Assessment of Mental Health and Quality of Life in Patients with Coronary Artery Bypass Graft

A Proposal

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Dedication

I would like to dedicate this work to the soul of my father, who has been the source of support, guidance and encouragement throughout my life.

Also, I would like to express my deep thanks to ***my mother, sister*** for their help, support and encouragement and care.

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LIST OF ABBREVIATION	
ACC	American College of Cardiology
ACS	Acute Coronary Syndrome
ADLs	*Activity of Daily Life*
AHA	American Heart Association
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AMI	Acute myocardial infarction
BAD	Bipolar Affective Disorder
CABG	Coronary artery Bypass Graft surgery.
CAD	Coronary artery disease.
CHD	Coronary Heart Disease
CHF	Congestive Heart Failure
CVD	Coronary Vessel Disease
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision.
GAD	*Generalized Anxiety Disorder*
HADS	Hospital Anxiety and Depression Scale
HPA	Hypothalamic-pituitary-adrenal.
HRQoL	Health-Related Quality of life
HRV	Heart rate variability.
ICU	Intensive Care Unit
LAD	Left Anterior Descending
LCX	Left Circumflex Artery
LIMA	Left Internal Mammary Artery
LMCA	Disease of the left main coronary artery
LVEF	Left ventricular ejection fraction.
MDD	Major Depressive Disorder.
MI	Myocardial Infarction
MMSE	Mini Mental State Examination
MOS SF-36	Medical Outcomes Survey Short Form 36 item questionnaire)
NHP	Nottingham health profile
OCD	Obsessive compulsive disorder.
OPCAB	On Pumb Coronary Artery Bypass Graft surgery.
PCI	Percutaneous coronary intervention
PSE	Present State Examination
PTCA	*Percutaneous Transluminal Coronary Angioplasty*
PTSD	Post traumatic stress disorder.
QEEG	Quantitative Electro Encephalo Graphy
QOL	Quality of life
RCA	Right Coronary Artery
SAD	*Seasonal Affective Disorder*
SCID	Structure Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders, 3rd ed
SVG	Saphenous Vein Graft
SWI	*Sternal Wound Infection*
TAG	Total Arterial Grafting
WHO	World Health Organization

Literature Review

Introduction:

Mental health and Quality of life are affected by coronary artery disease to varying extents. Coronary-artery bypass grafting (CABG) is the surgical procedure used to treat coronary artery disease to alleviate the physical burden of the illness and improve the patient's daily performance. It is expected that the quality of life for CABG patients will improve after a successful CABG procedure. A growing consensus finds it crucial to consider quality of-life (QOL) measures when assessing the value of medical procedures (Prevost et al, 1993). In general thoracic surgery, postoperative psychiatric disorders (PPDs) are associated with adverse outcomes including a longer hospital stay, and increased morbidity and mortality rates (Mehmet et al , 2009).

CABG surgery results in improved QOL for the majority of patients with extensive coronary artery disease. Nevertheless, some patients continue to have severe pain, sleep disturbances, and altered relationship with their spouse or next of a kind, 12 months after surgery (Hunt et al, 2000).

Fifteen percent of patients scored as probable cases of anxiety or depression. They were more likely than non-cases to report pre-infarct distress and poor adjustment (as indicated on the 36-item Medical Outcome Study short form),(Mayou et al 2000).

Elevated anxiety scores have been reported for 20% to 55% (Lavie and Milani 2004).

There is a prospective demonstration of a relationship between presurgical depressive symptoms and post-CABG mortality. And treating depression or depressive symptoms in CABG patients may have impact on quality of life, medical outcomes, and longer-term survival (Matthew et al 2003).

Depression is an important independent risk factor for cardiac events after CABG surgery (Connerney et al 2001).

Postoperative cognitive decline may diminish improvements in QOL. Strategies to reduce cognitive decline may allow patients to achieve the maximum improvement in QOL afforded by CABG, as even short-term cognitive dysfunction has implications for QOL 1 year later (Phillips et al 2006)

Cognitive impairment seems to be strongly associated with Cardio Pulmonary bypass and the occurrence of micro emboli. The off-pump technique appears to be promising in order to eliminate the source of these neuropsychological impairments following CABG operation (Diegeler et al 2000).

A population-based case-control study suggests that coronary artery bypass grafting is not a major risk factor for dementia overall, or for Alzheimer disease (Knopman et al 2005)

In a longitudinal assessment of neurocognitive function after coronary-artery bypass surgery, there were results that confirm the relatively high prevalence and persistence of cognitive decline after CABG and suggest a pattern of early improvement followed by a later decline that is predicted by the presence of early postoperative cognitive decline (Newman et al 2001).

Assessment of anxiety and depression together with evaluation of QOL, in addition to psychiatric evaluation will be used to explore the quality of life for patients experienced after CABG cardiac surgery.

Aim of work:

The aim of this thesis is to study the effect of CABG procedure on mental health and quality of life in CABG patients, two months after the operation.

THE RELATION OF MENTAL HEALTH

WITH CAD AND CABG

What is mental health?

Mental health is not just the absence of mental disorder. It is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (Richard, J 1995).

About 14% of the global burden of disease has been attributed to neuropsychiatric disorders, mostly due to the chronically disabling nature of depression and other common mental disorders. Such estimates have drawn attention to the importance of mental disorders for public health. However, because these estimates stress the separate contributions of mental and physical disorders to disability and mortality, they might have entrenched the alienation of mental health from mainstream efforts to improve health and reduce poverty. The burden of mental disorders is likely to have been underestimated because of inadequate appreciation of the connectedness between mental illness and other health conditions.

Because these interactions are protean, there can be no health without mental health. Mental disorders increase risk for communicable and non-communicable diseases, and contribute to unintentional and intentional injury. Conversely, many health conditions increase the risk for mental disorder, and comorbidity complicates help-seeking, diagnosis, and treatment, and influences prognosis (Prince, M et al 2007)

It is possible to imagine that worse physical health status could affect mental health. Similarly, worse mental health status can be associated with worse physical health status, as is found in conditions such as depression, where patients may have heightened perceptions of physical limitation. On the other hand, the baseline HRQL is a major determinant of postoperative HRQL as well as mortality (Herlitz J et al 1999), (Curtis LH et al 2002).

Dispositional optimism as a personality resource can have an important role in the response to recovery from CABG (Blumenthal and Mark 1994). Furthermore, preoperative denial was an adaptive