Chest pain description and recognition among Chinese people with coronary problems

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SUMMARY

- Chest pain is a common symptom of coronary heart disease and people with chest pain are in danger of developing an acute myocardial infarction. There is some evidence that ethnicity is associated with coronary symptom recognition and descriptions of chest pain vary across ethnic groups. As coronary heart disease is increasing in the Chinese population, there are limited studies on chest pain descriptions and recognition among Chinese people.
- The aim of this study was to explore chest pain descriptions and recognition among Chinese people with coronary problems.
- A qualitative exploratory design using convenience sampling was used to recruit participants with coronary problems from a cardiac rehabilitation and prevention centre of a community-based hospital in Hong Kong. Focus group interviews were used to collect data and content analysis was used to code and categorise the qualitative data.
- Forty-three participants (24 men and 19 women) participated in the focus groups. Two categories in respect of chest pain emerged from the interview data: chest pain description and chest pain recognition. The Chinese participants used a broader variety of descriptive words and analogies to report chest pain. Misperception of chest pain for other non-cardiac problems was reported.
- This study provides information about various descriptors and descriptions used by the Chinese participants to describe the chest pain, about which little information was found in the literature. It highlights the fact that the use of analogies might imply difficulties in articulating the pain experienced by the Chinese participants. An accurate detection of chest pain could increase the patient's awareness of being at risk for coronary disease.
- These results provide clinicians with some chest pain descriptors that Chinese patients are likely to express that could aid in the diagnosis of coronary heart disease. To render prompt management to alleviate any adverse cardiac disease-causing consequences, more research among the Chinese people regarding chest pain recognition and descriptions is recommended.

INTRODUCTION

Chest pain is a common symptom of coronary heart disease (Leslie et al., 2000). People with chest pain are in danger of developing an acute myocardial infarction and there is some evidences that ethnicity is associated with myocardial infarction symptom recognition (Ratner et al., 2006) and descriptions of chest pain vary across ethnic groups (Finnegan et al., 2000). A limited number of local studies on chest pain descriptions and recognition among Chinese people, coupled with the increasing incidence of coronary heart disease among the Chinese population justified the need for this study to explore issues and expand knowledge in these areas. Such knowledge will enable healthcare professionals and the lay public to become more familiar with the descriptions and recognition of chest pain shortly after occurrence of symptoms.

METHODS

This study was part of a large research project that used a qualitative exploratory design to explore individual awareness of coronary heart disease regarding risk factor reduction. Following approval by the ethics committee, convenience sampling was used to recruit participants with coronary problems in a cardiac rehabilitation and prevention centre of a community-based hospital in Hong Kong. Focus group interviews were used as the data collection method. Voluntary participation and confidentiality were assured.

After explaining the purpose of the study, each participant was asked to sign a consent form. Single sex focus group interviews were conducted in Chinese to facilitate open discussion. The group interview lasted from 60 to 90 minutes and was audio-recorded with permission of the participants. The interview started with the following questions:

- Could you tell me what you understand about coronary heart disease?
- Could you describe the symptoms you have experienced?

Follow-up questions were raised to explore the participants' initial answers. The group dynamics were maintained due to a high level of involvement among participants within each focus group.

Qualitative data were translated, back-translated, and checked for accuracy of translation and meaning by two independent English-Chinese bilingual persons. Content analysis was used to code and categorise the qualitative data. Qualitative data were analysed by two researchers independently and through constant discussions, categorised data were achieved that ensured reliability and validity of the data.

FINDINGS AND DISCUSSION

Eight focus groups consisting of four male and four female groups with a confirmed diagnosis of coronary heart disease consented to participate in the study. Each focus group consisted of three to seven participants. The total sample consisted of 43 participants including 24 men (56%) and 19 women (44%), whose age ranged from 44 to 78 years. More than 40% (n = 18) of the participants achieved a primary level of education, 23% (n = 10) completed secondary education, 7% (n = 3) attained a post-secondary qualification, 7% (n = 3) held a bachelor's degree, and 21% (n = 9) did not receive any formal education. Fourteen participants were employed and the remainder had retired. All participants had coronary heart disease, and of these, 49% (n = 21) had a history of myocardial infarction.

