

CASE REPORT

PSYCHOLOGICAL INTERVENTION TO MANAGE SEVERE DEPRESSION/ANXIETY IN SUSPECTED CARDIOVASCULAR DISEASE PATIENT AS A PRIMARY PREVENTION - A CASE REPORT

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ABSTRACT

Depression and anxiety are contributors to poor prognosis in cardiovascular diseases (CVDs). Depression and anxiety related disorders amount to 25% of total patient load. Out of 85% of patients diagnosed with depression were also reported to have anxiety whereas 90% of patients having anxiety also have depression in one form or the other. In this case report, the patient was a 30-years-old married male belonging to a middle-class Punjabi family living in Kashmir and working as a security guard. The patient reported that he experienced recurrent chest pain, palpitation and sinking of heart. Patient was diagnosed hypertensive (4 years back) and was on regular anti-hypertensive medications. Patient was managed through multi-disciplinary/collaborative efforts by involving cardiac consultants, Prevention and Rehabilitation team (preventive Cardiologist/Clinical Psychologist) and consultant psychiatrist. However, level of effectiveness of these interventions NEED to be determined by conducting multi-centered sample sized studies.

Keywords: Depression, Anxiety, Psychological intervention, Cardiovascular-disease patient.

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INTRODUCTION

Depression and anxiety are considerable contributors to poor prognosis in cardiovascular diseases (CVDs).¹ Depression and anxiety related disorders amount to 25% of total patient load. Out of 85% of patients diagnosed with depression were also reported to have anxiety whereas 90% of patients having anxiety also have depression in one form or the other. Initial symptoms may not be very specific to determine a valid diagnosis. Detailed history, general examination, psychological assessment along with investigations can lead to definite diagnosis. Depression and anxiety both need proper medical treatment. Psychological interventions along with anti depressants and antipsychotics, have proven to be beneficial for both the disorders.¹

Depression has been recognized as one of the prevalent risk factors for the development of coronary heart disease (CHD) which may lead to morbidity and mortality in diagnosed cardiovascular disease patients.²

Depression is one of the most common mental illnesses which, if not addressed timely, can lead to suicidal inclinations. Hence, timely diagnoses of depres-

sion along with appropriate interventions are crucial for an overall improvement of a patient's quality of life and mental status.³

It is also a proven fact that stressful lifestyles and behavioral choices such as smoking can lead to development of CVDs. As these risk factors are categorized as modifiable behaviors, it is logical to focus on altering them which will ultimately decrease this peril. Psychological interventions can be useful to modify these risk factors. Multiple studies conducted on healthy subjects as well as those at risk have reported that modifiable risk behavior can be changed over time which in turn can decrease the incidence of CVDs.⁴

During period of adolescence, voluntary health behaviors are adopted by individuals, which play a critical role in development of illnesses in later part of life. Behavior-focused, tailor made methods to deal with specific mental health issues should be devised. Apropos, research with the special focus on adolescent health psychology is imperative to bring about improvement in mental health disorders and risk management to prevent progression of diseases in future.⁵

CASE REPORT

The patient was a 30-years-old married male belonging to a middle class Punjabi family living in Kashmir and working as a security guard. He was 2nd born among 6 siblings, 3 brothers and 2 sisters. His

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mother suffered from a Respiratory disease, while his father was a cardiac patient.

The patient reported that he experienced recurrent chest pain, palpitation and sinking of heart. Patient was diagnosed hypertensive (4 years back) and was on regular anti-hypertensive medications. He underwent basic and specific cardiac investigations. His electrocardiogram, exercise tolerance test, computed tomography all turned out to be normal. He was referred to preventive cardiology department and was seen by the clinical psychologist during his admission. On psychological assessment following Psychological Tests were conducted to assess his mental status:

1. Thematic Apperception Test (TAT)
2. Human Figure Drawing Test (HFD)

work to decrease his job stress. That included regular psychotherapy alongwith psychotropic medications, light duties with excuse of heavy weapons and a need for cooperative behavior and encouragement by his seniors.

Patient showed marked improvement following 3 months of collaborative efforts by multidisciplinary team of cardiac consultant, rehabilitation team and psychologist. Not only his labs showed improvement but hypertensive chart readings also improved leading to decrease in anti-hypertensive medications. Psychological parameters also improved from “severe aggressive/depressive tendencies along with anxiety and psychosomatic complaints” to “low anxiety minor depressive tendencies with no psychosomatic complaints.” (Table).

Table: Pre/post psychological intervention assessment (3 months follow-up).

