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A contextual investigation on diabetes mellitus

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Abstract

Diabetes affects 463 million people worldwide, including more than 19 million in Africa. Diabetes is expected to affect 47 million Africans by 2045 (International Diabetes Federation, 2019). Zambia, one of the 48 African countries represented by the International Diabetes Federation (IDF), is no exception, and Diabetes Mellitus (DM) is on the rise. 2019 (International Diabetes Federation). Diabetes mellitus is a metabolic condition characterized by persistently elevated glucose levels in the blood. Increased thirst, frequent micturition, unexplained weight loss, increased hunger, weariness, and impaired eyesight are typical symptoms.

This family case study of a female adult aged 47 years with type 2 diabetes, intends to demonstrate that the correct medicine, food, exercise, and a change in lifestyle can enhance the quality of life of persons living with diabetes. In 2017, she discovered her disease after feeling intense hunger, increased thirst, and frequent micturition. The client's home setting and how the family is dealing with the condition were evaluated. Several home visits allowed us to detect real and future difficulties for our patients in order to provide appropriate nursing interventions to sensitize, train, and educate patients and their families about the signs and symptoms of diabetes and how to treat it at home. Four home visits were made.

Keywords: Diabetes mellitus, family case study, home visits

Introduction

India is one of the Asian countries represented by the International Diabetes Federation (IDF). Diabetes affects 463 million people worldwide, including more than 35 million in India. It will be around 47 million by 2045. Diabetes mellitus is on the rise in India, which is why it should be discussed so that people are aware of the signs and symptoms and know what to do if they occur. This will help draw attention to the illness, preventing inaccurate diagnosis.

How my client and I met

A diabetic patient in this case study. She is 47 years old, married, and has four boys and two girls. She discovered her problem when she began having symptoms. On and off headaches, frequent micturition, and extreme thirst. On the 24th of July, 2021, we encountered client while working on the ward at the hospital and learned that she was a diabetic patient who was coming to collect drugs and noticed her as a client for the case study.

We informed her that we wanted to perform a case study on a chronic disease similar to hers and received her approval. We swapped phone numbers and directions to her house, indicating that we would be seeing her shortly.

Considerations for ethical behaviour

The purpose of this study was to assess how the client and

his family were dealing with the disease. It was also intended to assist with any difficulties encountered during the research process. We informed the customer that her entire name would be withheld in this study. Furthermore, all information acquired was kept totally confidential, even if the study's findings would be disclosed later. She gave us her consent.

Personal background

At the time of the study, the client was 47 years old. She lives in Vijayawada, Andhra Pradesh, is married with 4 children, and is a Christian. She was treated at the Primary Health Centre.

Current medical history of the client

She is both a marketer and a tailor. When she began experiencing headaches on and off, passing urine frequently, and feeling excessive thirst, she filled a 2.5-litre bucket with urine one night and a 5-litre bucket the next, which is when she decided to conduct her own experiment as taught by her biology teacher. She urinated in a container and poured part of the urine on the floor. When she touched the urine after a few minutes, it was sticky and covered in ants. So she realized it may be diabetes since she had heard about it somewhere, and it is detailed in Ross and Wilson. Then, on December 17, 2021, she decided to go to the hospital, and after lab results, her random blood sugar was 24mmol/l, so

she was told to return in one week, and the results were 15mmol/l, which is when they decided to start her on tablet Daonil one per day at the health centre. After one month, her blood sugar level had reduced to 11mmol/l. During successive visits, her sugar level declined to 9mmol/l, 7mmol/l, 6mmol/l, and finally 5.3mmol/l.

Unfortunately, she opted to discontinue her treatment for a year in 2022, she began feeling stomach pains, so she went to the hospital, where they checked her random blood sugar and it was elevated to 25mmol/l, so she was re-started on Daonil and Metformin.

Investigations

A fasting blood sugar test is performed after an overnight fast. The patient is not given anything to eat, and a sample is obtained. The normal range is 5.6-6.9mmol/l. Her fasting blood sugar was elevated after her initial visit to the hospital.

