

Management of Sexual Dysfunction in Patients With Cardiovascular Disease: Recommendations of the Princeton Consensus Panel

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Sexual dysfunction is highly prevalent in both sexes and adversely affects patients' quality of life and well being. Given the frequent association between sexual dysfunction and cardiovascular disease, in addition to the potential cardiac risk of sexual activity itself, a consensus panel was convened to develop recommendations for clinical management of sexual dysfunction in patients with cardiovascular disease. Based upon a review of the research and presentations by invited experts, a classification system was developed for stratification of patients into high, low, and intermediate categories of cardiac risk. The large majority of patients are in the low-risk category, which includes patients with (1) controlled hypertension; (2) mild, stable angina; (3) successful coronary revascularization; (4) a history of uncomplicated myocardial infarction (MI); (5) mild valvular disease; and (6) no symptoms and <3 cardiovascular risk factors. These patients can be safely encouraged to initiate or resume sexual activity or to receive treatment for sexual dysfunction. An important exception is the use of sildenafil in patients taking nitrates in any form.

Patients in the intermediate-risk category include those with (1) moderate angina; (2) a recent MI (<6 weeks); (3) left ventricular dysfunction and/or class II congestive heart failure; (4) nonsustained low-risk arrhythmias; and (5) ≥ 3 risk factors for coronary artery disease. These patients should receive further cardiologic evaluation before reclassification into the low- or high-risk category. Finally, patients in the high-risk category include those with (1) unstable or refractory angina; (2) uncontrolled hypertension; (3) congestive heart failure (class III or IV); (4) very recent MI (<2 weeks); (5) high-risk arrhythmias; (6) obstructive cardiomyopathies; and (7) moderate-to-severe valvular disease. These patients should be stabilized by specific treatment for their cardiac condition before resuming sexual activity or being treated for sexual dysfunction. A simple algorithm is provided for guiding physicians in the management of sexual dysfunction in patients with varying degrees of cardiac risk. ©2000 by Excerpta Medica, Inc.

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Sexual function is an important component of patients' quality of life and subjective well being. Recent epidemiologic data reveal that sexual problems are widespread and adversely affect mood, well-being, and interpersonal functioning.¹ Common sexual problems include disorders of desire (hypoactive sexual desire), disorders of arousal and/or erections (including female arousal disorder and male erectile dysfunction [ED]), and disorders of orgasm and ejaculation. ED is perhaps the most commonly recognized and treated sexual dysfunction. It affects >30% of men 40

to 70 years of age.^{2,3} The prevalence of ED in patients with cardiovascular disease is higher than that in the general population.⁴ Conversely, the emergence of ED in a previously asymptomatic male may be a marker for occult coronary artery disease.

Until recently, the management of sexual dysfunction had been the domain of urologists, gynecologists, and mental-health specialists. The field of sexual-health medicine has recently broadened to encompass multiple medical specialties, particularly primary care and cardiology. This evolution is largely due to the increased numbers of patients that have been brought into treatment by the availability of an oral agent for ED, sildenafil citrate (Viagra, Pfizer Inc., New York, New York). ED and cardiovascular disease share many of the same risk factors and frequently coexist. Current therapies for ED and other sexual dysfunctions are safe and effective in the large majority of patients with or without cardiovascular disease, although the contraindication for sildenafil in patients taking nitrates should always be observed.

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Successful treatment of sexual dysfunction may not only improve sexual relationships, but also overall quality of life. However, the large numbers of patients receiving medical treatment for ED, has prompted concerns and questions about the risk of sexual activity triggering acute significant cardiovascular events. The American Heart Association/American College of Cardiology (AHA/ACC) Expert Consensus Document addressed the issue of sildenafil use in male ED patients with cardiovascular disease.⁵ However, cardiac risk associated with sexual activity itself, and the means to assess and manage this risk, have not been adequately addressed. Additionally, possible cardiac risks associated with sexual activity in women warrant further consideration.

An international consensus conference on sexual activity and cardiac risk was convened at Princeton University on June 4 and 5, 1999, under the auspices of the University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School. The conference included expert presentations on specific aspects of the topic, including epidemiology, pathophysiology, pharmacology, and psychosocial mechanisms. The full text of these presentations will shortly be available as a special supplement to the *Journal*.

