LUND UNIVERSITY
Faculty of Medicine

INFORMATION FROM HEALTHCARE PROFESSIONALS ABOUT SEXUAL FUNCTION AND COEXISTENCE AFTER MYOCARDIAL INFARCTION: A SWEDISH NATIONAL SURVEY

Bodil Ivarsson, RN, PhD [a], Bengt Fridlund, RNT, PhD [b, c], Trygve Sjöberg, PhD [a]

[a] Department of Cardiothoracic Surgery, Lund University Hospital, Lund, Sweden,
[b] School of Health Sciences and Social Work, Växjö University, Växjö, Sweden and
[c] School of Health Sciences, Jönköping University, Jönköping, Sweden

Corresponding author:
Bodil Ivarsson
Department of Cardiothoracic Surgery
Lund University Hospital
SE-221 85 Lund
Sweden
Phone: +46-46-17 70 16
Fax: +46-46-14 39 26
Email: bodil.ivarsson@med.lu.se

Short title: **INFORMATION ON SEXUAL FUNCTION**

Abstract

OBJECTVE: After a myocardial infarction (MI) many patients and their partners experience problems with marital and sexual life.

METHODS: A Swedish national survey was carried out to obtain knowledge on the information provided by cardiac healthcare professionals on the subject of sexual function and coexistence after an MI. It consisted of a questionnaire that was designed, tested and sent to 121 coronary care units (CCUs).

RESULTS: The results revealed that the CCU teams rarely provided oral or written information about sexual function and coexistence to MI patients and/or their partners. The healthcare professionals lacked competence in these areas.

CONCLUSIONS: It is essential that healthcare professionals are educated in, and inform the MI patient about the significance of sexual function and coexistence. Further research is needed regarding the patients', as well as their partners', need for information and support in this area.

Keyword: Heart disease, education, counselling, spouse, couples, sexuality, nursing, physician, cardiologist, marital life

Introduction

There is a lack of knowledge regarding the sexual life and coexistence, i.e., mutual life together, of men and women who have suffered a myocardial infarction (MI) [1,2] but many patients experience that MI has a negative impact [3]. Sexual dysfunction after MI is highly prevalent in both genders and at all ages, and it adversely affects patients' life and well-being [1]. The literature reports that 50 to 60% of patients describe a decrease in sexual activity and satisfaction after an MI with the decrease more obvious among women than men, as well as among older patients compared to younger patients [4,5]. The main reason given for decreased sexual activity is a fear of triggering another MI [6,7], which creates stress and anxiety and thereby impairs marital life [1]. When MI patients engage in the physical exertion associated with sexual activity, they fear precipitating a new MI and thereby cardiac death [8]. A study by Stewart et al [9] revealed that inadequate and differing information about sexual intercourse from healthcare professionals generated anxiety and fear in MI patients. Women who had had an MI reported a lack of information and counselling about sexual issues from healthcare professionals [10-12], although Steinke and Patterson-Midgley [13] did not find any differences between men and women in relation to the provision of sexual counselling. Many patients and their partners hesitate to approach healthcare professionals on issues related to sexual and marital life [14]. A discussion of sexual function with healthcare professionals is welcomed by most patients [15]. One study showed that only 38% of men and 22% of women over the age of 50 years discussed these issues with a physician [16]. Nurses in CCUs, as well as these in primary health care, play an important role in counselling individuals on such a sensitive topic [17]. However, sexual counselling is an area of health care that has received little attention in research and practice [7,18], and more evidence-based knowledge is needed. The aim of this study was to undertake a survey among cardiac healthcare professionals to obtain knowledge on the type of information about sexual function and coexistence given to patients and their partners after an MI.

Material and Method

In accordance with the Helsinki declaration a descriptive study was conducted during May 2007 in 73 of the 75 hospitals in Sweden that treat acute MI patients and 48 hospitals with cardiac rehabilitation programs. A questionnaire was designed containing 14 closed and open-ended questions. The closed questions were either dichotomous or multiple choice. Five different areas were covered: patient and partner information, relation and function, external experts, competence and source of information. The questions were tested for face and

