

Optimal Response to Insulin therapy for Control of Panic Symptoms in a Diabetic Patients: A case report

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Received: 2012/1/26

Accepted: 2012/3/10

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Abstract

Introduction: Diabetes is a chronic medical disease in which self-management through a social support network for good prognosis is necessary. Anxiety and depression in people with diabetes are much more common in the healthy population. Panic anxiety disorder is also more common in people with diabetes than in non-patient population. Panic attacks worsen diabetes for different reasons. Not paying attention to the presence of anxiety disorder can have a detrimental effect on the treatment trend. The following case report deals with optimal control on diabetes mellitus by a successful treatment for panic attacks.

Case report: A 45-year-old woman who had a history of diabetes from eight years ago, and was treated with insulin since two years ago, and was hospitalized because of lack of blood sugar control despite taking insulin. In the psychiatric interview with patient, depressive symptoms were found. The patient also complained of dyspnea attacks, which happened at different times of day and night and had the characteristics of panic attacks and consequently and consequently, patient imagining low blood sugar, took sugary drinks and sweets. Given the age of the patient, organic matters were considered, and recommendations were to be treated with clonazepam and citalopram. The patient was released in on the 7th day with suitable general conditions and without any asthma, of course, she was recommended to take psychiatric medications and insulin as well as to visit the clinic of psychiatry and endocrinology.

Conclusions: simultaneous signs of the weakness, appetite disturbance, and autonomic nervous system stimulation, even in the absence of the patient's complaints about psychiatric problems, the respectful internal and general practitioners must consider psychiatric counseling.

Keywords: Anxiety, diabetes mellitus, panic attack, case study

Introduction

General Practitioners and internists should be aware that patients with chronic diseases are in a high risk to be affected by psychiatric disease (1). Depression and anxiety in the patients with chronic diseases lead in occupational and social disabilities (2). Diabetes is a chronic medical condition, in which the patient self-management within a social network for good prognosis is necessary. Type 2 diabetes (non-insulin) is more common in adults, but over time, the majority will require insulin injections (2). Patients with type 2 diabetes more than healthy people showed depression and anxiety. Anxiety is often a periodical problem, but it is the same in the young men and women (3). Common mechanisms causing psychiatric disorders by physical illness include changes in brain neurotrophic factor of insulin - resistance and inflammatory cytokines. Thus psychiatric disorders can be a complication of diabetes (4). In one study, 40% of patients with type 2 diabetes suffered from anxiety, which widespread anxiety disorder, accounted for 40% of cases, respectively. One of the anxiety disorders is panic disorder with panic attacks, and concern for having a panic attack and behavioral consequents associated. Panic disorder is a period of serious fear and discomfort, which has an obvious start and end, and at least four signs appear suddenly, and reach its maximum severity. These signs are: beating, trembling or shaking, asthma or a feeling of suffocation, or discomfort or chest pain, nausea or abdominal distress, feeling dizzy and stumble or faint, distorted reality (feeling of unreality world) or depersonalization (feeling of dissociation), fear of going crazy or losing control of themselves, fear of dying, tingling (feeling of numbness or tingling), cold chills or hot flushes (5). In one study, 28% of patients with diabetes treated with insulin had diagnostic symptoms of panic or certain symptoms (6). In another study in women who had an endocrine

disorder, probability for a simultaneously psychiatric diagnosis was 30% (7). The following case study deals with the optimal control of diabetes by successful treatment of panic attacks.

Case report

The patient is a 45-year-old woman who has had a history of diabetes since eight years ago, and was under insulin therapy since two years ago, and was hospitalized due to lack of glycemic control despite taking insulin. Due to the non-diabetic control from the first day of treatment, the patient's insulin dose increased and during the second, third and fourth admissions continued to rise, and remain high blood sugar levels. This disappointed the patient, and she has frequently expressed her concern with this issue, and told that it did not seem to control blood glucose even with rising insulin; she repeatedly was ruminating about no cure and no treatment outcome. The nurse reported the patient also had been frequent crying. On the fourth day due to this concern, and a lot of crying of patients, psychiatric consultation was requested. Depressive symptoms were found in the psychiatric interview with patients. Furthermore, patient complains about attacks of asthma that occurred in different hours of the day and have the characteristics of panic attacks, and after that, imagining low blood sugar, patient used sugar water and sweets. Given the age of the patient, organic matters were considered, and recommendations were to be treated with clonazepam and citalopram. During the hospitalization days, the patient's heart problems were resolved. In addition, during the attacks of asthma, blood glucose was measured which in the range of glucose, it was not lower than normal. Other studies showed no abnormal findings. Thyroid function tests and serum calcium were normal. The recommended treatment for the patient immediately began. After the treatment, asthma attacks were quickly resolved.