Following the paper presentations, a working group was formed to develop consensus recommendations for the management of sexual dysfunction in patients with cardiovascular disease. These recommendations incorporate clinically useful guidelines for the assessment of the cardiac risk associated with sexual activity and for the office management of sexual dysfunction in patients with known cardiovascular risk factors and/or diseases. It should be noted that these guidelines are not intended to supersede or alter appropriate cardiologic evaluation and management.

BACKGROUND

The physiologic consequences of sexual activity: Sexual activity has been compared in some studies with everyday physical activities, such as walking or running, as well as with emotional states of arousal, such as anger or fear.⁶ Early studies indicated that the exercise aspects of sexual activity did not sufficiently account for the autonomic changes observed. Specifically, the effects of coital activity on heart rate, blood pressure, and oxygen consumption appear to be little greater than those associated with sexual arousal per se (i.e., noncoital activities or intercourse positions involving minimal physical exertion).⁷ Additionally, sexual arousal is associated with significant sympathetic discharge, and may contribute to the development of extrasystoles and ventricular tachyarrhythmias in susceptible individuals.⁸ Sympathetic activation appears intrinsic to sexual arousal, which is evident in recent studies with women.⁹ One such study¹⁰ showed marked systolic and diastolic blood pressure increases during sexual arousal to orgasm in female volunteers in the laboratory, in addition to significantly increased levels of plasma adrenaline and noradrenaline.

Wide individual variability has been observed with

respect to physiologic responses to sexual activity (e.g., heart rate, blood pressure, and oxygen consumption) that may be further influenced by situational factors such as the type of sexual stimulation and familiarity with the partner. In general, sexual activity is similar to mild-to-moderate intensity exercise for most individuals with or without coronary artery disease. Heart rate rarely increases to >130 beats/min and systolic blood pressure is rarely >170 mm Hg.

The standard clinical measure of physical exertion is the MET, or metabolic equivalent of energy expenditure at the resting state. It is associated with a relative energy demand of oxygen consumption of approximately 3.5 ml/kg/min. MET values have been computed for a wide range of daily activities. For example, walking at 2 miles/hour is associated with an energy expenditure of 2 METs. Sexual activity is associated in some studies with an exercise workload of 2 to 3 METs in the preorgasmic phase and 3 to 4 METs during orgasm. In general, the upper range appears to be approximately 5 to 6 METs in younger individuals, and a lower range in older individuals or long-established relationships. However, due to the excess sympathetic activation that may occur during sexual activity, heart rate and blood pressure response may be higher than that observed during usual exercise at the same METs level. This issue is addressed further by DeBusk.¹¹

In the past, it has been assumed that the patient who is able to climb 2 flights of stairs is otherwise capable of engaging in sexual activity without cardiac symptoms.^{12,13} However, these 2 types of activities differ with respect to the autonomic patterning of responses, as well as the putative role of psychological and/or emotional factors.

The risk of myocardial infarction (MI) associated with sexual intercourse: Fewer than 1% of MIs occur during sexual activity (attributable risk). The relative risk of a nonfatal MI during and after sexual intercourse has been examined by means of a case–crossover method.¹⁴ The relative risk of a coition-induced MI was found by Muller et al¹⁴ to be 2.5-fold greater than during noncoital activities. The duration of exposure to this increased risk was 2 hours. This relative risk was threefold greater in men with a previous history of MI. However, the absolute risk of coition-induced MI is still very low, even in this high-risk group. A 50-year-old man in the United States has a baseline annual risk of MI of about 1%. This annual risk increases to 1.01% as a consequence of sexual activity. In a high-risk man with a history of MI, the annual risk increases only to 1.10%. Hence, a small but definite risk of a cardiac event exists for the patient with cardiovascular disease who is resuming sexual activity. Recent studies indicate that the effects of MI on sexual activity are relatively similar overall in men and women.¹⁵ In one study, the subject's age and level of education, rather than the patient's gender, strongly predicted the return to sexual activity after an acute MI. Based upon findings from these and other studies, guidelines are being proposed in this report for the

TABLE I Major Risk Factors for Cardiovascular Disease

1. Age
2. Male, postmenopausal female
3. Hypertension
4. Diabetes mellitus
5. Obesity
6. Cigarette smoking
7. Dyslipidemia
8. Sedentary lifestyle

management of cardiac risk associated with sexual activity in both men and women.