content validity by an expert panel of two cardiologists, two specialist cardiac nurses and a mid-wife. Prior to distribution, eight nurses from different hospitals were asked to answer the questions in order to determine whether any of them could be misleading or misunderstood. In order to find a nurse or physician at each hospital who could act as a contact person for the group of healthcare professionals involved in the MI patients, we used the Register of Information and Knowledge about Swedish Heart Intensive Care Admissions (RIKS-HIA) and the Register of Secondary Prevention and Rehabilitation after an acute MI (SEPHIA), both of which are national quality registers. The questionnaire was then sent as an e-mail to the contact persons at the various hospitals. In an accompanying letter it was stressed that the answers should be completed in consultation with the whole professional team. These physicians and nurses filled in the questionnaire and returned it by e-mail. If no answer was obtained within the stated time limit, two reminders were sent. The final response rates were 84% (RIKSHIA) and 92% (SEPHIA). Descriptive statistics were used for the data provided by the closed questions and the frequencies in percent of each response alternative were calculated.

Results

The findings from both RIKSHIA and SEPHIA showed a similar pattern and are therefore presented as one group. Most male and female MI patients seldom or only sometimes received routine oral information about sexual function and coexistence before discharge from the hospital (Table 1). Fifty-five percent of both male and female patients routinely received written information. Most partners never or only rarely received routine oral or written information about sexual function and coexistence. Healthcare professionals seldom or only sometimes routinely discussed the risk of increased strain in the patient-partner relationship; likewise they seldom or only sometimes asked patients about sexual function and coexistence at the first follow-up visit to the hospital (Table 2).

Table 3 shows that more than half of the hospitals that provided group education for MI patients or patients and partners together, sometimes or always included sexual and coexistence topics in the group education. The majority of the teams working with MI patients did not agree or only partly agreed that they have sufficient competence about sexual and coexistence topics (Table 4). Most hospitals had no routines for cooperation with external experts on sexual function and coexistence for MI patients. The majority of the teams did not consider that they had access to sufficient information material about sexual and coexistence

issues for MI patients and their partners at their CCUs (Table 5). The most frequently mentioned pedagogical tool used to inform patients about sexual function and coexistence was a brochure or similar literature. In a few hospitals the teams used video films or CD ROMS while none referred to the Internet.

Discussion

Results issues

The present study demonstrates that sexual function and the possible consequences for the relationship after an MI received little attention in practice. The healthcare professionals did not provide information about sexual and coexistence topics actively enough. It can be argued that sexual and marital lives are not of major importance for the first period after an MI. However, these topics should not be neglected, not even at the CCU, because it is a matter not only for the patient but also the partner. It is not uncommon that the patient leaves the hospital directly from the CCU. It has been suggested that nurses could use information leaflets and guidelines prepared by healthcare professionals to initiate discussions with patients and their partners [19,20]. Another way to ensure that healthcare professionals and patients have concrete issues to discuss could be printed material prepared by a team of cardiac healthcare professionals, members of patient associations as well as former patients and their partners, containing questions and answers about sexual function and coexistence. Such a team could also design and implement group education for patients and their partners, which would be very beneficial for MI patients. Cardiac healthcare professionals have a great deal to learn from patients and the next of kin and must be prepared to share the pedagogical arena [21]. The present study also revealed that partners rarely received oral or written information about sexual function and coexistence after an MI. It is important that the partners of MI patients become involved, as it would increase their understanding of the situation, reduce the risk of overprotection [22], and make both themselves and the patient aware of the relatively small risk of sexual intercourse triggering another MI [23]. Counselling should therefore focus on encouraging patients to live a physically active life and not to abstain from sexual activity [6].

It is remarkable that none of the CCUs mentioned any form of Internet-based information about sexual function and coexistence. A user-friendly Internet-based healthcare system that provides evidence-based knowledge, where patients and their partners could search for information about sexuality after an MI, could complement oral and written information. It is important that MI patients and their partners should be able to access safe and controlled sites

containing evidence-based knowledge due to the huge amount of pornography on the Internet[24] and the difficulty in finding trustworthy information. It is surprising that most CCUs had no routines for cooperating with experts on sexual function and coexistence, as some MI patients suffered from depression due to reduced desire or erectile dysfunction, and some medications have side-effects such as impotence and vaginal dryness. Lindau et al [16] found that sex can continue to play an important role in older couples' relationship and well-being and that such couples benefit from counselling or medication. Therefore, CCUs must build a network with different experts on sexual function and coexistence in order to offer better advice and treatment.

This study shows that CCU professionals lacked competence about sexuality. We even believe that education should be offered to the whole of the multiprofessional cardiac teams. The deficiency must be remedied by specific education, which could be provided by courses organized by a national network such as the Swedish Society of Cardiology and the Swedish Association of Healthcare Professionals in Cardiology.

