Effective factors on decision to undergo angioplasty from the viewpoint of patients with heart disease

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Abstract

BACKGROUND: Angioplasty of coronary vessels is one of the basic and elective treatments for many patients with coronary diseases. The main objective of the present study was to survey the effective factors on patients' decision to undergo angioplasty from the viewpoint of patients.

METHODS: In a cross-sectional study, 30 angioplasty candidates were selected using convenience sampling. Data was collected by a researcher-made questionnaire consisting of five demographic questions and ten questions about factors affecting the decision to undergo angioplasty. The respondents scored the importance of each item as very high, high, medium, low, and very low. Data was analyzed by descriptive statistics, Mann-Whitney and Kruskal-Wallis tests in SPSS.

RESULTS: Financial problems were considered as an important barrier against undergoing angioplasty by 26 participants (86.7%). History of unpleasant experience was of little importance for 15 patients. Financial problems and existence of fear and anxiety were the most important factors and history of an unpleasant experience and high age were the least important. Fear was more effective on women than men (P = 0.37). Type of insurance was more important for patients with high school diploma or university degree (P = 0.33).

CONCLUSION: Since financial problems and fear and anxiety were effective on the decision to undergo angioplasty, arrangements need to be made to eliminate such factors and to prepare patients with heart diseases to better accept angioplasty.

Introduction

Healthy heart is currently one of the main objectives of health organizations in many countries.[1] In spite of developments in new therapeutic modalities, coronary artery disease (CAD) is the leading cause of mortality, morbidity and reduced quality of life throughout the world.[2,3] Diseases that affect quality of life, among which cardiovascular diseases are the most prevalent, are a great challenge in human societies. According to the CDC (Centers for control disease), 1.5 million persons suffer from myocardial infarction (MI), out of whom 15.65% will die every year.[4] The reports of the American Heart Association also indicated that about 25 million deaths will occur due to cardiac diseases until the year 2020.[5] Cardiovascular diseases are in fact supposed to be the main cause of mortality and disability in the world.[5] Cardiovascular diseases are responsible for the greatest number of deaths in Iran[6] and their mortality rate is increasing every year.[7]

Diagnosis of CAD often causes considerable psychological disturbances including anxiety, depression, and uncertainty about future.[8] It is obvious that psychosocial factors such as depression have undesirable effects on prognosis of MI and may be a barrier to improvement of health status of patients.[9] Moreover, CAD is a progressive illness and individuals may need multiple procedures to prevent it. Angioplasty of coronary vessels has been accepted as one of the basic and elective treatments for patients suffering from coronary diseases.[10] The American Health Association estimated 1.5 million cardiac catheterizations in 2003. However, this number is increasing every year.[6,7] Angioplasty of coronary vessels can improve prognosis, relieve symptoms, reduce ischemic events, and facilitate functional capacity through a relatively low-risk procedure with rapid recovery.[2] Although this procedure is common and relatively low-risk, 24-72% of patients experience anxiety.[2] Anxiety involves feelings of fear, tension, and panic due to expected unpleasant happenings and complications such as bleeding, hematoma, arteriovenous fistula, aneurysm, and arrhythmia.[11] While angioplasty is now considered as one of the therapeutic methods in

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coronary disorders, unfortunately, some patients refuse to accept it. Therefore, the present research was conducted to highlight the effective factors on accepting to undergo angioplasty among patients with heart diseases.

Materials and Methods

In a descriptive, cross-sectional study, convenience sampling was used to select 30 subjects from 40 patients who had been scheduled for first-time elective diagnostic coronary angioplasty. The study was carried out at Valiasr Hospital (Fassa, Iran). The patients had been visited by a cardiologist before treatment. All individuals signed consent letters before participating. All patients could communicate in Persian.

Data was collected by a researcher-made questionnaire including 5 demographic items and 10 questions about factors affecting the decision to undergo angioplasty. The respondents scored the importance of each item as very high, high, medium, low, and very low. The content validity of the questionnaire was confirmed by cardiologists of Fassa University of Medical Sciences (Iran) and its reliability was confirmed by test-retest method.

Data was analyzed by descriptive statistics, and Mann-Whitney and Kruskal-Wallis tests in SPSS version 13. (SPSS Inc., Chicago, IL, USA).

