CASE REPORT

A Case Study on the Effectiveness of Cognitive and Behavioural Approaches for Diabetic Patient with Cardiac Disease

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ABSTRACT

Diabetes Mellitus is a non-infectious disease that is caused by insulin resistance. Current case provides a detailed account of a 45-year female diagnosed with diabetes and coronary heart disease having complaints of pain in her joints, sadness and worry, unable to control anger, loss of interest in previous pleasurable activities, reduced interaction with others, and difficulty falling asleep. After assessment, patient was diagnosed with 293.83 (F06.31) depression due to diabetes and coronary heart disease, with depressive features and V61.03 (Z63.5) disruption of family by separation or divorce. Cognitive and behavioural approach was used for treatment, which significantly reduced complaints of patient.

Key Words: *Diabetes. Coronary heart disease. Cognitive and behavioural approaches.*

INTRODUCTION

Diabetes mellitus is universally prevalent and is a non-infectious disorder that is dangerous for each member of society. It involves an insufficient production of insulin or body's resistance to produce; as a result of which glucose gets bonded with lipid/proteins without enzymatic regulation that disturbs metabolism, which in turn may cause damage to vital organs of the body, adversely affecting overall health.[1] Diabetes has spread so much that more that 170 million people are diabetic; and it is also predicted that by 2030, twice as much individuals will have diabetes.[2] Additionally, among diabetics prevalence, rate of clinical depression is high.[3] For treatment, cognitive behavioural therapy has been found to be effective in reducing depression of those having diabetes.[4]

A case of diabetes and coronary heart disease along with major depressive disorder is presented here.

CASE REPORT

A 45-year female diagnosed with diabetes and coronary heart disease reported with complaints of pain in her joints, sadness and worry, unable to control anger, loss of interest in previous pleasurable activities, reduced interaction with others, and difficulty falling asleep. She was diagnosed with 293.83 (F06.31) depression due to diabetes and coronary heart disease, with depressive features and V61.03 (Z63.5) disruption of family by separation or divorce. She reported that her mother, father, and grandfather had diabetes. The patient was diagnosed with diabetes after she was divorced, and was non-compliant with regard to taking her medications. She was worried and stayed sad most of the time along with having feelings of fatigue due to diabetes. She also consumed unhealthy food and had reduced activity level that further contributed to worseing of her diabetes. One day she had a severe chest pain and was unable to breath, so her maid called patient's family; and she was rushed to the hospital. The doctors told her that she had a very high blood pressure and was diagnosed with coronary heart disease. She was prescribed some medicines for keeping her blood pressure in normal range.

ABA design was used. In phase-A, psychological assessment, which included semi-structured interview and Siddique Shah Depression scale,[5] was carried out for assessing her issues. In phase-B, therapy was given to her that included implementation of treatment plan which involved cognitive and behavioural approach. It included medical advice for increasing patient's compliance for taking medications. Then, deep breathing exercise was used for the purpose of making her feel relaxed and calm whenever she was in emotional destress. Some distraction techniques[6] were taught to the patient for interrupting the process of attentional narrowing so that she would stop thinking about what was bothering her for a while and health enhancing behaviours were highlighted to her. Written ventilation was also taught for helping patient release her built-up anger and write about the reasons for her anger as a way for venting her emotions.[7] Cognitive restructuring[4] was used to reframe the unnecessary negative thinking that she experienced from time to time. It included identifying upsetting situation, recording negative feelings, recording automatic thoughts, identifying cognitive distortion, identifying rational thought, and evaluating this restructuring process.

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Then positive self-talk[7] was carried out with the patient for keeping to go ahead in face of hardships and for achieving things in life. Patient was educated regarding the type of inner voices that she listened to. She was told to listen to the positive voices instead of the negative ones. Then, she was to write down these positive statements regarding her on a card and was told to read those statements 2 - 3 times a day, so as to remind herself of her positive traits and for protecting herself against negative thinking. Self-reinforcement[8] was also carried out in which first a goal for example increasing her interaction with her family and children, were set. Then a reinforcer was decided to be given to the patient if she completed her goal. Finally, when the patient had achieved the predetermined goal, she was to be given the decided reinforcer.

From pre- and post-assessment, it was evident that significant reduction in symptoms occurred in patient as her joint pain reduced along with her feelings of being sad and worried. Also, the patient was better able to manage her anger and started to take interest in previous pleasurable activities. Further, her interaction with others increased and her sleep improved significantly as compared to earliar condition. From results of Siddiqui Shah Depression Scale, her score reduced from 51 (severe depression) to 38 (moderate depression), indicating effectiveness of cognitive and behavioural approach to treatment.

DISCUSSION

Results of this case are consistent with a previous study in which effectiveness of cognitive and behavioural treatment approach in a sample of individuals who had diabetes was evident.[4] Predisposing factor for the patient's diabetes was genetic as her mother, father, and grandfather were diabetic. Previous studies have shown that individuals with a family history of diabetes are at risk for developing diabetes.[9] The precipitating factors that contributed to patient's psychiatric problems were stressful life events, non-compliance with medications, and health compromising behaviours. The patient was diagnosed with diabetes shortly after she was divorced, which was a very stressful time for her. Previous studies have shown a strong linkage between negative affect (including depression) and diabetes.[3] After she was diagnosed, she was prescribed medications for it but as she had to visit courts for taking custody of her children, she mostly skipped taking her medications, which made her diabetes worse. To make the situation worst, she engaged in health compromising behaviours like taking food high in cholesterol and reduced activity level which increased her blood sugar level and pressure of blood against blood vessel; which contributed to another complication – coronary heart disease.

The maintaining factors for patient's problems were anger, lack of socialisation, and depression. The patient developed depression after being diagnosed with another illness that was coronary heart disease as reported in history of presenting problems. Studies have shown that patients of coronary heart disease ultimately develop depression.[10]

It is concluded that due to genetic vulnerability, patient was at risk for developing diabetes and coronary heart disease. Further, certain precipitating and maintaining factors contributed to her problems. A proper therapeutic plan, based on cognitive and behavioural approach, showed improvement in patient's symptoms.

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