Methodological issues

Both closed and open-ended questions were examined by an expert panel and a pilot study was conducted. This made it possible to enhance the quality of data by changing the formulation of some questions. The relatively high response rate can be explained by the fact that the questionnaire was easy to complete and directly addressed to one contact person. At each hospital this contact person had a special responsibility for follow up and registration of MI patients. Before answering the questionnaire the contact person was asked to consult the whole team of professionals around the MI patients, therefore the representativeness must be regarded as good.

Conclusions

This study revealed that cardiac healthcare professionals in Sweden who are specialists in the area of cardiac disease and rehabilitation lack sufficient competence and information material about sexual and coexistence topics. As a result, patients, as well as their partners, do not receive adequate information about sexuality in relation to the disease, despite it forms a central aspect of human life and wellbeing. It is therefore essential that healthcare professionals at CCUs and primary healthcare centres are educated in, and can inform the MI

patient about, the significance of sexual function and coexistence. Further research is needed regarding the patients' as well as their partners' need for information and support in this area.

Acknowledgements
This study was supported by grants from the SSSH (Southern Sweden Nurse's home) and the Ottar foundation.

References

1. Steinke EE, Wright DW. The role of sexual satisfaction, age, and cardiac risk factors in the reduction of post-MI anxiety. *Eur J Cardiovasc Nurs* 2006; **5**:190-196.
2. Trudel G. Sexuality and marital life: results of a survey. *J Sex Marital Ther* 2002; **28**:229-249.
3. Drory Y, Kravetz S, Weingarten M. Comparison of sexual activity of women and men after a first acute myocardial infarction. *Am J Cardiol* 2000; **85**:1283-1287.
4. Ouldzein H, Aounallah Skhiri H, Zouaoui W, Nacef MH, Kafsi N, Ben Romdhane H et al. [Social and occupational repercussions of acute myocardial infarction]. *Tunis Med* 2005; **83** (Suppl 5):36-40.
5. Vacanti LJ, Caramelli B. [Age and psychologic disorders. Variables associated to post-infarction sexual dysfunction]. *Arq Bras Cardiol* 2005; **85**:110-114.
6. Moller J, Ahlbom A, Hulting J, Diderichsen F, de Faire U, Reuterwall C et al. Sexual activity as a trigger of myocardial infarction. A case-crossover analysis in the Stockholm Heart Epidemiology Programme (SHEEP). *Heart* 2001; **86**:387-390.
7. Yildiz H, Pinar R. [Sexual dysfunction in patients with myocardial infarction]. *Anadolu Kardiyol Derg* 2004; **4**:309-317.
8. Cheitlin MD. Should the patient with coronary artery disease use sildenafil? *Prev Cardiol* 2003; **6**:161-165.

9. Stewart M, Davidson K, Meade D, Hirth A, Makrides L. Myocardial infarction: survivors' and spouses' stress, coping, and support. *J Adv Nurs* 2000; **31**:1351-1360.

10. Hamilton GA, Seidman RN. A comparison of the recovery period for women and men after an acute myocardial infarction. *Heart Lung* 1993; **22**:308-315.

11. LaCharity LA. The experiences of younger women with coronary artery disease. *J Womens Health Gend Based Med* 1999; **8**:773-785.

12. Rushford N, Murphy BM, Worcester MU, Goble AJ, Higgins RO, Le Grande MR et al. Recall of information received in hospital by female cardiac patients. *Eur J Cardiovasc Prev Rehabil* 2007; **14**:463-469.

13. Steinke E, Patterson-Midgley P. Sexual counseling following acute myocardial infarction. *Clin Nurs Res* 1996; **5**:462-472.

14. Ben-Zion I, Shiber A. [Heart to heart: rehabilitation of sexuality in cardiac patients]. *Harefuah* 2006; **145**:350-351, 398, 397.

15. Bedell SE, Duperval M, Goldberg R. Cardiologists' discussions about sexuality with patients with chronic coronary artery disease. *Am Heart J* 2002; **144**:239-242.

16. Lindau ST, Schumm LP, Laumann EO, Levinson W, O'Muircheartaigh CA, Waite LJ. A study of sexuality and health among older adults in the United States. *N Engl J Med* 2007; **357**:762-774.