Random blood sugar

This is a test that is performed at random, regardless of what you ate or when you ate it. This measures the quantity of serum glucose in your blood, which is normally done on initial contact.

Diabetes

is indicated by readings above 11.1mmol/l along with any signs and symptoms such as excessive thirst and urination. My client's random blood sugar level was 24mmol/l when we first met.

Treatment

She has been treated solely with Metformin and Daonil since being diagnosed with diabetes.

Diet

Diet is an important aspect in diabetes management. The treatment goal for DM patients is to restore and maintain normal blood glucose and lipid levels, as well as to avoid large swings in blood glucose levels throughout the day. A nutritionist educated her on the importance of eating and the value of maintaining a healthy body weight.

Activity

The goals of activity and exercise for a diabetic are to maintain metabolic control with a regular programme of activities and exercise. Activities and exercise help to control weight and lower the risk of cardiovascular and peripheral vascular problems. It promotes and enhances circulation. So my client was recommended to exercise modestly because physical activity helps to reduce blood glucose levels.

1st home visit: July 27th, 2021 objectives

1. To evaluate the home surroundings.
2. To see how the client was dealing with her situation.
3. To become acquainted with other family members.

Interventions and Findings

When we arrived at the house, we made ourselves at home by welcoming the family, introducing ourselves, and explaining the reason for our visit. We established that she

lived with her husband, who works every day, and their last-born child, who attends school. The other elder children had grown up and moved out to start their own families. As a result, she was frequently left at home alone to deal with household disarray.

The house had been well swept, and the environs were spotless. She had a backyard garden where she plants vegetables for sale as well as consumption, so we warned her to be careful when working in her garden since if she harmed herself, the cut would take a long time to heal or it may become infected and not heal at all if it was badly maintained.

We noticed during this visit that she was not even testing her blood sugar levels, let alone coming to the health facility for monitoring. She stated that she was taking certain spices that were assisting her in controlling her blood sugar levels. We explained with her the necessity of having her blood sugar checked every day, or at least every other day, because this would help us decide the levels and amount of medicine she should take to control her blood sugar levels.

I also warned her about the risks of combining conventional and natural therapy. That this could lead to negative drug interactions or possibly prevent the drugs from working properly in her body. She understood and agreed to cut back on her herbal remedies. Following our conversation, we finished the session by agreeing on my future visit.

2nd visit 5th august 2021 goals

1. To monitor the client's progress.
2. To find out if she began having her blood sugar levels checked.
3. To assess her vital signs and blood sugar levels in order to track the progression of her condition.

Interventions and Findings

Her backyard garden was full with vegetables for sale at the market. When asked how she was doing, she stated that she was fine. After that, I examined her vital signs and RBS. Her blood pressure was 165/90 mmHg, her temperature was 36.5oC, and her random blood sugar level was 11.5mmol/l. We warned her not to go to the market because she is a known hypertension patient, resulting in her elevated systolic pressure. We also recommended her to get her blood pressure monitored on a regular basis and to follow a low salt, low fat, and no sugar diet.

She didn't have her own glucometer and had to rely on the glucometer at the clinic or hospital to test her blood sugar., which she did on a monthly basis when she went for her reviews. She consented to buy her own glucometer after I suggested it. We ended our day's visit by making sure she took her hypertension medication and then leaving her at home to rest.

The third visit will be on august 12, 2020.

1. To inquire about how she was taking her medication.
2. To see how the family was dealing with the illness.

Interventions and Findings

Her sewing machine was discovered, and her husband was home that day. She was doing fine and had her blood sugar checked a few days ago. Her blood pressure, temperature, and random blood sugar were all 158/95mmHg, 36.8oC, and

9.5mmol/l, respectively. The husband and children were supportive in terms of checking her diet, what she should and should not eat, and reminding her not to eat if she was tempted.

During this appointment, I discovered that she was not taking her medication as prescribed after speaking with her husband. I then educated her client on the significance of taking her medication exactly as prescribed because it is the only way to avoid complications.