Results

There were 19 men (63.3%) and 11 women (36.7%) among the angioplasty candidates in this study. The mean age of the subjects was 53.9 ± 11.6 years. According to 26 subjects (86.7%), financial problems had a great effect on refusing to undergo angioplasty. Half of the participants considered history of an

unpleasant experience of angioplasty not to be very effective. Overall, financial problems and fear and anxiety were the most important factors. On the other hand, history of an unpleasant experience and high age were the least important factors affecting patients' decisions (Table 1).

Fear was more effective among women than men (P = 0.37). The importance of type of insurance was higher in view of patients with high school diploma or university degree compared to other persons (P = 0.33).

Discussion

In developing countries, CAD is considered as a major public health problem that can decrease quality of life among patients. Improving health-related quality of life (HRQOL) is a major objective in taking care of patients undergoing cardiovascular procedures.[7] Previous studies have indicated that angioplasty improved physical functioning and reduced signs and symptoms of cardiac diseases. Patients with CAD could return to work more quickly after angioplasty.[8] We found fear and anxiety as the most important and effective factors on refusing to undergo angioplasty.

Habib et al. evaluated both the benefits and the risks of peripheral angioplasty and reported that patients suffered more from the feelings of uncertainty and fear rather than the chest pain.[7] Khayam Nekouei et al. compared the anxiety of angioplasty candidates with normal population in Isfahan (Iran). Their study showed that cardiac disease and diagnostic measures, especially angioplasty, caused anxiety in patients. They concluded that it was necessary to evaluate this kind of anxiety and apply proper techniques to reduce it.[12]

Table 1. The importance of factors affecting angioplasty decision from the viewpoint of angioplasty candidates

Factors	Very low	Low	Medium	High	Very high
Fear	8 (26.7)	9 (30.0)	8 (26.7)	3 (10.0)	2 (6.7)
Having insurance	6 (20.0)	4 (13.3)	9 (30.0)	4 (13.3)	7 (23.3)
Financial problems	2 (6.7)	1 (3.3)	0 (0)	1 (3.3)	26 (86.7)
Recommendations by relatives	8 (26.7)	5 (16.7)	7 (23.3)	5 (16.7)	5 (16.7)
High age	9 (30.0)	14 (46.7)	2 (6.7)	3 (10.0)	2 (6.7)
Giving information by physician	2 (6.7)	3 (10.0)	12 (40.0)	9 (30.0)	4 (13.3)
Confidence in improvement	3 (10.0)	5 (16.7)	9 (30.0)	10 (33.3)	3 (10.0)
Having knowledge	3 (10.0)	6 (20.0)	10 (33.3)	5 (16.7)	6 (20.0)
Previous unpleasant experience	15 (50.0)	5 (16.7)	2 (6.7)	6 (20.0)	2 (6.7)
Confidence in correct diagnosis	2 (6.7)	6 (20.0)	2 (6.7)	15 (50.0)	5 (16.7)

We and other researchers[13] found high levels of anxiety to influence the choice of proper therapeutic method by patients and post-treatment results. Gallagher et al. stated that assessment of fear and anxiety before angioplasty is essential.[14]

Considering the high prevalence of anxiety and depression among patients with coronary heart disease and their negative impact on treatment outcomes, appropriate screening and therapeutic approaches have to be applied for this group of patients.[6] Higgins et al. reinforced that nurses can provide these patients with both educational and psychological support. However, with improvements in technology and technique, the hospitalization period is as short as 1-2 days. Such a short stay and high-turnover environment limit the time available for nurses to support and care for those undergoing angioplasty.[10]

In general, social support is thought to be important to cardiac patients and can be linked to improved HRQOL.[7] Asadi Noughabi et al. suggested that a preoperative educational program on rehabilitation can be implied for those awaiting coronary artery bypass surgery.[15] Participation in cardiac rehabilitation would help to address stressors, decrease anxiety, and improve the quality of life.[2] Nursing personnel could also increase the knowledge of patients via presenting educational pamphlets and brochures. Physicians are considered as the most important source of information. In addition, their confidence in their own medical skills will reduce patients' fear and enhance support.[13]

In the present research, financial problems were also considered as barriers against undergoing angioplasty. Shahamat et al. reported that one of the most important problems of angioplasty candidates was financial issues.[16] Undertaking insurance policies to cover angioplasty can reduce financial problems of patients and thus eliminate barriers that prevent patients from undergoing this therapeutic method.

Conclusion

Financial problems and fear and anxiety are the most important barriers against undergoing angioplasty. Nursing care is an essential component in decreasing anxiety and fear of angioplasty candidates. Appropriate measures should be taken to reduce the stress of these patients.

Acknowledgments

Conflict of Interests

Authors have no conflict of interests.

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