

Therapeutic Education for Diabetic Travellers

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ABSTRACT

Introduction: Diabetes is a chronic disease on the rise. Therapeutic education is an essential pillar of patient care, and should be an integral part of the patient's care. It has proven benefits in terms of improving patients' quality of life and reducing healthcare costs by slowing down the onset of certain complications and reducing the need to seek care.

Materials and methods: This is a descriptive, cross-sectional study on the knowledge of diabetic patients followed up in the endocrinology and internal medicine outpatient departments of the Farhat Hached University Hospital and the Sahloul University Hospital in Sousse during February and March 2024.

Results: There were 100 participants, with an average age of 44.9 ± 10.6 years and extremes ranging from 22 to 80 years. There was a slight male predominance (54%), with a sex ratio (M/F) of 1.2. The average length of diabetes was 8.8 ± 7.3 years, with extremes ranging from 1 to 33 years. They were type 2 diabetics in 64% of cases. Concerning self-monitoring during the trip, the participants noted that they increased monitoring in 14% of cases, 57% continued correctly, 28% often forgot and 1% stopped monitoring. In 62% of cases, they confirmed that they always ate a balanced diet during the trip, 48% drank sufficient water and in 75% of cases, they used suitable footwear. **Conclusion:** Therapeutic education is a fundamental aspect of care for diabetic patients at every stage of their lives. It is an integral part of diabetes care. Nurses play a key role in the therapeutic education of diabetics, whether in the public or private sector, and in different life situations such as the Ramadan fast, sports activities, travel and pilgrimages, to ensure that diabetics are well balanced and receive better care.

Keywords: Therapeutic Education, Diabetes, Travel

INTRODUCTION

Diabetes is a chronic disease on the rise. It affects 537 million people worldwide in 2021. Its prevalence in 2045 is estimated at 783 million, representing an estimated increase of 46% [1]. People with diabetes travel every year. Having diabetes brings may bring some specific problems (which will depend on the type of diabetes, its control, how long it has been present and any complications) [2]. Therapeutic education is an essential pillar of patient care, and should be an integral part of the patient's care. It has proven benefits in terms of improving patients' quality of life and reducing healthcare costs by slowing down the onset of certain complications and reducing the need to seek care [3].

The aim of this study is to describe the education of diabetic patients about diabetes and travel.

MATERIALS AND METHODS

This is a descriptive, cross-sectional study on the knowledge of diabetic patients followed up in the endocrinology and internal medicine outpatient departments of the Farhat Hached University Hospital and the Sahloul University Hospital in Sousse during February and March 2024.

Were included in this study:

- Diabetic patients on insulin
- Those that had travelled at least once outside Tunisia
- Patients who agreed to answer all the questions.

Data was collected using a pre-established anonymous questionnaire, written in French and consisting of 2 parts:

- 13 questions concerning the socio-demographic characteristics of the participants and clinics
- 33 questions on diabetes and travel.

RESULTS

There were 100 participants, with an average age of 44.9 ± 10.6 years and extremes ranging from 22 to 80 years. There was a slight male predominance (54%), with a sex ratio (M/F) of 1.2. The average length of diabetes was 8.8 ± 7.3 years, with extremes ranging from 1 to 33 years. They were type 2 diabetics in 64% of cases. They were on human insulin in 49% of cases and on a basal bolus protocol in 6% of cases. Distribution of participants according to type of diabetes and insulin therapy is mentioned in Table 1.

Table 1. Distribution of participants according to type of diabetes and insulin therapy

	Number (N=100)	Percentages %
Type of diabetes		
Type 1 diabetes	64	64
Type 2 diabetes	36	36
Type of insulin		
Humain	49	49
Analogue	51	51
Type of protocol		
Bed time	12	12
Basal	45	45
Basal plus	21	21
Basal 2 plus	5	5
Basal bolus	6	6
Premixed	11	11

In 63% of cases, participants said they had received therapeutic education about diabetes and travel. In 68% of cases, they confirmed that they should seek advice from their GP before travelling. It should be noted that only 3% confirmed that they had taken a paper (in French and English) from their GP explaining the state of their health and 2% had received a prescription before travelling. 61% of cases confirmed that they had travel insurance and consulted their diabetologist to

adjust their treatment. 62% of cases noted that they had to have a pre-travel vaccination (Covid 19 vaccine) and prepare a medical kit. They assumed that the medical kit should essentially contain a glucometer with strips (34% of cases) and insulin used in 22% of cases. 74% of our population noted that it was necessary to prepare a first-aid kit and that it should essentially contain a sugar substitute (Table 2).

