



CASE STUDY

DIABETES MELLITUS A GLOBAL HEALTH PROBLEM

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ABSTRACT

Diabetes mellitus a concern for public health. Diabetes mellitus is increasingly becoming a prime chronic threat and burden around the globe. Unhealthy diet due to lack of awareness in health care leads to increase in the prevalence of diabetes. Along with medical nutrition therapy, nutrition education play a vital role in the management of diabetes mellitus. Periodically follow-up is also essential to maintain sugar level and hence will reduce the incidences of diabetes mellitus.

INTRODUCTION

Diabetes mellitus is a global health problem and one of the major causes of morbidity and mortality in developing countries giving the disease the dimension of an epidemic. Diabetes complications often result in significant financial burden as well as decreased quality of life. The changes in lifestyle, life expectancy and lack of information in healthcare are in part accountable for the astounding increase in the diabetes mellitus incidences. As a result, there is an upward trend of incidence, especially in industrialized urban areas. The global prevalence of diabetes mellitus in the adult population in 2013 estimates that almost 382 million people suffer from diabetes mellitus with owning a prevalence rate of 8.3 %.

Objectives

The aim of the present study was to review the role of diet, insulin, behavior and exercise in type I diabetic subject.

Case Presentation

In 2013, a 7 year old boy was admitted in hospital with measles, weakness as well as frequent urination since three weeks. It started after the patient was diagnosed with measles. No history of fever, abdomen pain, cough, loose stools. Increased frequency of urination since three weeks. He had one episode of vomiting last night and three episodes of vomiting

since morning. Patient diagnosed with type I diabetes ketoacidosis. At the time of admission patient blood pressure was 100/60, pulse was 120 beats per minute and his GRBS was 556 mg/dl. He was dehydrated and had acidotic breathing. Venous blood gas was suggestive of metabolic acidosis.

Birth and development history: LSCS @ 9 months due to angohydramilies.

Management: He was given a bolus of 0.9%, saline 20ml/kg and then started on maintenance fluid and IV insulin. He was admitted and observed in ICU for a day. The following day he was stable and acidosis improved. He was started on subcutaneous insulin. GRBS was monitored and insulin doses adjusted. Patient is seven year old boy, diagnosed with type I diabetes ketoacidosis. He was dehydrated and had acidotic breathing. He was given a bolus of 0.9 %, saline 20 ml/kg and then started on maintenance fluid and IV insulin. He was admitted and observed in ICU for a day. The following day he was stable and acidosis improved. He was started on subcutaneous insulin. GRBS was monitored and insulin doses adjusted. At the time of discharged he was clinically well, urine was negative for ketones and eating well.

Medication prescribed

| MEDICINE | DOSE | FREQUENCY | PURPOSE |
|-------------------|--------------|---------------------|-----------------------------|
| Inj H. Actrapid | 5-0-4 units | 15 mins before food | Substitute for body insulin |
| Inj H. Insulatard | 10-0-5 units | 15 mins before food | Substitute for body insulin |

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Conclusion

At the time of discharge he was clinically well, urine was negative for ketones and patient eating well. His HbA1c was 12.6%. Parents have been given counseling about diabetes and diabetic diet as well as taught to give insulin and how to check GRBS. Boy was discharged in stable condition. Diet adherence along with exercise is one of the cornerstones of diabetes which enabled diabetic people to control their diabetes. Life style modification including nutritional status is an important factor for diabetes management. Unhealthy life styles have resulted in people suffering from diabetes. Consequences of diabetes can be prevented by investment in health and fitness throughout life. Diet counseling help the people suffering from diabetes to understand the importance of nutritional concept and to maintain a good health.

Goal of medical nutrition therapy

- To prevent malnutrition
- To obtain adequate nutrition

- To improve nutritional status and maintain desirable body weight
- To maintain normal blood sugar level and avoid episodes of hypoglycemia
- To reduce signs and symptoms
- To prevent from further complication

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