17. Robinson KR. Envisioning a network of care for at-risk patients after myocardial infarction. *J Cardiovasc Nurs* 1999; **14**:75-88.

18. Crumlish B. Sexual counselling by cardiac nurses for patients following an MI. *Br J Nurs* 2004; **13**:710-713.

19. Albarran JW, Bridger S. Problems with providing education on resuming sexual activity after myocardial infarction: developing written information for patients. *Intensive Crit Care Nurs* 1997; **13**:2-11.

20. Katz A. Sexuality and myocardial infarction. *Am J Nurs* 2007; **107**:49-52.

21. Hildingh C, Fridlund B. A 3-year follow-up of participation in peer support groups after a cardiac event. *Eur J Cardiovasc Nurs* 2004; **3**:315-320.

22. Condon C, McCarthy G. Lifestyle changes following acute myocardial infarction: patients perspectives. *Eur J Cardiovasc Nurs* 2006; **5**:37-44.

23. Rerkpattanapipat P, Stanek MS, Kotler MN. Sex and the heart: what is the role of the cardiologist? *Eur Heart J* 2001; **22**:201-208.

24. Smith M, Gertz E, Alvarez S, Lurie P. The content and accessibility of sex education information on the Internet. *Health Educ Behav* 2000; **27**:684-694.

Table 1
Response frequencies from the coronary care units (n=104) regarding information to myocardial infarction (MI) patients and partners concerning sexual function and coexistence

	Never (%)	Seldom (%)	Sometimes (%)	Always (%)
MI patients:				
routinely receive oral information about sexual function and coexistence before discharge from hospital.				
Male patients	12	43	40	5
Female patients	18	46	31	5
routinely receive written information about sexual function and coexistence before discharge from hospital.				
Male patients	29	8	8	55
Female patients	29	8	8	55

(continued)

(continued)

Partners of MI patients:				
routinely receive oral information about sexual function and coexistence before discharge from hospital.				
Partners of men	46	34	18	2
Partners of women	53	30	15	2
routinely receive written information about sexual function and coexistence before discharge from hospital.				
Partners of men	56	17	12	15
Partners of women	57	18	10	15

Table 2
Response frequencies from the coronary care units (n=104) regarding topics discussed with myocardial infarction (MI) patients at discharge and the first follow-up visit to the hospital

	Never (%)	Seldom (%)	Sometimes (%)	Always (%)
When MI patients are discharged, the risk of increased strain in the relationship with their partner is routinely discussed.				
Male patients	7	30	46	17
Female patients	9	29	45	17
At the first follow-up visit to the hospital, questions about sexual function and coexistence are routinely asked.				
Male patients	14	29	46	11
Female patients	21	28	41	10

Table 3
Response frequencies from the coronary care units (n=104) regarding group education provided for myocardial infarction (MI) patients and partners concerning sexual function and coexistence

	Never (%)	Seldom (%)	Sometimes (%)	Always (%)	There is no group education for MI patients/partners at the hospital (%)
Are sexual and coexistence topics always included in cases where the hospital offers group education (e.g. “cardiac school”) for MI patients?	17	16	32	23	12
Are sexual and coexistence topics always included in cases where the hospital has group education for MI patients and their partners?	23	17	30	20	10
Are sexual and coexistence topics always included in cases where the hospital has group education only for partners of MI patients?	18	3	0	1	78

Table 4
Response frequencies from the coronary care units (n=104) regarding healthcare professionals' competence and cooperation with other experts regarding MI patients' and partners' sexual function and coexistence

	Not known (%)	Do not agree (%)	Partly agree (%)	Agree almost totally (%)	Totally agree (%)
The team working with MI patients has sufficient competence about sexual function and coexistence.	8	38	42	9	3

	No routines (%)	Never (%)	Seldom (%)	Sometimes (%)	Always (%)
The team working with MI patients (and their partners) has routines for cooperation with experts on sexual function and coexistence.					
Male patients	80	4	2	10	5
Female patients	83	8	0	9	1

Table 5
Response frequencies from the coronary care units (n=104) regarding access to information material concerning myocardial infarction (MI) patients' sexual function and coexistence

	Do not agree (%)	Partly agreement (%)	Agree almost totally (%)	Totally agreement (%)
There is sufficient information material about sexual function and coexistence for MI patients and their partners at the CCU.				
Written information material	57	37	3	4
Videotape/CD-ROM	90	9	1	0
Internet access	90	8	2	0