Table 2. Distribution of participants according to responses concerning the contents of the first aid kit

Content	Frequency (n=74)	Percentage%
Sugar Chunks	41	55,4
Glucagon	10	13,5
Alcohol and compresses	5	6,7
Bandages	7	9,4
Anti-emetics	4	5,4
Anti-diarrhoeal	4	5,4
Antibiotics	21	28,4

Concerning self-monitoring during the trip, the participants noted that they increased monitoring in 14% of cases, 57% continued correctly, 28% often forgot and 1% stopped monitoring. In 62% of cases, they confirmed that they always ate a balanced diet during the trip, 48% drank sufficient water and in 75% of cases, they used suitable footwear.

The participants in this study stated that they reported accidents or problems occurring during the journey to their doctor in 59% of cases.

They thought that therapeutic education for diabetics travelling was the role of: Nurses: 47%, doctors: 2% 3% the family, family: 8%, nurses, doctors and family: 22%.

They also noted that the therapeutic education of diabetic person travelling is:

- ✓ Essential: 25%.
- ✓ Important: 49
- ✓ Useful: 18
- ✓ Not important:8%

DISCUSSION

Therapeutic education is an essential pillar of patient care, and should be an integral part of the patient's care. It has

proven benefits in terms of improving patients' quality of life and reducing healthcare costs by slowing down the onset of certain complications and reducing the need to seek care [3].

Therapeutic education is a fundamental dimension in the care of diabetic patients at different stages of their lives. It is an integral part of the management of diabetics in different life situations, such as the Ramadan fast, sports activities, travel and pilgrimage, to ensure that diabetics are well-balanced and receive better care. As travel is a special situation requiring certain practices to be adapted (insulin schedule, storage, etc.), diabetics need to be educated to ensure better glycaemic control.

An increased relative risk of travel-related illness (including metabolic disturbance) was recorded for travellers with type 1 diabetes in an observational study of travellers attending a medical clinic in the Netherlands [4].

The pre-travel consultation should take place 4 to 6 weeks before the trip. At this appointment, the patient should be given a travel letter and prescriptions to take with them on their journey. The travel letter should specify that the patient is diabetic and should list all the equipment and medicines the patient needs [5].

For air travel, you need to plan your journey carefully and know your flight plan precisely (total length of journey, stopover(s), meals on board, timetable). Self-checks should be carried out

every three hours, and you should not change the time on your watch until you arrive at your destination. You should also ensure that you have sufficient carbohydrate reserves (there is a risk of hypoglycaemia if you walk long distances through airports or stations, and carry heavy luggage). Beware of "special" meal trays for diabetics, which are sometimes low in carbohydrates [2,5,6].

When travelling by car, diabetic patients should ideally travel during the day and be accompanied. It is essential to check blood sugar levels before driving. If you feel unwell, you should immediately move to a safe place on the hard shoulder and take at least 30g of quick sugar. It is advisable to take a break every 2 hours.

Finally, remember that insulin should not be left in a vehicle in direct sunlight [2,6,7].

The recommendations for travelling by boat are the same as those set out for other means of transport, except that vomiting due to seasickness should be prevented (antinauseants), and patients should ensure that they have a sufficient supply of carbohydrates (200-300 g) hermetically packed in case technical incidents prolong the cruise. As travel is a special situation requiring certain practices to be adapted (insulin schedule, storage, etc.), diabetics need to be educated to ensure better glycaemic control.

CONCLUSION

Therapeutic education is a fundamental aspect of care for diabetic patients at every stage of their lives. It is an integral part of diabetes care. In our study 63% of participants said they had received therapeutic education about diabetes and travel. This shows the imminent role of nurses. They play a key role in the therapeutic education of diabetics, whether in the public or private sector, and in different life situations such as the Ramadan fast, sports activities, travel and pilgrimages, to ensure that diabetics are well balanced and receive better care.

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