S. No.	Pre Psychological Intervention Assessment	Post Psychological Intervention Assessment
1	<ul style="list-style-type: none"> • Patient’s IQ fell in the Average Range as indicated by the IQ Screening Test was able to deal with his Individual, Familial and Social Problems 	<ul style="list-style-type: none"> • Patient’s IQ fell in the average range as indicated by the IQ screening test was able to deal with his individual, familial and social problems
2	<ul style="list-style-type: none"> • Result of the neurological screening test indicated that he had neurological problems of minor nature. • He could face minor issues while executing his fine motor skills but he had no issue with the execution of gross motor skills 	<ul style="list-style-type: none"> • Result of the neurological screening test indicated that he had no neurological problems. • He could face minor issues while executing his fine motor skills but he had no issue with the execution of gross motor skills
3	<ul style="list-style-type: none"> • Results of projective personality tests (thematic apperception test human figure drawing test and Rorschach Ink Blot test) revealed that the client had an aggressive, depressive sadistic & suicidal tendencies • He perceived his environment as hostile and less supportive. He also had Anxiety along with psychosomatic complaints 	<ul style="list-style-type: none"> • Results of projective personality tests (Thematic apperception test human figure drawing test and Rorschach Ink Blot test) revealed that the client had a low depressive & no suicidal tendencies. He also had low anxiety.
4	<ul style="list-style-type: none"> • He had low control over his aggressive impulses which could be manifested in the familial and social environment in the form of acts of aggression. • He also appeared to be suspicious and had poor interpersonal and social relationships 	<ul style="list-style-type: none"> • He had control over his aggressive impulses which could be manifested in the familial and social environment in the form of acts of aggression. • He also appeared to be normal and had good interpersonal and social relationships.
	<ul style="list-style-type: none"> • Final Report: Severe aggressive/depressive tendencies along with Anxiety and psychosomatic complaints 	<ul style="list-style-type: none"> • Final Report. Low anxiety minor depressive tendencies no psychosomatic complaints

3. Rorschach Ink Blot Test (ROR)
4. Slosson Drawing Coordination Test (SDCT)
5. Raven Standard Progressive Matrices (RSPM)

Patient was managed through multi-disciplinary /collaborative efforts by involving Cardiac Consultants, Prevention and Rehabilitation team (Preventive Cardiologist/ Clinical Psychologist) and Consultant Psychiatrist. Patient underwent multiple psychological sessionstwic a week for duration of three months along with antidepressants and medical treatment. Recommendations were also forwarded to his place of

DISCUSSION

In the sequenced treatment alternatives to relieve depression (STAR*D) trial, it was reported that almost 50% of the patients had both depression and anxiety. Remission was however quiet less and 53% of anxious depressive patients took longer to have remission as compared to non-anxious depressive patients.¹

A study conducted by Williams *et al* reported that there was low or very low quality evidence that psychological interventions improved participant-reported levels of depressive symptoms (standardized

mean difference (Grade=low), anxiety (Grade=low), and stress (Grade=very low) which contradicted with the present case report probably because a multidisciplinary approach along with individually focused face to face multiple psychological sessions were carried out.⁶

A systematic review conducted by Richards *et al* reported results supporting the present case report stated that eleven trials reported reduction in the cardiac mortality. There was evidence of risk reduction in favor of the intervention (RR 0.79, 95% CI 0.63-0.98; participants=4792; Grade=low).⁷

A systematic review and meta-analysis constituting of 35 studies and 10,703 participants (median follow-up of 10 months) by Richards *et al* reported that Psychological interventions led to a reduction in cardiovascular mortality (relative risk 0.79, 95% confidence interval [CI] 0.63 to 0.98), although no effects were observed for total mortality, myocardial infarction or revascularization. Psychological interventions improved depressive symptoms (standardized mean difference [SMD] -0.27, 95% CI -0.39 to -0.15), anxiety (SMD -0.24, 95% CI -0.38 to -0.09) and stress (SMD -0.56, 95% CI -0.88 to -0.24) compared with controls.⁷

Despite the high prevalence, burden, and the presence of many effective treatment options, depression is still under recognized and undertreated.⁸ For example, in Germany - with a comparatively well-developed mental health care system - only 54% of people with a lifetime diagnosis of major depression and 62% with dysthymia report lifetime service use, indicating barriers and gaps in the health care system.⁹

CONCLUSION

Case report concluded that face to face Psychological intervention leads to decreasing depressive and anxiety disorders, ultimately reducing mortality due to CVD. However, level of effectiveness of these interventions need to be determined by conducting multi-centered/large sample sized studies.

Conflict of Interest: None.

Author's Contribution

SFM: Interpretation of data, SNA: Manuscript writing & discussion, JK: Manuscript writing, RS: Formatting.

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