly reduce myocardial pump function.

A wide range of abnormalities in cell metabolism, function, and structure underlie these mechanical disturbances during ischemia. The normal myocardium metabolizes fatty acids and glucose to carbon dioxide and water. With severe oxygen deprivation, fatty acids cannot be oxidized, and glucose is broken down to lactate; intracellular pH is reduced, as are the myocardial stores of high-energy phosphates, i.e., ATP and creatine phosphate. Impaired cell membrane function leads to the leakage of potassium and the uptake of sodium by myocytes. The severity and duration of the imbalance between myocardial oxygen supply and demand determine whether the damage is reversible ( $\leq 20$  min for total occlusion in the absence of collaterals) or whether it is permanent, with subsequent myocardial necrosis ( $> 20$  min).

Ischemia also causes characteristic changes in the electrocardiogram (ECG) such as repolarization abnormalities, as evidenced by inversion of T waves and, when more severe, by displacement of ST segments. Transient ST-segment depression often reflects subendocardial ischemia, while ST-segment elevation is thought to be caused by more severe transmural ischemia. Another important consequence of myocardial ischemia is electrical instability, which may lead to ventricular tachycardia or ventricular fibrillation. Most patients who die suddenly from IHD do so as a result of ischemia-induced ventricular tachyarrhythmias.

硬化是一个引起非均质性心肌缺血的重要过程。心室局部的收缩紊乱能引起节段性的运动障碍, 严重者, 如室壁膨出可以极大降低心脏的泵血功能。

心肌细胞代谢、功能和结构等许多方面的异常成为在心肌缺血时心脏机械舒缩的紊乱的基础。正常的心肌细胞可以使脂肪酸和葡萄糖代谢成为二氧化碳和水。由于严重缺氧, 脂肪酸不能被氧化及葡萄糖被分解转变成乳酸; 当心肌细胞内有高能磷酸、三磷酸腺苷和磷酸肌酸蓄积时, 细胞内的 pH 值减小。细胞膜受损导致钾离子溢出细胞外, 钠离子进入细胞内。心肌氧气供应和需求的不平衡的严重程度和持续时间决定了是否心肌细胞的损害是可逆的(没有侧支循环完全闭塞达  $\leq 20$  分钟)或心肌细胞的损害是永久性的, 伴发心肌坏死 ( $> 20$  分钟)。

心肌缺血可以引起特征性的心电图的改变比如复极异常, 在心电图可表现为 T 波倒置, 当心肌缺血更严重时在心电图中可表现为 ST 段移位。短暂的 ST 段压低常常反映心内膜下的缺血, 当 ST 段抬高时通常认为是更严重的心肌透壁性缺血。另外一个心肌缺血更严重的后果是心脏的电生理不稳定, 这可以导致室性心动过速和室颤。大多数因缺血性心脏病发生猝死的原因是由于缺血诱发的快速室性心律失常。

### Asymptomatic versus Symptomatic IHD

### (二) 无症状及有症状的缺血

Postmortem studies on accident victims and military casualties in western countries have shown that coronary atherosclerosis often begins to develop prior to age 20 and is widespread even among adults who were asymptomatic during life. Exercise stress tests in asymptomatic persons may show evidence of silent myocardial ischemia, i.e., exercise-induced ECG changes not accompanied by angina pectoris; coronary angiographic studies of such persons may reveal coronary artery obstruction. Postmortem examination of patients with such obstruction without a history of clinical manifestations of myocardial ischemia often shows macroscopic scars secondary to myocardial infarction in regions supplied by diseased coronary arteries. According to population studies, ~25% of patients who survive acute myocardial infarction may not reach medical attention, and these patients carry the same adverse prognosis as those who present with the classic clinical syndrome. Sudden death may be unheralded and is a common presenting manifestation of IHD. Patients with IHD can also present with cardiomegaly and heart failure secondary to ischemic damage of the left ventricular myocardium that may have caused no symptoms prior to the development of heart failure; this condition is referred to as ischemic cardiomyopathy. In contrast to the asymptomatic phase of IHD, the symptomatic phase is characterized by chest discomfort due to either angina pectoris or acute myocardial infarction. Having entered the symptomatic phase, the patient may exhibit a stable or progressive course, revert to the asymptomatic stage, or suddenly die.

### Stable Angina Pectoris

This episodic clinical syndrome is due to transient myocardial ischemia. Males constitute ~70% of all patients with angina pectoris and an even greater fraction of those <50 years.

