



KASR ALAINY

Questionnaire Study about the role of Cardiologists in Sexual counseling of their patients

Thesis

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and Andrology

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ABSTRACT

Introduction: Sexuality is an important factor influence quality of life .An association between erectile dysfunction (ED) and Coronary artery disease (CAD) has been described in various settings.

Aim: To examine the Cardiologists attitudes to discuss sexual problem with patients with Coronary Heart disease and to clarify the different factors that might interfere that.

Method: we administered 300 questionnaires to stratified random sample of Cardiologists including residents, specialists and consultants with different gender in Dubai and Cairo, responses to items in questionnaire were analyzed in relation to respondents location, qualification and gender.

Results: the majority of cardiologists in Dubai and Cairo were not addressing the sexual health problems with patients with coronary heart disease either in the early or late stage post diagnosis. Lack of time and patient lack of readiness were noted as the highest perceived barriers preventing the Cardiologists from discussing sexual health problems with cardiac patients.

Conclusion: The cardiologists in Cairo and Dubai tent to underestimate the scale of sexual problem in Coronary heart disease patients, findings from our study suggest that there is a need to increase the awareness of this devastating problem among the cardiologists, make specific guide lines in the area of sexual consultation available for practice and further training in this area.

Keywords: Erectile dysfunction, Coronary artery disease, Cardiologists

ABBREVIATION

ACC	American College of Cardiology
AHA	American Heart Association
BMI	Body Mass Index
BP	Blood Pressure
C-CMP	Cyclic Guanosine Monophosphate
CACS	Coronary artery calcium score
CAD	Coronary Artery Disease
CHD	Coronary Heart Disease
CHF	Congestive Heart Failure
CRP	C - reactive protein
CVD	Cardiovascular Disease
CT	Coronary computed tomography
ECG/EKG	Eco Cardio graphic
ED	Erectile Dysfunction
FDA	Food and Drug Administration
LAD	left anterior descending artery
METs	Metabolic Equivalent Tasks
MI	Myocardial Infarction
PDE5 Inhibitor	Phosphodiesterase Inhibitor
PPSV	Peak penile systolic velocity
SHIM	Sexual Health Inventory for Men
TDS	Testosterone Deficiency Syndrome
UAE	United Arab Emirate

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Introduction

According to the World Health Organization, sexual health has been defined as “a state of physical, emotional, mental, and social wellbeing in relation to sexuality, Healthy sexual functioning has important implications for emotional health, happiness and self esteem. **(Laumann, et al.,1999)**

Sexuality is an important factor influence quality of life that may be altered for patients with Coronary heart disease **(Bedell et al., 2002)** Sexuality should be seen as a developmental process, as sexual desire does not diminish with age **(Albarran and Bridger, 1997)**.

Evidence suggests that sexual dysfunction is a common problem, increasingly associated with patients with coronary heart disease, a significant proportion of men experience erectile dysfunction (ED) **(Hardin, 2007)** which defined as “The persistent inability to attain or maintain an erection sufficient for sexual intercourse”. **(Hatzimouratidis et al., 2010) (Benet and Melman 1995) (Krane et al., 1989)**.

An association between Erectile dysfunction (ED) and Coronary artery disease (CAD) has been described in various settings **(Charles et al., 2011)** and the prevalence of ED in Cardiovascular patients is higher than in general population, in men with history of heart disease or previous Myocardial Infarction (MI). The incidence of sexual dysfunction ranges from 39-64% **(Riedner et al., 2011)** and ED is present in 42% to 75% of men with CAD **(Baum, 2008)**. It is speculated that ED manifests prior to CAD and consequently, it can be an index of sub clinical CAD. It has been shown that a considerable number of men with ED have a silent CAD, and the degree of ED has a relationship with the severity of CAD. **(Jackson et al., 2010)**.

The possibility arises that ED maybe an early indicator for systemic endothelial dysfunction and subsequent CVD. **(Shin et al., 2011)** Because of coexistence of ED & CAD, It is imperative to high light the documentation for drugs interaction. The clinically most important interaction is for phosphodiesterase type 5 inhibitor with nitrate **(Kloner et al., 2003)**.

On the other hand, drug-induced sexual dysfunction is frequently seen in cardiac patients with different cardiac medications. **(perkapattanapipat et al., 2001)**.

