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Hyperglycemia in poor controlled diabetes from crude tamarind herbal pill: a case study

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ABSTRACT

Hyperglycemia is an important finding in the diabetic patient with poor glyceemic control. There are several possible causes of hyperglycemic. Here, the author presents an interesting case study on a female diabetic patient presenting with hyperglycemic due to intake of crude tamarind herbal pill. General practitioner should realize that the use of alternative medicine can be a cause of unexplained hyperglycemic episode in diabetic patient.

1. Introduction

Diabetes mellitus is an important metabolic disorder that can be seen in every country around the world. This disease is considered the most important chronic endocrine disorder of human beings. The basic clinical manifestations of diabetes mellitus include polyuria, polyphagia and polydypsia and these manifestations are believed to be due to the high blood glucose level^[1].

The high blood glucose level is an important laboratory finding in diabetes mellitus and is used as an important diagnostic clue^[2]. To manage a case with diabetes mellitus, an important aim is to control and stabilize the blood glucose level^[3]. An important problem in diabetic control is the poor control blood glucose level and this is generally known as hyperglycemic episode^[4].

There are many possible causes of hyperglycemic episode. The intake of sweet, pop and juice are common. However, there are also other possible causes of hyperglycemic episode in diabetic patients. In the tropical world, there are some specific important causes of hyperglycemic episode that should be mentioned. The herbal regimen—induce

hyperglycemia is interesting and this can be an important problem in tropical cases since the use of herbal regimen is deeply rooted behavior of the patients in the tropics^[5]. In this specific brief case report, the author presents an interesting case study on a female diabetic patient presenting with hyperglycemic due to intake of crude tamarind herbal pill.

2. Case report

A 47 years old male patient with poor controlled diabetes mellitus was consulted to the consultant physician in charge for assessment of the causes of hyperglycemic episodes. This case had been diagnosed for diabetes mellitus for 8 years and had regular visit to the physician for diabetic management. The patient was regularly managed by the oral hypoglycemic drug. The swinging of blood glucose record in the following up was observed for 2 year and the primary physician could not successfully control and determined the exact cause of the hyperglycemic episodes in this case hence he decided to consult the case to the expert.

The complete assessment of nutrition practice in this case was done and the clinical dietician reported that the patient had a good self practice according to the nutritional management program. This is also confirmed by normal hemoglobin A1C level in the patient. Therefore, the problem in this case is on the sporadic unexplained

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hyperglycemic episode. Hence, the question is “What is the exact cause of the strange phenomenon in this patient?” After further in depth interview of the case, a possible cause, “the use of tamarind herbal pill”, could be revealed. The patient noted a common behavior in every visit with unexplained hyperglycemic episode. He noted that he had used this pill for relieving of the cough symptom. Hence, the use of tamarind herbal pill was accused of the possible cause of the problem. The patient was recommended to stop the mentioned herbal pill. On the following up for the next 6 month period, the patient never developed the hyperglycemic episode again.

3. Discussion

The poor control of blood glucose level becomes an important problem in diabetic management. It is proved that the poor blood glucose control is relating to several complications of diabetes mellitus including retinopathy, nephropathy, neuropathy and vasculopathy[6]. The aim of present diabetic management practice is the regular stabilization of blood glucose in normal acceptable level. However, the problem of control of blood glucose is still the common problem in any diabetic clinics. Poor blood glucose control can result in excessive high blood glucose level called hyperglycemia.

There are many factors that is relating to the hyperglycemic episode[7]. The intrinsic factors include the disorders of the endocrine and regulatory functions within the body of diabetic patients. The extrinsic factors include excessive food intake and other external source of glucose. The extrinsic factors are the present main focus for diabetic management is these factors are considered controllable. The basic concept to manage the external source of glucose is the nutritional planning and management[8]. This practice is aiming at success in control of blood glucose. However, in some cases, despite intensive planning, the hyperglycemic episodes still occur and the searching for the rooted causes of those cases is warranted.

Focusing on tropical biomedicine, there are many things to be discussed when one talks about the hyperglycemic in diabetic patients. There are many possible external sources of glucose that are not well recognized by the Western. Of several external sources, the herbal regiment should be mentioned. In the tropical world, the use of herbal regimen is an important practice according to alternative medicine principle[5]. Thousands of herbal regiment can be seen in clinical practice in the tropics. It is no doubt that the herb can result in aberrant laboratory investigation in the patients[9]. When a practitioner manages a case, it is required to find out the history of concomitant alternative medicine and herbal regimen usage in the patient.

Since diabetes mellitus is a chronic disease and the complete cure is not possible, many diabetic patients turn to use the alternative medicine as an additional treatment option[10]. If this is not well concerned, the effect of alternative medicine practice on the diabetic management can be missed[11]. The present case report is a case of poor

controlled diabetic patient that was finally discovered for the disguised history of using tamarind herbal pill that is proved to be the possible cause of hyperglycemic episodes in the patient. The exact mechanism is believed to be due to the adding of sugar content from tamarind into the blood stream. Of interest, the drug interaction due to the use of tamarind herb is well described in the literature[12,13]. Indeed, there are many tropical herbal regimens that are reported for the possibility to induce hyperglycemia (Table 1).

Table 1

Some important tropical herbal regimens that can induce hyperglycemia episode.

Herbal regimen	Ethnopharmacological property	Possible mechanism
<i>Chrysanthemum</i> extract water ^[14]	Relief of fever, cough	The adding of sugar into the <i>Chrysanthemum</i> extract water during processing of herb regimen
Honey bee-pollen mix ^[15]	Relief of respiratory difficulty, peptic ulcer	Glucose content within the honey

In conclusion, a case of herbal regimen induced hyperglycemia in a poor controlled diabetic patient is reported. This case can imply the requirement of awareness of tropical doctors on the use of herbal regimen and its interference effect on the disease management.

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