The major risk factors associated with cardiovascular disease are shown in Table I. Patients with ≥ 3 risk factors, excluding gender, are considered to be at increased risk during sexual activity. Management guidelines for these patients are presented in the following.

The mechanism of acute MI has been shown to involve coronary thrombosis secondary to the disruption of a previously nonobstructing lipid-laden plaque. Much of the currently available data on risk related to sexual activity predate the important trials that have demonstrated the benefit of aspirin and statins in stabilizing the atheromatous plaque. Additionally, the modest changes in heart rate and blood pressure that occur during sexual activity can be minimized by antianginal therapy, such as β blockers.

Categories of graded cardiac risk: The incidence of cardiac events resulting from sexual activity may be increased in patients with high-risk cardiovascular profiles or established disease. Additionally, the cardiac patient and his or her partner may have significant fears about sexual activity, especially after a recent MI. To assist in the clinical management of sexual dysfunction in the patient with cardiac disease, a stratification of patients based on the well-known concept of graded cardiac risk has been formulated.

In general, patients can be placed into 1 of 3 major categories at the time of initial assessment based upon cardiovascular status: low risk, high risk, and intermediate or indeterminate risk. The low-risk category includes patients in whom sexual activity does not pose a significant cardiac risk. In general, sexual activity in these patients may be initiated without need for additional cardiovascular evaluation or treatment. The high-risk category includes those patients with cardiovascular diseases requiring specialized cardiac consultation, evaluation, and priority cardiovascular management. Sexual activity and the management of sexual dysfunction in these patients should be deferred until the patient's cardiac condition has been fully evaluated, treated, and stabilized.

A third group has been identified as representing either an intermediate or indeterminate level of risk. From an epidemiologic or group statistical perspective, patients in this group can be classified as having an intermediate level of risk. These patients should not be counseled to resume sexual activity or to undergo treatment of sexual dysfunction until a cardiac evaluation aimed at facilitating restratification of these pa-

tients into either the high- or low-risk categories has been performed (Table II). It should be noted that objective data are strongest in support of these recommendations in the area of sexual activity in men with ischemic heart disease (angina, MI, postcoronary bypass). Specific recommendations for management of sexual activity in these patients are discussed in more detail by Jackson.¹⁶

MANAGEMENT RECOMMENDATIONS

The low-risk patient:

- Asymptomatic, < 3 risk factors for coronary artery disease (excluding gender)
- Controlled hypertension
- Mild, stable (evaluated and/or being treated) angina
- Post-successful coronary revascularization
- Uncomplicated past MI
- Mild valvular disease
- Congestive heart failure (left ventricular dysfunction and/or New York Heart Association class I)

The low-risk category includes patients who do not have any significant cardiac risk associated with sexual activity. Based upon current knowledge of the exercise demands or emotional stress associated with sexual activity, no special cardiac testing or evaluation is indicated for these patients before the initiation or resumption of sexual activity or therapy for sexual dysfunction. Common patient profiles in this category are as follows.

Asymptomatic, < 3 cardiovascular risk factors: The patient with < 3 major risk factors (Table I) for cardiovascular disease (excluding gender) is generally at low risk for any significant cardiac complications from sexual activity or treatment of sexual dysfunction. These patients are, in general, good candidates for ED or other sexual dysfunction therapies. Routine follow-up and monitoring of cardiovascular risk status are important.

