THE LITERATURE REVIEW OF THE EFFECTIVENESS OF EARLY START CARDIAC REHABILITATION PROGRAM PHASE II POST CARDIAC EVENT.

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Introduction;

Cardiovascular disease is the prominent cause of mortality and morbidity all over the world. Less than a decade ago, 6 to 8 weeks of bedrest was suggested to be essential post myocardial infarction. This has since changed and patients are now encouraged to participate in cardiac rehabilitation (CR). CR programs provide education, exercise, and teaching for primary and secondary prevention of coronary artery disease and overall wellbeing. While the benefits of CR are enormous, CR remains significantly underutilized due to referral and access to services and is demonstrated by low participation rates.

Method:

A search of the following data bases was conducted from the Cochrane Review by searching the Cochrane (2005 to January 2017), MEDLINE (Ovid) and CINAHL (EBSCO) (2005 to January 2017) with restriction to English language articles. Search terms included words cardiac rehabilitation, Nursing, physiotherapy, referral and exercise

Results:

A total of 20 articles were found and literature reflected that outpatient CR is highly effective and beneficial if delivered 1to 3 week after the cardiac event. Cardiac rehab is delivered in accordance with Heart Foundation Recommended Framework and Australian Cardiovascular Health and Rehabilitation Association (ACRA) recommendations and run for anywhere from 4 to 12 weeks comprising of multi-disciplinary team based in the outpatient hospital setting.

The literature also suggested that early enrolment into CR may have contributed to reduced major complications. At the same time, early enrolment to CR programs trend toward higher CR-related complications. It was mentioned in the literature that early admission in CR prevents major events at the expense of increasing minor CR-related events. This suggests that the sooner a patient can enrol in CR, the better their outcomes will be from the hospital, client, and patient perspectives but that CR programs will have to actively manage an increased number of minor complications. Furthermore a number of studies have shown several outcomes can be positively influenced by starting cardiac rehab early, including mortality and cardiovascular events reduction, functional improvement, improvement in cardiorespiratory 6 min walk test and cardiac functioning showing a great improvement from early cardiac rehab practice.

The potential safety of early enrolment (<2 weeks) in CR with coronary artery bypass graft surgery or heart valve surgery essential to be evaluated for the safety of clinical reasons and suitability for exercise training. There are advantages and disadvantages to early enrolment in CR after open heart surgery, and a policy of early enrolment should be the standard of care for all patients who are undergoing open heart surgery. Aside from clinical outcome, additional evidence suggested that CR timing may even impact on initial enrolment to CR, one randomised control trial found an early CR session increased attendance 18%, and for every 1 day increase in wait time patients were 1% less likely to enrol. Any factors which negatively influence a delayed CR start should be avoidable if possible.

Studies found that various social, psychological, medical and demographic variables have an impact on delay to commencement in a CR program. These factors include age, sex, race, physician recommendation, length of hospital stay and patient's beliefs about their illness, patient mood and coping style and their expectations about CR.

Home based CR is recommended as another alternative method to improve early participation rates and the use of new technologies such as the internet, phones and other communication tools offered to patients will assist to increase admission rates and improve timely access to CR.

The clear association between exercise based cardiac rehab and a reduction in mortality signifies that it is important that any potential causes of suboptimal improvement in fitness are avoided. It also indicates that the timing of cardiac rehab is based on case by case basis and long waitlists should be avoided.

Current guidelines and research papers in cardiac care have recommended the early start of CR where appropriate. Despite this the evidence shows in some cases there is a disconnect between recommended practice and the realities of participating in CR program. The literature demonstrated that delaying the initiation of exercise based CR may lessen the change in absolute peak exercise capacity following long term training. However engaging early (<4 weeks) in a CR program resulted in a significantly maximized cardiorespiratory adaptation, a reduction in a further cardiac events and a decrease in following long term exercise training.

Implication of Practice:

It is very important to ensure that all cardiac patients access a CR program soon after their cardiac event and referrals offered to all patients. It is also vital that referrals are individually tailored to meet patient's preferences and different program models and methods of delivery in CR are offered.

New researches exploring new ways of cardiac rehabilitation delivery to improve referral and participation rates. CR programs need to ensure that they are delivering individualized modified exercise regimes that are more effective and useful to ensure maximized CR benefits.

Home based rehabilitation is another practice, which can be of benefit to younger patients with lower medical risk.

Conclusion:

In conclusion, cardiac rehabilitation has been proven to be safe and effective in improving the cardiovascular patient's quality of life and the reduction in morbidity and mortality. Timely access to enrolment in CR varies substantially and can have a causal effect on the disease process. The length of hospital stay and delayed enrolment in CR is directly related to the outcome for the patient. Although all patients showed improvements regardless of delay time, CR was of greatest benefit, when initiated within 3 weeks of the cardiac event.

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