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Perceptions of Illness among Thai Patients Undergoing Coronary Artery Bypass Grafting Surgery

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This qualitative study investigated perceptions of illness among cardiovascular patients before and after undergoing coronary artery bypasses grafting (CABG) surgery at a central hospital in the eastern region of Thailand. Data were collected from December 2011 to May 2012. Altogether 75 patients who had CABG surgery were recruited as informants. The data were collected from 7 patients through narrative interviews and 68 patients through semi-structured interviews. Home visits were also made to conduct participant observation, additional in-depth interviews were conducted with medical experts, and medical records were reviewed to triangulate the data. The data were analyzed using narrative and content analysis. The findings are grouped into two stages: pre-surgery and post-surgery periods. The patients' pre-surgery perceptions included noticing warning signs of illness; perceiving heart surgery as a terrifying and life-threatening experience; and recognizing the causes of the illnesses that led to the surgery. Perceptions in the post-operational period involved accepting their predicament, finding refuge in religion and dispelling the fear of death. The findings suggest that the prevention of cardiovascular diseases and the development of holistic rehabilitation programs for CABG surgery patients should take into consideration socio-cultural factors in addition to physical treatment.

Keywords: perceptions of illness, coronary artery bypass grafting surgery, Thai patients

Cardiovascular diseases are among the leading causes of death and disability in industrialized nations. Similarly, these diseases are the leading cause of death among Thai people (National Health Security Office, 2011). CABG surgery is usually performed in cases which medical therapy with oral drugs become ineffective in relieving the patients' symptoms caused by severe obstruction of the three coronary arteries and reduced left ventricular function (Lhojaya, Phongpanich, & Sakhonpan, 1993; Rujirawat et al., 2010). CABG surgery is a form of open-heart surgery and may have undesirable physical, mental and social impacts on the patients, resulting in changes in their daily life routines afterwards. Therefore, post-surgery rehabilitation should encompass physical, mental and social aspects of their recovery.

Most studies on CABG surgery focus on the biomedical aspects of heart surgery, but few investigate patients' perceptions on their illness. In one study on patient perceptions on the CABG surgery, Vila, Rossi and Costa (2008) found that patients' perceptions included feeling on the edge between life and death, fear of disability, entrusting one's life into

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God's hands, loss of freedom and incapacity to work. These perceptions reflect lay persons' common sense, through which they try to understand their disease and CABG surgery, informed by cultural perspectives, especially religious ones. Lapum, Angus and Watt-Watson (2010) found that patients who were distrustful or afraid of medical technology in open-heart surgery went through a longer period of recovery. Thus, the patients' mental and emotional state could affect the duration of their post-surgery recovery.

No previous studies in Thailand have focused on perceptions of CABG surgery. Since perceptions of illness are closely related to behaviors, beliefs and values (Kleinman, 1988), a study from an anthropological perspective provides an appropriate framework to examine the reactions of Thai CABG surgery patients, whose beliefs, culture and lifestyles differ from their counterparts in Western countries. Knowledge gained from such study is expected to contribute to the prevention of illness in the Thai socio-cultural context through improving communication between healthcare providers and patients, which in turn can increase patients' confidence in the surgery and quicken their recovery processes. More broadly, the findings may be used to develop holistic rehabilitation programs to improve quality of life among Thai CABG surgery patients.

This study adopted a critical medical anthropology perspective to analyze individual patient perceptions on illness within a context shaped by the structure of society, culture, political factors, the capitalist economy, the medical establishment, and unequal patient-practitioner relationships (Bear, Singer, & Susser, 1997). Illness perceptions are fluid and reflect the patient's context. Cardiovascular diseases emerge within the capitalist way of life. However, in Thailand, their surgical treatment mostly takes place in large state hospitals characterized by the civil servant culture. Under the Thai state's economic development framework, central hospitals with the capacity to perform open-heart surgery have been established in regional development centers.

The concept of cyborg anthropology was also used to explain the coexistence of human beings with mechanical instruments or artifacts in a cultural context (Haraway, 2008). The medical technology used in heart surgery, including medication, helps patients survive cardiovascular disease, but forces the patients to live with medical technology both before and after the surgery. Aspects of such technology that patients have to live with include anticoagulant medication and various investigations, such as ECG, MRI, or ultrasound tests, the exercise stress test, or coronary angiography. The purpose of this study was to investigate the perceptions of illness before and after the operation among Thai patients who underwent CABG surgery.