Controlled hypertension: Patients with well-controlled hypertension, regardless of the number or class of antihypertensive medications, may be readily and safely managed with currently approved medical therapies for sexual dysfunction. It should be noted, however, that certain antihypertensive medications might contribute to the patient's sexual dysfunction. Although a good medical rationale exists to change patients' drug class or dosages, there is little objective evidence that such changes will reverse the patient's sexual difficulties. The classes of antihypertensive medications most commonly associated with sexual dysfunction, particularly ED, are the β blockers and thiazide diuretics.¹⁷ Calcium channel blockers and angiotensin-converting enzyme inhibitors are less commonly associated with ED, and α blockers are least commonly associated with this side effect. A change in class of antihypertensive medication, however, rarely results in restoration of erectile function. In most cases, these patients must be considered for

TABLE II Management Recommendations Based on Graded Cardiovascular (CV) Risk Assessment

Grade of Risk	Categories of CVD	Management Recommendations
Low risk	<ul style="list-style-type: none"> ● Asymptomatic, <3 major risk factors for CAD ● Controlled hypertension ● Mild, stable angina ● Post-successful coronary revascularization ● Uncomplicated past MI (>6–8 wk) ● Mild valvular disease ● LVD/CHF (NYHA class I) 	<ul style="list-style-type: none"> ● Primary-care management ● Consider all first-line therapies ● Reassess at regular intervals (6–12 mo)
Intermediate risk	<ul style="list-style-type: none"> ● ≥3 major risk factors for CAD, excluding gender ● Moderate, stable angina ● Recent MI (>2, <6 wk) ● LVD/CHF (NYHA class II) ● Noncardiac sequelae of atherosclerotic disease (e.g., CVA, peripheral vascular disease) 	<ul style="list-style-type: none"> ● Specialized CV testing (e.g., ETT, Echo) ● Restratification into high risk or low risk based on the results of CV assessment
High risk	<ul style="list-style-type: none"> ● Unstable or refractory angina ● Uncontrolled hypertension ● LVD/CHF (NYHA class III/IV) ● Recent MI (<2 wk), CVA ● High-risk arrhythmias ● Hypertrophic obstructive and other cardiomyopathies ● Moderate/severe valvular disease 	<ul style="list-style-type: none"> ● Priority referral for specialized CV management ● Treatment for sexual dysfunction to be deferred until cardiac condition stabilized and dependent on specialist recommendations

CAD = coronary artery disease; CHF = congestive heart failure; CVA = stroke; CVD = cardiovascular disease; Echo = echocardiogram; ETT = exercise tolerance test; LVD = left ventricular dysfunction; NYHA = New York Heart Association.

direct therapy for ED. Antihypertensive therapy has also been associated with impairment of sexual response in women, although the specific mechanisms are uncertain.¹⁸

Mild, stable angina: The patient with mild angina that has previously been evaluated and treated effectively has a functional reserve that is typically greater than that required by sexual activity. Even in the borderline patient, medical management of the angina (after an exercise stress test) may preclude or prevent any symptoms during sexual activity. The relative risk of an acute nonfatal MI occurring during sexual activity in this patient population is not significantly greater than in the patient without documented cardiac disease. Additionally, the specific drugs utilized to manage the patient's angina may need to be modified depending on the sexual therapy regimen selected. In particular, nitrates are an *absolute contraindication* in patients receiving sildenafil.

Postrevascularization (coronary artery bypass grafting or percutaneous coronary intervention): The risk of sexual activity in the patient postcoronary revascularization, either coronary artery bypass grafting or percutaneous coronary intervention (angioplasty, stenting, etc.), is clearly dependent upon the adequacy of the revascularization. Exercise stress testing may be of benefit in assessing the extent and severity of residual ischemia in these patients. The patient with adequate coronary revascularization and without significant residual ischemia should be considered at low risk.

Past myocardial infarction (>6 to 8 weeks): The patient with a past MI, who is currently asymptomatic, is at low risk for a coition-induced MI, provided there is no ongoing ischemia and the post-MI stress test is negative.

The patient with a recent MI may be at risk for coition-induced reinfarction, cardiac rupture, or perhaps more commonly, coition-induced arrhythmias.⁸ The period of maximum risk appears to be within 2 weeks after an MI. Post-MI sexual activity for the large majority of patients is safe, but the completion of a successful exercise stress test to 4 to 5 METs or greater beforehand has been advocated as a means of assessing risk and reassuring patients.