Individuals with heart disease may hold negative perception of their bodies as being fragile and develop a negative relationship with their body **(Traeen and Olsen, 2007)**. It is important to understand the issues of sexual dysfunction in patients with underlying cardiovascular disease, **(Schwarz and Shen, 2008)**.

Several studies have reported that cardiac patients would like to receive information about resuming sexual activity **(Fridlund, 2009)**.

American Heart Association meeting on May 2010 reported that CAD patients are sexually active but have internal fear to resume a normal sex life. Furthermore, less than half of heart attack patients received information about resuming sex before discharge. Unfortunately the majority of physicians are focusing on saving lives and sexual health may not be valued as much as medications and other treatments **(Lindeu, 2010)**.

Based on what mentioned above cardiologists are ideally placed to deal with the sexual problems associated with coronary heart disease , researches reported that Doctors and rehabilitation staff were reluctant to address sexual problems with CHD patients **(Aspasia et al., 2008)** **(Byrne et al., 2010)** **(Doherty et al., 2010)**.

Aim of work

The aim of this study was to examine the Cardiologists self reported behavior and attitudes to discuss sexual problem with patients with Coronary Heart disease and to clarify the different factors that might lead to reluctance of Cardiologists to address this problem in order to help them to do proper counseling of this devastating problem among coronary artery disease patients.

CAUSES OF ED AND THE LINK BETWEEN CORONARY ARTERY DISEASE AND ERECTILE DYSFUNCTION

Erectile dysfunction (ED) is defined as the persistent inability to achieve and then maintain an erection to permit satisfactory sexual intercourse (**Hatzimouratidis et al., 2010**) (**Benet and Melman, 1995**).

The severity of ED is classified as mild to severe, according to the International Index of Erectile Function to Organic ED (i.e. that with an underlying physical etiology) and coronary artery disease (CAD). (**Jackson et al., 2010**) (**Rosen et al., 1999**).

Any number of conditions can cause ED, among them diabetes, peripheral vascular disease, cavernosal impairment, hormonal imbalance, and neurologic dysfunction. A host of psychologic problems, such as depression, mental stress, or marital/partner dissatisfaction, can contribute as well. In some men, a combination of physical and psychologic factors culminates in ED. (**Adolph and Hutter, 2004**)

It is estimated that sexual dysfunction is caused by vascular conditions in more than 80% of all cases that is by inadequate blood supply and vascular dysfunction. Since there is a 52% probability for sexual dysfunction in men between the ages of 40 and 70 y (i.e., every second individual might develop sexual dysfunction), these numbers likely are going to increase due to aging and prolonged survival even with critical heart conditions. Therefore, sexual dysfunction represents a major medical as well as economic and psychosocial problem. (**Schwarz, 2005**)

Foroutan and rajabi 2007 added erectile dysfunction (ED) is a common medical problem affecting approximately 15% of men each year. (**Johannes et al., 2000**). It is strongly related to both physical and psychological health status. Some major risk factors are diabetes mellitus,

hypertension, hyperlipidemia, obesity and smoking, all which are risk factors of coronary artery disease (CAD). (**Borgquist et al., 2006**).

Despite its increasing prevalence among older men, ED is rarely due to age-related hypogonadism, and a vascular disorder is present in the majority of the patients. (**Montosi et al., 2006**).

Causes of Erectile dysfunction in myocardial infraction patients

Jones, 2001 highlighted the phenomena of CAD, depression and erectile dysfunctions have in one study been linked. The author argues that depression causes MI, that MI causes ED, and that ED leads to depression. He refers to this phenomenon as a 'self-reinforcing triad' (**Goldstein, 2000a**).

Post-infarct loss of libido: The patient who has survived an MI might undergo a loss of sex drive for numerous reasons. The fact of being ill may make someone disinclined to have sex, but to have had what many patients might perceive as a '**near-death experience**' might terrify a person and overwhelm his libido. The patient may be undergoing a form of bereavement and may feel that his youth has come to an abrupt halt. There may also be other more complex reasons. Depression has long been reported to be a psychological complication of MI (**Roose and Seidman, 2000**). One of the signs of depression is that once pleasurable activities are no longer enjoyable. If the patient is taking antidepressants, this may independently contribute to loss of libido and ED (**Buffum, 1986**).