Two categories in respect of chest pain emerged from the interview data:

- chest pain description
- chest pain recognition

Chest pain description

The common pain descriptive words that many Chinese participants used were squeezing, tightness, pressure, pressing, a pushing force near the chest, a burning sensation, piercing pain, pinching pain, a feeling of needle prick, fullness, and indescribable feeling of pain.

This sample of Chinese participants used a broader variety of descriptive words to report chest pain when compared with previous studies, despite the fact that some of the pain descriptors were quite consistent with previous studies (Finnegan et al., 2000; Ronnevig et al., 2003; Lockyer, 2005). In addition, some participants used analogies to describe their pain experiences such as:

- Just like a ball being held tightly and it's going to burst
- Just feel like you want to get rid of the abdominal gas
- Just like someone was squeezing my throat

The use of analogies could highlight the difficulties in articulating the pain experiences by these Chinese participants. Common words used by the Chinese participants to indicate their pain intensity were 'severe discomfort', 'severe pain', 'extremely painful', 'could not tolerate it', and 'extreme suffering'. However, coronary heart disease patients in Ronnevig et al.'s (2003) study used stronger words, such as 'intense' and 'miserable' to express great pain, and used 'troublesome' and 'annoying' to indicate less pain. Other than common pain areas such as 'jaw pain', 'neck pain', 'shoulder and arm numbness', 'pain in the middle of the chest 'and 'the back' were quite consistent with previous studies (Finnegan et al., 2000; Lockyer, 2005), whereas 'pain in airway' and 'pain just below the throat' were reported by the present sample of Chinese participants.

Regarding pain characteristics, many Chinese participants commonly described the pain as sudden, fast, episodic, and radiating to the shoulders, arms and back. Pain was usually experienced at night, while chasing a bus, walking fast and/or climbing stairs. It was relieved by rest and a few participants reported that the pain was temporarily stopped by deep breathing, rubbing the chest, or after having a cup of hot water. In addition, some participants reported that pain associated with symptoms including breathlessness, diaphoresis and vomiting, which is in concordance with other studies (Finnegan et al., 2000; Leslie et al., 2000; Lockyer, 2005).

Chest pain recognition

The participants described that they underestimated their risk of coronary heart disease because they did not recognise the chest pain symptom, even though they had experienced chest pain in the past. They highlighted that their immediate motives or thoughts were those of other diseases or bodily problems. Misperception of chest pain for muscle or nerve pain, as well as stomach or lung problems were reported by most participants. The verbatim illustrations included:

- I thought that it was related to muscle ache
- I did not think of it as chest [heart] pain. I thought that it was nerve pain
- I've had pain in this area [pointing to the abdominal area] for several years, I perceived it as stomach pain
- It was easy to confuse it just like gastric distention in my case
- I thought it was heart burn. So I went to the doctor for antacids
- At that time, I thought of respiratory problems or pain in the lung

The findings of the present study concur with those of previous studies, indicating that the subjects failed to recognise chest pain or attributed chest pain to other health problems (Burnett et al., 1995; Finnegan et al., 2000; Leslie et al., 2000). As such, mistaking chest pain as other bodily symptoms should be highlighted while imparting messages related to chest pain recognition.

CONCLUSIONS

This study provides information about various descriptors and descriptions, as well as analogies used by the Chinese participants with coronary problems to describe the characteristics of chest pain, in which little knowledge was found in the literature. The study also highlights that the use of analogies could imply difficulties in articulating the pain experienced Chinese people. An accurate detection of chest pain for Chinese people could prevent confusion of the symptoms as those of other non-cardiac bodily problems and hence, increase self-awareness of being at risk of a coronary heart disease event.

Pain is a subjective experience that exists whenever and whatever an experiencing individual describes it is (McCaffery, 1979). These findings could provide clinicians with chest pain descriptors that Chinese patients are likely to express that could aid in the diagnosis of coronary heart disease or myocardial infarction. These findings are also relevant to the provision of health education to the public by highlighting the importance of seeking medical help when they experience atypical chest pain different to those experienced by other patients. To render prompt management of coronary heart

disease to alleviate any adverse disease-causing consequences, more research in these areas regarding Chinese individuals' chest pain recognition and descriptions is recommended.

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