Exercise training after MI will improve cardiovascular efficiency and reduce myocardial oxygen consumption during sexual activity.^{13,14} Cardiac rehabilitation exercise programs are associated with a reduction in reported coital symptoms and a reduction in coital heart rates. Traditionally, it has been recommended that sex be avoided for 6 to 8 weeks after an MI. In the presence of a satisfactory post-MI stress test, however, the period of inactivity may be reduced to 3 to 4 weeks in select patients.

Mild valvular disease: The patient with mild mitral valvular disease is not at appreciably increased risk for coition-induced cardiac events. This may also be true of select cases of aortic stenosis. Male patients may safely employ oral, intraurethral, or injectable medications for ED without the need for antibiotic prophylaxis.

Mild congestive heart failure (NYHA class I): The New York Heart Association classification of congestive heart failure defines class I patients as those with cardiac disease that allows ordinary physical activity without symptoms. Most such patients, particularly with appropriate medical management, do not have an increased risk of coition-induced cardiac events.

Other cardiovascular conditions: Other cardiovascular conditions such as atrial fibrillation with controlled

ventricular response, mitral valve prolapse, and pericarditis should be managed on an individualized basis. Overall, the literature does not provide adequate information regarding the risk of sexual activity in association with these conditions. However, individual factors may prompt the physician to conduct further cardiologic evaluation as required.

The high-risk patient:

- Unstable or refractory angina
- Uncontrolled hypertension
- Congestive heart failure (NYHA class III/IV)
- Recent MI (<2 weeks)
- High-risk arrhythmias
- Hypertrophic obstructive and other cardiomyopathies
- Moderate-to-severe valvular disease

The high-risk category consists of those patients whose cardiac condition is sufficiently severe and/or unstable that sexual activity may constitute a significant risk. Such individuals should be referred for cardiologic assessment and treatment. Sexual activity should be deferred until the patient's cardiac condition has been stabilized by treatment, or a decision has been made by the cardiologist and/or internist that sexual activity may be safely resumed. Under some circumstances, the patient's evaluation of risk relative to the need for sexual activity may lead to a discussion with the physician about the cardiovascular aspects of sexual activity, and the possible associated risks, and a more or less restrictive approach to initiating or resuming sexual activity. Specific patient profiles in this risk category are as follows.

Unstable, refractory angina: Unstable angina includes angina that is new onset, severe, accelerated, refractory, or occurs at rest. The patient with unstable angina is potentially at higher risk for an MI during exercise or coitus. These patients have a functional cardiac reserve that is exceeded by mild physical activity, typically including sexual intercourse.

Uncontrolled hypertension: The patient with untreated, poorly controlled, accelerated or malignant hypertension is at risk for both acute cardiac and vascular events, including stroke.

Congestive heart failure (NYHA class III or IV): The NYHA classification of congestive heart failure defines class IV congestive heart failure as that associated with breathlessness at rest and class III congestive heart failure as that associated with marked limitation, with symptoms provoked easily (e.g., walking on the flat). Cardiac decompensation may be triggered by sexual activity in some of these patients.

Recent MI (<2 weeks): As noted previously, the patient with a recent MI may be at risk for coition-induced reinfarction, cardiac rupture, or coition-induced arrhythmias.⁸ The period of maximum risk appears to be within 2 weeks after an MI. Sexual activity is typically not recommended for patients during this period of initial recovery.

High-risk arrhythmia: The occurrence of malignant arrhythmias during sexual activity is an uncommon cause of sudden death. However, the patient with high risk, frequently ventricular arrhythmias, particularly if induced by exercise or coition, is at high risk. Holter monitoring during sexual activity may be of value in selected cases. Within this cardiovascular profile, the patient with an implanted defibrillator or pacemaker does not appear to be at any greater risk.

Hypertrophic obstructive cardiomyopathy: Hypertrophic obstructive cardiomyopathy or idiopathic hypertrophic subaortic stenosis, although relatively rare, is associated with syncope and sudden death during or after exercise. Little is known about the risk of sexual activity or treatment of sexual dysfunction in this population. Vasodilators may increase the intraventricular gradient and should be specifically avoided in these patients. Cardiologic evaluation, including exercise stress testing and echocardiography, may be used to guide management with regard to effort-induced symptoms or arrhythmias. Specific recommendations on sexual activity may be made accordingly.