Coronary artery disease risk factors and testosterone

A cause of ED in elderly patients is abnormally low testosterone levels. Low testosterone will erode a man's sex drive, but is rare in younger men. The incidence of low testosterone corresponds with the appearance of central adiposity in men (**Yassin and Saad, 2008**) (**Traish, Saad et al., 2009**) (**Jackson, 2008**). That is to say, the lower the testosterone levels the higher the waist-hip ratio. A high waist-hip ratio has been associated with CAD. Testosterone has also been seen to decline in men with diabetes and in those with hypertension (**Khaw and Barret-Connor, 1998**) (**Basaria and Dobs, 2007**).

Cigarette smoking has been shown to increase oestrogen levels in men, which could antagonise the effect of testosterone (**Khaw and Barret-Connor, 1998**).

Coronary artery disease and disruption of control of erection

The mechanism of erection is mediated by complex nervous interactions (**Rampin and Giuliano, 2000**), and any condition that interferes with these impulses may lead to ED.

Disruption of these pathways is uncommon in MI patients, but those who also have or develop diabetes may develop neuropathy throughout the body and there is no reason why the penis will be spared this debilitating complication. Depression and anxiety may also disrupt the flow of parasympathetic stimulation, keeping the penis in a dormant state due to sympathetic tone (**Rampin and Giuliano, 2000**).

CAD and disseminated arteriopathy

Solomon et al., (2003) raised the question of the vascular contribution to erectile dysfunction. They argued that the person with risk factors for MI (smoking, diabetes, hyperlipidaemia and hypertension) is likely to have arteriopathy, and the process that may cause problems in his heart may manifest itself elsewhere, including in the iliac arteries. The arteries supplying the penis may have begun the process of sclerotic change and the penis may not have access to enough blood for proper function. Further studies have suggested that the man presenting with primary ED may on investigation be found to have as yet undiagnosed ischemic heart disease (**Virag et al., 1985**). Men complaining of erectile dysfunction to urologists have been shown to have abnormal cholesterol concentrations. Other investigations have revealed that, in this group, over 90% had evidence of penile arterial disease when examined with Doppler ultrasound (**Levine and Kloner, 2000**).

Medication-induced erectile dysfunction “Explained in details in Chapter II”

Erectile dysfunction caused by drugs is one of the most common presentations of the condition. Many of the problems experienced by the patient will be due to drugs prescribed for the treatment of his cardiac condition. Antihypertensive drugs, for example, are well known to produce erectile dysfunction, as are some diuretics. Beta-blockers are renowned for causing problems (**Jackson et al., 2010**) like Digoxin Cardioactive drugs also have the tendency to diminish circulating testosterone.

Link between coronary artery disease and ED

Montorsi et al., 2003 reported that evidence is accumulating in favor of considering ED as a vascular disorder (**De Busk, 1996**). Common risk factors for atherosclerosis have been frequently found in patients with ED; in addition, the extent of ED has been related to the number and severity of vascular risk factors (**Sullivan et al., 2001**) (**Burchardt et al., 2001**). Moreover, abnormal sexual function has been reported in patients with vascular diseases such as myocardial infarction, cerebrovascular accidents, hypertension and peripheral arterial disease (**Feldman et al., 2000**).

Jackson et al., 2005 reported that erectile dysfunction also correlates with the severity of coronary artery disease. Patient with single vessel disease having less difficulty in obtaining an erection.

Montorsi et al., 2003 explained that the smaller penile arteries (diameter 1–2 mm) suffer obstruction from plaque burden earlier than do the larger coronary (3–4 mm), carotid (5–7 mm), or iliofemoral (6–8 mm) arteries; hence erectile dysfunction may be symptomatic before the occurrence of a coronary event. Addressing cardiovascular risk early after the presentation of erectile dysfunction, and aggressive intervention to reduce risk, may have long-term symptomatic and prognostic cardiac benefits (**Borgquist et al., 2006**) (**Montorsi et al., 2006**). Most acute coronary syndromes follow from the rupture of asymptomatic lipid-rich plaques, and erectile dysfunction may therefore be a marker for reducing the risk of this happening (**Vlachopoulos et al., 2005**).

Foroutan and Rajabi, 2007 said that Non diabetic men with CAD documented by angiography were evaluated for ED. Erectile function was assessed by a 5-item version of the International Index of Erectile Dysfunction, the Sexual Health Inventory for Men (SHIM). The findings