Method

Design

A qualitative research design was used in this study. The study site, chosen through purposive sampling, was one province in the Eastern region of Thailand. The data were collected from patients who resided in the study area and had undergone CABG surgery at the study site hospital or in another hospital, and regularly visited the study site hospital for post-surgical care. The data were collected from a total of 75 patients—7 through narrative interviews and 68 through semi-structured interviews. Validity of the data was check through methodological triangulation (multiple data collection methods) as well as data triangulation (multiple sources of data): In addition to the patient interviews, participant observation was

conducted during patient home visits; two in-depth interviews were conducted with medical experts; and patients' medical records were reviewed to check the data obtained from patients through interviews. The data were collected from December 2011 to May 2012.

Inclusion criteria of research participants

The first researcher was working as a dentist in a project to follow up patients who had received open-heart surgery at the study site hospital. Purposive sampling was used to recruit patients, all of whom had to have received CABG surgery at either the study site hospital or elsewhere and be currently visiting the study site hospital for follow-up treatment. Patients whose surgery was performed less than six months or more than 10 years before the data collection period were excluded—the former because they were still in the recovery stage, the latter because they might have been unable to recollect the events related to the surgery and how they felt about it. Altogether 75 patients were interviewed, 7 through narrative interviews and 68 through semi-structured ones. The choice of interview technique depended on the communication skills of the patient. Narrative interviews required the participant to have good communication skills. Furthermore, narrative interviews were preferred with patients who had a very specific case history, such as one involving emergency surgery, cardiac arrest, myocardial infarction, unsuccessful case, infection of the surgical wound, or co-morbidity with other chronic illnesses, like stroke, diabetes, hypertension, a herniated disc, or osteoporosis.

Ethical Considerations

The study was approved by the research ethics review board at the Faculty of Social Sciences and Humanities, Mahidol University, Thailand. Before each interview, the purpose of the study was clearly explained to the informants, who were asked to sign a written informed consent if they agreed to participate. All informants were told that the information they gave in the interview would be kept confidential and not be linked to any one of them specifically in the presentation of the findings, and that they could refuse to answer any question they felt uncomfortable with. All informants had the right to withdraw from the study at any point; doing so would not have had any impact on their treatment.

Data Analysis

The data were analyzed through narrative analysis in chronological order (Elliot, 2005) as well as through content analysis, in which thematic categories were established. The analysis of the data followed the following steps: transcribing the audio recorded interviews, processing the data, verifying the data, indexing the data, drawing conclusions and presenting the results by illustrating salient points and diverse attitudes among the research informants with quotes. Excerpts were taken from the narratives without altering the meaning of the text (Creswell, 1994; Miles & Huberman, 1994).

Results

Table 1 summarizes the participant characteristics. The majority of the participants (82.67%) were men, reflecting the greater number of men among CABG surgery patients. The medical explanation for this difference is that female sex hormones reduce the risk of coronary artery disease (CAD). The sociological explanation is that women are likely to seek

health care earlier than men when they perceive possible symptoms of illness and are thus more likely to be helped by less invasive treatments and require CABG less often than men.

Table 1

Participant Characteristics

Characteristic	Participant (n = 75)	Percentage
Sex		
Male	62	82.67
Female	13	17.33
Age		
50-60 years	18	24.00
60-70 years	46	61.33
Over 70 years	11	14.67
Marital status		
Single	5	6.67
Married	44	58.67
Widowed	11	14.67
Separated/divorced	15	20.00
Time elapsed since surgery		
6 months-1 year	10	13.33
2-5 years	40	53.33
6-10 years	25	33.34
Co-morbidity with other chronic illnesses		
No	21	28.00
Yes	54	72.00
Indication for surgery		
Sudden cardiac arrest	3	4.00
Myocardial infarction	11	14.67
Other internal medicine procedures ineffective	61	81.33
Situation of surgery		
Emergency	3	4.00
Appointment	72	96.00
Result of surgery		
Unsuccessful	1	1.33
Infection of the surgical wound	1	1.33
Successful	73	97.34
Number of surgery		
Twice	1	1.33
One	74	98.67
Type of residence		
Municipal (urban)	33	44.00
Rural	42	56.00

The CABG surgeries performed on the participants were successful in almost all cases. However, in one case, the surgery failed to correct the arterial obstruction; in another, the surgical wound got infected. One participant had to undergo the surgery twice. Three received emergency surgeries, while the others were treated at an appointed time.