Moderate-to-severe valve disease, particularly aortic stenosis: Significant aortic stenosis is associated with sudden death. Little is known about the impact of sexual activity in this group of patients. Caution must be exercised in the utilization of vasoactive drugs in the patient with significant aortic stenosis who may not tolerate systemic vasodilation, with the resultant decrease in perfusion pressure in the coronary and cerebrovascular circulation.

The intermediate- or indeterminate-risk patient:

- ≥ 3 risk factors for coronary artery disease (excluding gender)
- Moderate, stable angina
- Recent MI (>2 , <6 weeks)
- Left ventricular dysfunction and/or congestive heart failure (NYHA class II)
- Noncardiac sequelae of atherosclerotic disease (e.g., stroke, peripheral vascular disease)

The intermediate- or indeterminate-risk category consists of those patients whose cardiac condition is uncertain, or whose risk profile is such that further testing or evaluation is indicated before the resumption of sexual activity. Based upon the results of testing, these patients may be subsequently assigned to either the high- or low-risk group. Cardiology consultation may be of value in such cases to assist the primary physician in making the determination of the relative safety of sexual activity for the individual patient. Specific patient profiles in this intermediate-risk category are as follows.

Asymptomatic, ≥ 3 risk factors (excluding gender): The presence of ≥ 3 risk factors for coronary artery disease, excluding gender, increases the patient's risk profile, and therefore consideration should be given to cardiovascular assessment, such as an exercise stress test. Sedentary lifestyle is considered an important risk factor, and hence, in this setting, would justify an

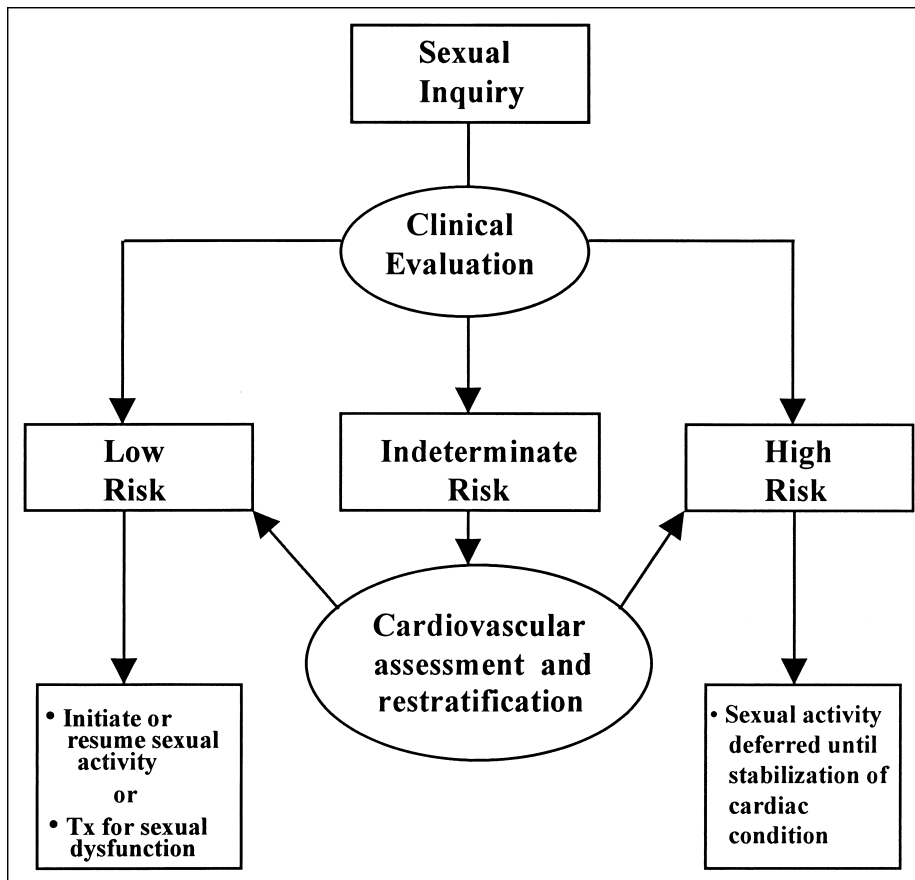


FIGURE 1. Sexual activity and cardiac risk: a simplified algorithm. Tx = therapy.

exercise test. Other relevant risk factors are shown in Table I.

