



Review Article

Anxiety managements in patients with myocardial infarction: a literature review

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ABSTRACT

Background: Myocardial Infarction (MI) prevalence is increasing over the world. The patient with MI tend to have anxiety which could worsened their condition and quality of life. The anxiety in patients with MI could increase re hospitalization and mortality rate. Therefore, there is a need of better understanding regarding Anxiety in patients with MI.

Objective: This study was conducted to reviews the evidence regarding management of Anxiety in patients with MI.

Methods: Literature study was conducted through online searching. Pub-Med, Else-vier/Science Direct, and Ovid SP, were used and all of the included articles were published in English. Important information and analysis were extracted into tables which consisted of topics and authors, year of publication, design of the study, variables, subjects, intervention, data analysis, result, strength/weakness, and level of evidence.

Results: The result of the analysis present the intervention to manage anxiety in patients with MI. There are four main interventions to reduce anxiety in patients with Myocardial Infarction patients, which are aromatherapy, massage, education process, and music therapy. The intervention can be conducted separately or in combine together

Conclusion: Aromatherapy, massage, education process, and music therapy effectiveness to reduce anxiety in patients with MI.

INTRODUCTION

Myocardial Infarction (MI) is one of heart disease with highest prevalence around the world and become the common reason for hospitalization ¹. In Indonesia 35 % patients who admitted in the emergency room was diagnosed by myocardial infarct ². Patients who experience Myocardial Infarction have high risk of re infarction and increase the mortality rate ³.

MI often comes suddenly, and in the early stage patients will experience chest pain which can initiate fear and anxiety, noted that 50% from hospitalized MI patient in western country show significant symptom of anxiety ¹. MI patients with high anxiety also have more frequent cardiac events and can have higher mortality rate in 10 years after first onset ⁴. The mortality risk can increase significantly if

the complications of Myocardial Infarction not controlled wisely. Due to impact of anxiety in patients with Myocardial Infarct, it is very important to understand appropriate intervention of anxiety in patients with myocardial infarction.

METHOD

A search for studying the management of anxiety in patients with Myocardial infarction was conducted. The online data based including PubMed, Elsevier/Science Direct, and OvidSP were used and all of the included articles were published in English. The keywords were used for searching including anxiety, myocardial infarction, anxiety management, and anxiety intervention. All of these key words were mixed in different combinations. The article must be published in 2005-2016.

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The relevant articles were graded by using the Joanna Briggs Institute for Evidence-Based Nursing and Midwifery (JBI) 2014 levels of evidence. Important information and analysis were extracted into tables which consisted of topics and authors, year of publication, design of the study, variables, subjects, intervention, data analysis, result, strength/weakness, and level of evidence.

RESULTS

Based in the literature review, author found nine studies which discuss about the intervention to manage anxiety in patients with myocardial infarction (six RCT, two quasi experiment, and one systematic review). Level of evidence was used to differentiate the research methods based on Joanna Briggs Institute (JBI) 2013.

The articles which founded from searching proses were 58 articles and reduces into 39 due to duplication. Further eligibility check reduce article into 20. Total article that can be used in this research are nine article because others 11 article using retrospective methods. Secondary searching method were conducted as well but did not give us desired result. There are four main method of anxiety management in patients with Myocardial Infarction based on the evidence based which are aromatherapy, massage, education process, and music therapy. Each intervention has different advantage and disadvantage which can be used as a consideration in application setting.

From the evidence we can find the first intervention to manage anxiety is aromatherapy. There is a study from which examine the effect of anxiety in patients with Myocardial Infarction⁵. This study using Randomized Controlled Trial as design and for intervention the authors use Lavender aroma. The researchers clearly explain about step by step of the intervention but not mention about the theory to support it. From that study the can be reduced significantly by giving aromatherapy to the patients twice a day. The second evidence about aromatherapy to reduce anxiety conducting their research in patients with acute coronary syndrome⁶. The result of this study is there is not significantly anxiety difference between control group and intervention group. This result can be affected by the frequency of aromatherapy delivering which is only one time. Almond oil as a placebo in control group which is can induce bias because almond also known as an important oil in aromatherapy. Aromatherapy can be used as an option to reduce anxiety in patients with Myocardial Infarction. This therapy is low cost, easy to apply in the clinical setting, and safe for patients⁶.

The second intervention based on the evidence to reduce anxiety is massage. There are three studies which can be found to reduce anxiety. Effect of massage on the anxiety of patients receiving Percutaneous Coronary Intervention. The massage in this study was delivered 20 minutes before PCI. The result of this study is massage can significantly reduce anxiety in patents receiving PCI⁷. The second study is by which is conducted in patients with Congestive Heart Failure (CHF). In this study patients receive back massage conducted by the specialist nurse 10 minutes each day for 3 days consecutively. The result of this study is back massage can reduce anxiety significantly in patients with CHF. CHF and Myocardial Infarction have

some common effect physically and psychologically because of nature of illness and patient's perception⁸. Compare the effect of whole body massage by specialist nurse and patients relatives on blood cortisol. The result of this study is cortisol level in patients who receive massage from nurse is significantly decreased compare with patients who received massage from relatives. From this evidence we can get information that massage should be delivered by skillfully person to get maximum result. Massage can be option to reduce anxiety in patients with MI, but it have some disadvantage like consuming time and difficult to apply because based on the evidence massage should be given by well train care giver to reduce anxiety significantly⁹.