### 性心脏病

西方国家从车祸和战争死亡的尸检研究表明,冠状动脉粥样硬化的病变在20岁以前即开始发生,而在生前无缺血症状的成年人中,有冠状动脉粥样硬化者十分常见。无症状者通过运动试验可以揭示有隐匿性心肌缺血的证据,即:运动诱发缺血性心电图的改变,而不伴发心绞痛;对这些病人的冠状动脉造影常显示有阻塞性冠状动脉疾病。对有阻塞性冠状动脉疾病,而无任何临床心肌缺血表现的患者的尸检研究表明,在有病变冠状动脉供血的区域内,常可见到心肌梗死的瘢痕。根据普查,大约25%这些发生过心肌梗死而存活的患者并没有去医院看病,这些病人与有典型临床症状的病人预后是相同的。猝死可无任何先兆症状,但又是缺血性心脏病常见的表现。病人也可出现因左室心肌缺血损伤而导致的心脏肥大和心力衰竭。而这些心肌的损伤在无心脏衰发展之前可无任何症状,这种情况被称为缺血性心肌病。与无症状缺血性心脏病相反,有症状的缺血性心脏病或因心绞痛或因急性心肌梗死出现胸部不适。进入有症状时期,病人可表现呈稳定性或恶化的病程,也可能回复至无症状状态或发生猝死。

### (三) 稳定性心绞痛

这种发作性的临床综合征是由于短暂的心肌缺血所致。心绞痛病人中男性约占70%,在50岁以下病人中男性所占的比例甚至更高。

## History

The typical patient with angina is a man >50 years or a woman >60 years who complains of chest discomfort, usually described as heaviness, pressure, squeezing, smothering, or choking and only rarely as frank pain. When the patient is asked to localize the sensation, he or she will typically press on the sternum, sometimes with a clenched fist, to indicate a squeezing, central, substernal discomfort (Levine's sign). Angina is usually crescendo-decrescendo in nature, typically lasts 2 to 5 min, and can radiate to the left shoulder and to both arms, especially to the ulnar surfaces of the forearm and hand. It can also arise in or radiate to the back, interscapular region, root of the neck, jaw, teeth, and epigastrium. Angina is rarely localized below the umbilicus or above the mandible.

Although episodes of angina are typically caused by exertion (e.g., exercise, hurrying, or sexual activity) or emotion (e.g., stress, anger, fright, or frustration) and are relieved by rest, they may also occur at rest (Unstable Angina Pectoris) and at night while the patient is recumbent (angina decubitus). The patient may be awakened at night distressed by typical chest discomfort and dyspnea. Nocturnal angina may be due to episodic tachycardia or to the expansion of the intrathoracic blood volume that occurs with recumbency; the latter causes an increase in cardiac size and myocardial oxygen demand that lead to ischemia and transient left ventricular failure.

The threshold for the development of angina pectoris may vary by time of day and emotional state. Many patients report a fixed threshold for angina, which occurs predictably at a certain level of activity, such as climbing two flights of stairs at a normal pace. In these patients coronary stenosis and myocardial oxygen supply are fixed and ischemia is precipitated by an increase in myocardial oxygen demand. In other patients the threshold for angina

## 1. 病史

典型的心绞痛见于 50 岁以上的男性病人, 或 60 岁以上的女性病人, 主诉胸部不适, 常为沉重感、压迫感、挤压感、窒息感或哽塞感, 很少为明确的疼痛。当要求病人明确指出胸部不适的具体部位时, 他们常将手压在胸骨上, 或用一个拳头表明其胸骨后中部的压榨感觉。这一症状常呈自然地渐增-渐减过程, 典型的持续 2~5 分钟, 心绞痛可放射至左肩和双臂, 特别是前臂和手的尺侧。也可放射至背, 颈, 颊, 齿和上腹部。心绞痛很少累及脐部以下和下颌骨以上。

虽然心绞痛的发作是由用力(如运动、快走或性生活)或情绪激动(如应激、发怒、受惊、受挫折)而引起, 同时可因休息而缓解, 但也可在休息时发生(不稳定型心绞痛)或在夜间病人平卧位时发生(卧位心绞痛)。病人可在夜间因典型的胸痛和呼吸困难而惊醒。夜间心绞痛的发生可能由于心动过速发作或由于卧位胸腔内血容量增加所引起; 后者可增加心脏的体积和心肌的耗氧量, 从而导致心肌缺血和左心衰发生。

诱发心绞痛的负荷阈值在一日之内因时间不同和情绪变化而有所不同。许多病人诉说心绞痛有一个固定的阈值, 心绞痛发生在一个特定的活动水平, 诸如以正常的速度上两层楼时。在这些病人冠状动脉狭窄和心肌的耗氧量是固定不变的, 缺血由于心肌的需氧量增加而诱发。在另一些病人其心绞痛

may vary considerably within any given day and from day to day. In such patients variations in myocardial oxygen supply, most likely due to changes in coronary vascular tone, may play an important role. A patient may report symptoms upon minor exertion in the morning (a short walk or shaving) yet by midday may be capable of much greater effort without symptoms. Angina may also be precipitated by unfamiliar tasks, a heavy meal, exposure to cold, or a combination. Exertional angina is typically relieved by rest in 1 to 5 min and even more rapidly by rest and sublingual nitroglycerin. Indeed, the diagnosis of angina should be suspect if it does not respond to the combination of these two measures. The severity of angina can be expressed by the Canadian Cardiac Society functional classification.