Approach to avoid worsening her condition and averting disease. We went over the signs and symptoms of hyperglycemia and hypoglycemia again, as well as what to do if either occurs. I ended the day by reminding her of the necessity of sticking to her treatment plan.

4th August 2021 Visit

1. To give more information, education, and communication (IEC) about the importance of medicine, food, and reviews.
2. To wrap up the family case study.

Interventions and Findings

We arrived for the fourth home visit at 12.04 p.m. and found her in her backyard garden. She welcomed us and we went to sit beneath a tree near her garden. She informed us that she was not feeling well. We took her blood pressure and blood sugar levels. Her blood pressure was exceedingly high, at 231/121mmHg, and her blood sugar was also very high, at 15.9mmol/l. When asked if she took both her hypertension and diabetic medications, she said yes.

IEC was educated on the necessity of a healthy diet, rest, medicine, and regular check-ups. She was discouraged from taking a combination of herbal and conventional treatment because herbal medicines do not have quantities and may be harmful to her health, as indicated in Harrison's book, which she respected. We took her to a local hospital, where she was admitted to receive more treatment for her high blood pressure and sugar levels, as well as to relax. She was tested for malaria and the Rapid Diagnostic Test (RDT) was positive, which most likely caused the elevated B/P and blood sugar levels. She was also given Malaria medication. We then left her at the health centre to recover. We told her that we had to leave for other responsibilities, but that we would check in on her as often as we could and that if she was not feeling well, she should not hesitate to phone us for assistance.

How this study has helped the client

As we explained her how DM develops and why she was exhibiting the symptoms, she learned many things about her condition that she had never known before. She was aware that following the recommended course of action, eating a nutritious diet, exercising, and leading a healthy lifestyle would improve her health. She also discovered that going to the health centre every time she felt unwell was preferable to self-treating with herbal remedies because she would have never realized that the reason she felt ill on the fourth visit was due to Malaria, which required different medical attention. As a result of the home visits, she changed her perspective on her health and made improvements.

She adopted a positive attitude towards her health during the home visitation process and changed some aspects of her

lifestyle, including routinely checking her blood pressure and sugar levels, taking her medications as directed, and abstaining from herbal remedies and "unhealthy food" in accordance with Watson's advice. She made an informed decision about her situation with the aid of her spouse after receiving all the essential facts.

Challenges and knowledge gained

The client faced difficulties since she lacked a personal glucometer and was unable to monitor her blood sugar more frequently. Because getting to the hospital was difficult, she occasionally skipped her scheduled review, which occasionally caused her condition to go worse. We urge all government-run healthcare facilities, including rural health clinics and health posts, to keep glucometer and blood pressure monitors on hand for clients in rural areas to easily access, especially those who cannot afford to visit hospitals just to have their blood sugar checked. Additionally, these glucometer ought to be reasonably priced so that even the poorest people can purchase them because anyone can develop this ailment, regardless of socioeconomic level.

DM is spreading throughout the world, not only in India, and it affects both the wealthy and the less fortunate. Community health professionals could receive training in doing follow-ups for the chronically ill in their homes in order to track their development through frequent and routine blood pressure and sugar checks. This may make it possible to identify issues early and stop more harm and unexpected deaths in our communities.

This family case study was helpful since it offered nursing care by keeping track of the client's health at home, which can lessen health issues that affect families by taking a holistic approach.

Conflict of Interest

Not available

Financial Support

Not available

References

1. <https://www.ide.org>
2. Waugh A, Grant A, Premdas N, *et al.* Ross, Wilson Anatomy, and Physiology in Health and Illness. United Kingdom Churchill Livingstone Elsevier; c2010.
3. Fauci AS, Fauci A, Kasper D, *et al.* Harrison's Principles of Internal Medicine. United States of America; c1994.
4. Royle AJ, Royle AJ. Watson is Medical- Surgical Nursing and Related Physiology. London Bailliere Tindall; c1994.

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