The third intervention to reduce anxiety in patents with MI is educational process. There are two evidence that found using educational process to reduce anxiety in MI patients. The first evidence is conducted by education in myocardial infarction using face to face training. The result of this study is education intervention can reduce anxiety significantly¹⁰. The second evidence which aim to examine face to face education and educational booklet on heart health indexes of the hospitalized patients with MI. The result of this study is face to face education and educational booklet can significantly reduce anxiety in patients with MI. Anxiety is one of indicator in Heart Health Indexes of the hospitalized patients with MI. From this review we can get information that education I very important to reduce anxiety in patients with MI. Education can be used to clarify patient's wrong perception about their illness and increase patient's knowledge to manage their condition. The information that can be deliver to the patient during educational process is symptoms, causes, and problems of myocardial infarction and change of life style such as quitting smoking, increase of physical activity, observance of food and drug regime, control of blood pressure, weight, and management of anxiety¹¹.

The fourth intervention to manage anxiety in in MI patients based on the evidence is music therapy. There are two evidence that found using music therapy to reduce anxiety. The first evidence is a systematic reviews conducted which use music therapy to reduce anxiety in patients with CHF¹². The result of this study is music therapy can significantly reduce anxiety and relevant to use as complementary therapy in clinical settings. The second evidence is a RCT which examine the effects of music intervention for woman with high anxiety during angiography. The result of this study is music intervention can make patients have higher positive experience during treatment. Music therapy is well known as a therapy to reduce anxiety but I cannot found evidence that specifically conducted in MI population. Music therapy can be used as an option to manage anxiety because it has good result when conducted in CHF population which have same causes of anxiety like MI and in angiography setting as one of the therapies for MI which is also can induce anxiety because of it procedure. Music therapy is easy to apply in clinical setting, low cost, safe for patient, and we can ask patients to choose the music for treatment based on their preferences¹³.

Table 1. Comparison of intervention to manage Anxiety in MI patients

Intervention	Advantage	Disadvantage	Level of evidence (JBI 2013)
Aromatherapy	1. Low cost 2. Easy to apply 3. Safe for patients	1. The result is still inconsistent 2. It has to combine with another intervention to strengthen the effect	1c, 1c
Massage	1. Low cost 2. Safe for patients 3. Can reduce anxiety significantly	1. Difficult to apply 2. Consuming time 3. Better conducted in private room 4. Some patients feel uncomfortable with this intervention	1c, 2d, 1c
Education	1. Low cost 2. Safe for patient 3. Easy to apply 4. Can reduce anxiety significantly	1. Consuming time 2. Need follow up	1c, 2c
Music Therapy	1. Safe for patient 2. Easy to apply 3. Can reduce anxiety significantly 4. Low cost 5. Patient can choose the music based on preferences	1. Better conducted in special room 2. Nurse should control the noise of environment	1b, 1c

DISCUSSION

Aromatherapy could be used to reduce anxiety in patients with Myocardial Infarction, even though the result often inconsistent. This contradictory result could be caused by different study design which affected with the duration of the treatment⁶. This intervention also does not seem effective to several patients who have anxiety due to the absence of the family or he patient in critical care unit⁵. Aromatherapy intervention also affected by patient's preferences which make this therapy cannot be used as a single intervention to reduce anxiety⁶.

Massage could decrease anxiety in patients with Myocardial Infarction. However this intervention only will show their effectiveness when delivered by the expert or therapist⁸. The effect of massage to reduce anxiety in patients with Myocardial Infarction also does not last for a long time and should be repeated after several time⁹.

From this review we can get information that education is very important to reduce anxiety in patients with MI. Education can be used to clarify patient's wrong perception about their illness and increase patient's knowledge to manage their condition. The information that can be deliver to the patient during educational process is symptoms, causes, and problems of myocardial infarction and change of life style such as quitting smoking, increase of physical activity, observance of food and drug regime, control of blood pressure, weight, and management of anxiety¹¹.

The study show that music intervention can make patients have higher positive experience during treatment. Music therapy is well known as a therapy to reduce anxiety but the researchers cannot found evidence that specifically conducted in MI population. Music therapy can be used as

an option to manage anxiety because it has good result when conducted in CHF population which have same causes of anxiety like MI and in angiography setting as one of the therapies for MI which is also can induce anxiety because of it procedure¹². Music therapy is easy to apply in clinical setting, low cost, safe for patient, and we can ask patients to choose the music for treatment based on their preferences¹³

CONCLUSIONS AND RECOMMENDATION

Anxiety in patients with Myocardial Infarction can induce many disadvantages from induce complication until increase mortality rate. Anxiety also can increase patient length of stay in the hospital. From the review of the evidence based there are four main interventions to reduce anxiety in patients with Myocardial Infarction patients, which are aromatherapy, massage, education process, and music therapy. The intervention can be conducted separately or in combine together. Further research regarding combination intervention to reduce anxiety in patients with myocardial infarction is needed. The findings of this research is crucial to provide knowledge on management of anxiety in patient with Myocardial Infarction. Further research regarding the effect of combination intervention to reduce anxiety in patients with myocardial infarction is needed.

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