Sharp, fleeting chest pain or prolonged, dull aches localized to the left submammary area are rarely due to myocardial ischemia. However, angina pectoris may be atypical in location and not strictly related to provoking factors. In addition, this symptom may exacerbate and remit over days, weeks, or months. Its occurrence can be seasonal, being more frequent in the winter in temperate climates. Anginal "equivalents" are symptoms of myocardial ischemia other than angina. These include dyspnea, fatigue, and faintness and are more common in the elderly and in diabetic patients.

### Grading of Angina Pectoris According to CCS Classification

Class	Description of Stage	级别	级别概述
I	"Ordinary physical activity does not cause..... angina," such as walking or climbing stairs. Angina occurs with strenuous, rapid, or prolonged exertion at work or recreation.	I	"日常的体力活动不能引起心绞痛"诸如走路和爬楼梯。在工作中或娱乐时紧张的,快速的,持久的劳累可以导致心绞痛的发生。
II	"Slight limitation of ordinary activity." Angina occurs on walking or climbing stairs rapidly; walking uphill; walking or stair climbing after	II	"日常活动的轻微限制"心绞痛的发生常出现在快速走路、爬楼梯;走路上坡;饭后



meals; in cold, in wind, or under emotional stress; or only during the few hours after awakening. Angina occurs on walking > 2 blocks on the level and climbing > 1 flight of ordinary stairs at a normal pace and under normal conditions.

III “Marked limitations of ordinary physical activity.” Angina occurs on walking 1 to 2 blocks on the level and climbing 1 flight of stairs under normal conditions and at a normal pace.

IV “Inability to carry on any physical activity without discomfort”—anginal symptoms may be present at rest.

Systematic questioning of the patient with suspected IHD is important to uncover the features of an unstable syndrome associated with increased risk, such as angina occurring at rest or awakening the patient from sleep. Since coronary atherosclerosis is often accompanied by similar diseases in other arteries, the patient with angina should be questioned and examined for peripheral arterial disease (intermittent claudication, stroke, or transient ischemic attacks). It is also important to uncover a family history of premature IHD (<45 years in first-degree male relatives and <55 in female relatives) and the presence of diabetes mellitus, hyperlipidemia, hypertension, cigarette smoking, and other risk factors for coronary atherosclerosis. The history of typical angina pectoris establishes the diagnosis of IHD until proven otherwise. In patients with atypical angina, the coexistence of advanced age, male gender, the postmenopausal state, and risk factors for atherosclerosis increase the likelihood of important coronary disease.

### Physical Examination

This is often normal in patients with stable angina, but it may reveal evidence of atherosclerotic

走路和爬楼梯;寒冷天气;刮风天气;情绪激动的状况下;或仅在睡醒后的几个小时之内。心绞痛发生在走路达到两个街区,或以正常的速度上一层以上楼梯时。

III “显著的日常活动的限制”心绞痛发生在走路在 1~2 个街区以内或正常情况下以正常速度上一层楼时。

IV “只要进行任何日常活动都会有心绞痛发作”——休息时也有心绞痛发生。

对怀疑缺血性心脏病患者系统问诊很重要,可以揭示对于增加不稳定症状危险因素的特征,诸如心绞痛发生在休息还是由于心绞痛从睡眠中惊醒。因为冠状动脉粥样硬化常伴随着其他动脉的相似的疾病,所以对心绞痛患者应该询问和检查是否有周围动脉疾病(间歇性跛行)、中风或是短暂性脑缺血发作。发现缺血性心脏病的早发的家族史(在直系亲属中男性小于 45 岁,女性小于 55 岁)、糖尿病、高脂肪血症、高血压、吸烟以及其他冠状动脉粥样硬化危险因素是非常重要的。典型的心绞痛病史确立了缺血性心脏病的诊断。在有非典型的心绞痛的患者,老年、男性、绝经后状态和动脉粥样硬化的共同存在增加了冠状动脉疾病发生的可能性。

### 3. 体格检查

在稳定型心绞痛患者体格检查常可正常,但在其他方面可能揭