Perceptions on illness and CABG surgery

1. Pre-surgery period.

All participants had noticed signs of illness before being informed by their physician that they required CABG surgery. They perceived the surgery as life-threatening and tried to identify the reason they needed the surgery, in order to be able to accept their illness.

1.1 Perceptions on warning signs of illness. The patients' illness perceptions were influenced by their socio-cultural background and their level of access to information. All participants reported that they perceived warning signs of illness before the CABG surgery: irregularities in their bodies, loss of consciousness or awareness of similar illness among close relatives.

1.1.1 Perceptions on irregularities in the body. Before receiving medical confirmation about their condition, some patients had either felt ill or noticed irregularities in their bodies, for example incessant cough, exhaustion, shortness of breath, numbness, constricting chest pain, or a sensation of having liquid in their chest. When the doctor diagnosed their symptoms as CAD and stated open heart surgery was necessary, these patients calmly accepted it: *"I had a fit of coughing that kept me from sleep. I was exhausted and unable to get enough air into my lung. My arms and chest went numb. The doctor diagnosed my illness as blocked coronary arteries."* (79-year-old monk)

"When lying down I felt some liquid running in my chest. Lying on either my left or right side, I heard a gurgling sound from inside my body all the time. The doctor told me to have heart surgery." (69-year-old man)

1.1.2 Perceptions of losing consciousness. Some participants had experienced loss of consciousness while sitting on a chair or going to the toilet: *"I was sitting on a chair with a backrest, the doctor across the table from me. I pushed my hands against the seat. The doctor asked me what my problem is. I replied: 'I was drilling when I felt this sensation gripping my heart. I felt choked and breathless.' As I reached this point, I just stopped breathing and fell on the back of the chair."* (65-year-old man)

"I was in the bathroom, about to flush the toilet when I fell forward and blacked out. My children took me to the hospital." (51-year-old man)

1.1.3 Perceptions on the hereditary nature of heart disease. Most participants knew that their close relatives had had heart disease: *"I am one of seven siblings. All of us have heart disease. Four gone, three still alive. The doctors said it was genetic."* (64-year-old woman)

"I and my siblings all have heart disease. My younger brother and sister already had heart surgery. My older sister didn't heed her doctor's suggestion for heart surgery, and it eventually killed her." (60-year-old man)

1.2 Perceptions of heart surgery as a terrifying and life-threatening experience. Although the CABG surgery could relieve patients from suffering chest pain and prolong their lives, the prospect of the surgery could be terrifying. The surgery involves cutting the patient's breastbone wide open with a scalpel. This procedure is perceived as life-threatening

by most people, who regard the heart as the most important organ in human body and its beating the key sign of life: *"I felt my heart breaking into pieces as I learned I had to undergo surgery."* (64-year-old woman)

"When the doctor told me I needed heart surgery, I was shocked and stunned." (58-year-old man)

1.3 Perceptions on the reasons necessitating heart surgery. The participants tried to find explanations for their illness and the necessity of the surgery from their social and cultural backgrounds. These explanations included karma, stress and food habits: *"When I knew I needed to have heart surgery, I was filled with anxiety. I wondered if my karma was catching me up."* (60 year-old man)

"I am the abbot of a temple. There was a period when law suits were filed to evict people encroaching and occupying the temple's land. It was so stressful, and my physical health was so badly affected that I needed to have heart surgery." (79-year-old monk)

"When I cooked, I would add a lot of coconut milk to make the food taste good. But after the heart surgery, the doctor said 'no more coconut milk.'" (64-year-old woman)

2. Post-surgery period.

The participants' perceptions following their surgery were diverse. Some accepted their predicament; some found refuge in religion to dispel their fear of death. While they were aware that the CABG surgery could help prolong their lives, they also knew that the procedure involves stopping their heart temporarily and thus constituted a near-death experience for them. The patients came to accept the truth that death is universal. This realization made them more mindful in conducting their lives. Some made a careful plan in anticipation of the end of their life. Others made a will to prevent trouble after their death. Most spent more time and effort in religious activities, such as merit-making, visits to temples or listening to sermons, believing that these activities would be rewarded in their next life: *"I read books on dharma; they say no one lives forever. Everyone, even Lord Buddha himself, dies. Nothing could be truer, and it makes me think that I am lucky to escape death and survive the heart surgery. It made me more mindful with life."* (64-year-old man)