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Table 1: A report of the patient's blood sugar and insulin administered at admission

Days of hospitalization	Time Blood Sugar				NPH+REG(IU)
	6 am	10 am	6 pm	10 pm	
Day of hospitalization	-	607	446	554	58 +18
First Day	338	374	448	484	72+28
Second Day	252	267	415	415	72+36
Third Day	328	338	234	408	76+48
Four days (starting psychiatric medications)	258	309	365	304	80+48
Fifth Day	163	204	185	176	76+46
Sixth Day	155	193	178	168	74+42

Also, until discharge, any asthma attacks were reported. On the fifth day, the patient's blood glucose reached the normal range, and in the next few days, even it was occurred a slight decrease in insulin, and glucose still remained in the proper range (Table 1). On the seventh day, the patient was discharged with a good public and without any asthma attacks, with a recommendation to psychiatric medications and insulin, as well as advice or recommendation to visit a psychiatric clinic and glands.

Discussion

In the causes of asthma, it must be noted physical examination, vital signs, preclinical studies such as chest x-ray and ECG and other investigations, including thyroid problems and anemia (8). In this patient, these studies were all normal. Other important factors that can show your panic attack include electrolyte disorders, hyperthyroidism, hyperparathyroidism, pheochromocytoma, and periodical hypoglycemia

during insulin-induced, seizure disorders, vestibular dysfunction, lung diseases like asthma, pulmonary embolism, and renal disorders, malignancies. In addition to taking drugs including anticholinergic, antihypertensive drugs, theophylline, Emily's nitrite, amphetamines, cocaine, hallucinogens, cannabis, opium and other similar materials to the sleeping drug - they can imitate the symptoms of panic. Profile and physical examination and laboratory tests on the patient's condition had not the ideal use of these materials. Following items are in favor of quasi-panic symptoms, abnormal gait, and altered level of consciousness or lack of bladder control.

There was none of the above. A number of psychiatric disorders, such as general anxiety, obsessive-compulsive disorder, post-traumatic stress disorder, specific phobia and enochlophobia can also imitate panic attack symptoms (9). Psychiatric interview with the patient refused above issues. Since symptoms

of panic are similar to the various medical conditions, patients often select one of the most eerie symptoms, and refer to a physician (10). Due to the similarity of the symptoms of hypoglycemia, patients with diabetes may try to raise their blood sugar while it is not necessary to control diabetes, and it makes worse the state (11). Anxiety can increase cortisol production and sustained increase in cortisol production leads to high blood pressure, osteoporosis, immunosuppression, insulin resistance, lipid disorders and cardiovascular disease causes (9). Anxiety panic attacks themselves can be brought in worsening diabetes (8). Substances such as caffeine, nicotine and alcohol (9) and certain medications, such as metformin (12) can cause or intensify panic. None of the materials were responsible for problems of patients. It is recommended if there are the simultaneous symptoms for weakness, appetite disturbance, and autonomic nervous system stimulation in patients with diabetes, then it will be necessary to consider the possibility of depression and anxiety (13). Diabetes is with multiple complications of eye, kidney and heart (2). Patients may worry about the risk of these complications, and perhaps, concerns about the financial and emotional challenges of this complication cause more anxiety. In addition to patients, friends and family of the patient are prone to depression more than the normal population, and they have a poorer social functioning compared to healthy subjects (14). This depression in turn affects the quality of life in patients with diabetes and their treatment trend. Panic therapy can be with use

of medication or cognitive - behavioral therapy (15). In patients with more medical problems, psychiatric treatment for panic disorder can take time in order to obtain more favorable treatment outcome (16), and treatment of psychiatric diseases in a diabetic patient, as the abovementioned patient's physical condition leads to the optimal control. Exercise and physical activities are another strategy to reduce anxiety in patients with diabetes (17), and recommendation for appropriate physical activity for patients with anxiety and diabetes will lead to better control.

Conclusions

Therefore, it is reasonable that in case of poor response to therapy in a diabetic patient, or any simultaneous sign of the weakness, appetite disturbance, and autonomic nervous system stimulation, even in the absence of symptoms of psychiatric problems, respectful general or internal doctors should consider both internal and public psychiatric consultation. No follow-up care after discharge should be considered as the limitations of this study.

Acknowledgments

Hereby we appreciate all staff of Golestan Hospital in Ahvaz. Furthermore, we acknowledge deputy vice-chancellor for research affairs of Ahvaz Jundishapur University Medical Sciences, particularly Research Consultation Center (RCC) for technical support.

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