Moderate, stable angina: The occurrence of myocardial ischemia in the patient with stable angina is usually reproducible for a given exercise-induced heart rate and systolic blood-pressure increase. Exercise testing may be useful in further stratifying the risk of acute cardiac events among patients with coronary artery disease as discussed previously.

History of myocardial infarction (>2 weeks, <6 weeks): The patient with a history of MI (>2 weeks and <6 weeks) may be at slightly higher risk for coition-induced ischemia and reinfarction as well as a malignant arrhythmia. This risk may be assessed by exercise stress testing.

Left ventricular dysfunction/congestive heart failure (NYHA class II): The NYHA classification of congestive heart failure defines class II congestive heart failure as that associated with slight limitations caused by cardiac disease, with activities such as walking causing dyspnea. The patient with NYHA class II congestive heart failure, or asymptomatic left ventricular dysfunction (ejection fraction <40%), may be at moderate risk for exacerbation with sexual activity. Cardiovascular assessment and rehabilitation may facilitate re-stratification into a lower risk category.

Noncardiac sequelae of atherosclerotic disease: Atherosclerosis is a diffuse condition affecting multiple vascular beds. Thus, patients with clinically evident peripheral arterial disease, a history of stroke or

transient ischemic attacks, are at higher risk for MI. Accordingly, many patients in this category should be considered for cardiologic evaluation.

FINAL ALGORITHM FOR RISK STRATIFICATION AND PATIENT MANAGEMENT

A simplified algorithm for cardiovascular risk stratification and patient management is shown in Figure 1. According to this algorithm, assessment and management of cardiac risk associated with sexual activity, or the treatment of sexual dysfunction, is viewed as a 2-step process, which can be briefly summarized as follows.

Step 1: An assessment of sexual function should be included routinely in the initial evaluation of all patients. Further clinical evaluation based upon a thorough medical history, physical examination, and relevant laboratory testing enables stratification of patients into high, low, or intermediate levels of cardiac risk. Specialized cardiovascular testing is recommended to reclassify patients at intermediate (or indeterminate) levels of risk into the low- or high-risk category.

Step 2: The majority of patients at low risk may be safely encouraged to engage in or resume sexual activity or to receive treatment for sexual dysfunction as needed. Patients at high risk should be stabilized by cardiologic treatment for their specific condition(s) before resumption of sexual activity is considered or

treatment of sexual dysfunction is recommended. Additional clinical considerations, such as the patient's age, overall health status, and motivational state may need to be taken into account in making this determination. Patient follow-up and reassessment at regular intervals (e.g., every 6 months) is recommended in all cases.

CONCLUSION

Given the high incidence of cardiovascular disease in patients seeking treatment for sexual dysfunction, in addition to the potential cardiac risks associated with sexual activity itself, a consensus panel was convened to develop clinical guidelines for patient management in this area. Based upon a review of the available literature, in addition to individual opinions by invited experts in the field, a classification system was developed for stratification of patients into high, low, and intermediate levels of cardiac risk. A simple algorithm was proposed for guiding physicians in the clinical management of patients with varying degrees of cardiac risk. These guidelines were intended to be applied to male and female patients of all ages.

According to these guidelines, the large majority of patients are classified in the low-risk category. In general, these patients can be safely encouraged to initiate or resume sexual activity or to receive treatment for sexual dysfunction. Patients at intermediate (or indeterminate) levels of risk should further receive cardiologic evaluation before reclassification into either the low- or high-risk group. Finally, patients in the high-risk category should be stabilized by specific treatment for their cardiac condition before resumption of sexual activity, or initiation of treatment for sexual dysfunction. Follow-up at regular intervals (e.g., every 6 months) and reassessment of all patients receiving treatment for sexual dysfunction and/or cardiovascular disease is highly recommended.

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