"After the heart surgery, I don't know when I would go. I'm not married. I wrote a letter directing which portion of my money goes to whom. Not a lot of money, but I don't want to turn in my grave having left certain things unsettled." (A 52-year-old woman)

"Death worries me no more because there's nothing left for me to take care of. All my children are grownups. I need not worry about anyone anymore. Just offering foods to monks in the morning and then saying a prayer, saving up merit for next life." (65-year-old man)

Discussion and Conclusion

The participants' perceptions were dynamic and subject to change both before and after the surgery, from the time they first noticed signs of illness (abnormalities in their bodies, their relatives' ill health, experiences of losing consciousness), through their fear of the heart surgery and trying to understand why it had become necessary, to their post-surgery period of adjustment and attempts to calm their mind and reduce their suffering through

religious beliefs and teachings, resignation to the inevitability of death, and positive thinking. The patients who were aware of warning signs of illness (feeling ill, bodily irregularities, and history of similar illnesses among family members) before the surgery tended to accept their doctors' diagnosis and recommendations with a calm mind. Yasuhara, Takada, Tanioka, Kawanishi and Locsin (2010) have noted that perceiving signs foretelling a dangerous situation helps people to handle momentous changes in their lives. Their perception of heart surgery as a terrifying and life-threatening experience is in line with the findings of Lapum, Angus and Watt-Watson (2010).

Critical medical anthropology analyzes individual patient perceptions on illness within a context shaped by the structure of society, culture, political factors, the capitalist economy, the medical establishment, and unequal patient-practitioner relationships (Bear, Singer, & Susser, 1997). The CABG surgery confines patients to the hospital where it is performed, removing them from their own surroundings and families. As a result, the present study's participants felt lonely, in pain, helpless, and out of control of their own lives. The patients' attribution of their illnesses and heart surgery to karma reflect Thai culture and Buddhism, which contrast with the dominant scientific thinking held by the medical personnel and institutions. Similarly, Vila, Rossi, and Costa (2008) found that some CABG surgery patients relied on their religious beliefs and reasoned that their disease and surgery were resulted from God's will. This perception of illness from cultural and religious perspectives reflects the patients' lack of trust in the surgery.

The participants also had to dispel the anxiety resulting from various aspects of the care context. The first of these was the civil servant culture among the medical personnel they interacted with, which made the participants in their capacity as ordinary people feel deferential toward the personnel; thus, they often did not dare to express their opinions. The second was that they had to entrust their lives with the personnel and accept the consequences, come what may. The participants had to find ways to adjust to these conditions and help themselves the best they could. This reflects the way state hospitals operate as social welfare institutions. Patients' rights are increasingly advocated for in contemporary Thai society. To realize these rights and improve the health provision system, patients need to receive comprehensive information, advice and emotional preparation to assist their decision making prior to surgery and to reduce their anxieties, pain and suffering related to their illness and its treatment. Patients need to be able to participate in the decision making about their treatment options.

The concept of cyborg anthropology illustrates that human beings and technology co-exist within a cultural context; this co-existence is mediated by cultural meanings (Lapum et al., 2012). To live with medical technology post-surgery, many participants found comfort in cultural and religious beliefs and became more mindful in conducting their lives. After the realization that their illness and death were beyond their control, the participants concentrated on doing good deeds, praying and making merit–actions they perceived as preparation for their next lives. These cultural and religious viewpoints brought back balance to their lives and had calming effects on them when the thought of dying recurred.

Recommendations

The findings of the present study can be used to improve strategies for pre-surgery, surgery, and post-surgery care. The key message is that care needs to be patient-centered: Appropriate rehabilitation programs for Thai CABG surgery patients must address their

physical, mental and social needs. Self-help groups of fellow patients would be an effective structure for them to share illness experiences and self-care techniques, and be involved in community service, religious and health recovery activities. Patients also must receive sufficient information and advice from medical personnel before and after the surgery. The prevention of cardiovascular diseases should address physical as well as socio-cultural aspects of illness, that is, observation of irregularities in the body, history of similar illnesses among close relatives, eating behaviors, work patterns, stress reduction and recreation.

Limitations of the study

This study was conducted among Buddhist patients receiving services at an eastern Thai central state hospital. The findings are not directly generalizable to patients in other contexts. This study did not utilize a gender perspective, as the main focus was on cultural dimensions of patient perceptions on heart surgery. Future studies should incorporate a gender perspective in the analysis of perceptions on heart surgery.

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