

A Study to Assess the Knowledge and Practice Regarding Foot Care among Type-2 Diabetes Mellitus Patients Attending Tertiary Health-Care Center

Kiran Shinde, Nitin N Chate

Associate Professor, Department of Surgery, Swami Ramanand Teerth Rural Government Medical College, Ambajogai, Maharashtra, India

Abstract

Aim: To determine the level of awareness and attitude toward foot care among adult Type-2 diabetes patients attending tertiary health center.

Background: In rural setup patients attending the clinic are mostly from rural areas. Diabetic foot complications are frequent among them and this can be attributed to several sociocultural practices such as barefoot walking, inadequate facilities for diabetic care, low education and poor socioeconomic condition. The study also focuses on the ever present need for health education among Type-2 diabetes patients in rural areas.

Materials and Methods: This is a descriptive cross-sectional clinic-based study at a rural tertiary health-care center with adult diagnosed cases of Type-2 diabetes mellitus patients with or without foot ulcers present/attending the surgical and medicinal ward/outpatient department of the rural hospital over the period of 2-month, as the study population. A questionnaire consisting of a total 15 questions each regarding knowledge and practice regarding foot care was given to patients, fulfilling the selection criteria. Each question assigned one mark each. The results will be classified as good, satisfactory, and poor depending on the scores obtained.

Results: This study gave an idea about the awareness of foot care measures among the diabetic patients in rural areas. Out of total 100 patients fulfilling the selection criterion, the majority (66) found to have poor scores both for knowledge and practice of foot care while 24 patients had satisfactory and 10 had good scores.

Conclusion: The study proved the lack of education for foot care measures among adult diabetic patients in rural setup. It also emphasized on need of appropriate steps to be taken to maintain the health and quality of life of the diabetic patients in rural setup.

Keywords: Foot care, Rural setup, Type 2 diabetes mellitus

INTRODUCTION

Diabetes is a global epidemic with devastating human, social and economic consequences and its prevalence is increasing at an alarming rate.¹ The disease claims as many lives per year as HIV and places a severe burden on

health-care system and economic with heaviest burden falling on developing countries it is the fourth leading cause of death by disease globally. According to diabetes atlas 2006 published by International diabetes federation, number of people with diabetes in India currently around 40.9 million is expected to rise to 69.9 million by 2025 unless preventive steps are taken.² Who has projected that the maximum increase in diabetes would occur in India, as it is being now termed as "The diabetes capital of world." Every fourth diabetic in the world is Indian and every fourth Indian is diabetic. Diabetes foot problems are among most serious and costly complications of diabetes and common cause for hospital

Access this article online



www.surgeryijss.com

Month of Submission : 12-2016

Month of Peer Review: 01-2017

Month of Acceptance : 01-2017

Month of Publishing : 02-2017

Corresponding Author: Dr. Nitin N Chate, Department of Surgery, Swami Ramanand Teerth Rural Government Medical College, Ambajogai - 431 517, Maharashtra, India. E-mail: nittinchate@gmail.com

admission of diabetic patients in India. Diabetic foot as per the World Health Organization (WHO) may be defined as a group of syndrome in which neuropathy, ischemia, and infections leads to tissue breakdown resulting in morbidity and possible amputation.³ It adversely affects the physical quality of life index of patient.⁴ So effective patient care and proper education is most important.

MATERIALS AND METHODS

This study was carried out at Swami Ramanand Teerth Rural Medical College and Hospital, Ambajogai, District Beed, Maharashtra.

Study type: Descriptive cross-sectional clinic-based study.

Study population: The study population consisted of the adult diagnosed cases of Type-2 diabetes mellitus patients with or without foot ulcers present/attending the surgical and medicinal ward/outpatient department of the rural hospital.

Study duration: 2 months.

Methodology

Inclusion criteria

All the adult patient diagnosed with Type-2 diabetes mellitus with or without foot ulcers admitted/attending the surgical and medicinal ward/outpatient department in the rural hospital, fulfilling following criteria, (1) Patients diagnosed with Type-2 diabetes mellitus several years before. (2) Patients should have impaired fasting glucose >126 mg/dl and oral glucose tolerance test shows their blood glucose concentration >200 mg/dl as per the WHO criteria.

Exclusion criteria

The following patients were excluded.

1. Newly diagnosed cases of Type-2 diabetes mellitus to eliminate the bias
2. Acutely ill patient
3. Mentally subnormal patient
4. Patient who are unwilling to participate in the study or unable to give informed consent.

A total 100 number of patients fulfilling the inclusion criteria were explained with the purpose of study and informed consent was obtained. Data were collected by administration of a self-structured questionnaire to assess the patient data the inclusion criteria were explained ellitus patients with or without foot ulcers of or hospital admission of diabetic patients i practicing foot care measures was analyzed and classified on scoring. Appropriate statistics was employed to analyze the collected data. The patients were given a questionnaire

which consists of two sections, Section A and Section B. Section A consisted of basic patient history, i.e. name, age, sex, residence, occupation, number of years post diagnosis of diabetes and type of diabetes medication being taken. Section B consisted of self-structured questionnaire. The Section B questionnaire consisted of a total 15 questions each regarding knowledge and practice regarding foot care. Each question assigned one mark. The results were classified as good, satisfactory, and poor depending on the scores obtained. If score was >70% (11-15), it was regarded as good, if score 50-70% (8-10), it was regarded as satisfactory and if score was <50% (>8%) it was regarded as poor both for knowledge and practice of foot care. The set of questions that was asked to determine the knowledge and practices regarding the foot care measures are as follows.

Questions	Knowledge	Practices
1. Daily washing the feet		
2. Importance of taking antidiabetic treatment to prevent complications		
3. Using warm water for washing/bathing		
4. Checking temperature of water before using		
5. Drying of feet after washing		
6. Talcum powder usage for keeping the inter digital spaces dry		
7. Keeping the skin of feet moist to prevent dryness		
8. Avoid barefoot walking		
9. Lotion not to be applied in inter digital spaces		
10. Trimming of nails of feet with care		
11. Inspection of feet once a daily		
12. Wear comfortable shoes		
13. Regular and rigorous control of diabetes with diet		
14. Checking the shoes from inside before wearing		
15. Warning signs for which consultation is required		

The questionnaire was filled by the patients.

Statistical analysis of the collected data was done to study effect of gender, occupation, literacy, and age distribution.

RESULTS

This study gave an idea about the awareness of foot care measures among the diabetic patients in rural areas.

- The study proved lack of education for foot care measures among diabetes patients with 66% of the total patients scoring ≤ 8 (poor) (Table 1).
- Slightly higher scores were noted among male patients compared to female counterparts (Table 2).

Table 1: Scoring of knowledge and practices among the patients

Scores	Number
11-15 (Good)	66
8-10 (Satisfactory)	24
<8 (Poor)	10

Table 2: Effect of gender on the knowledge and practice regarding foot care (unpaired *t*-test was used to compare between male score and female score)

Gender	Number	Score
Male	64	10
Female	36	9

Table 3: Age-wise distribution (one-way ANOVA test for comparing the score)

Age (in years)	Number (%)	Score
30-40	10 (10)	11
41-50	22 (22)	8
51-60	26 (26)	7
>60	42 (42)	7
Total	100 (100)	

Table 4: Effect of literacy on knowledge and practice of foot care (unpaired *t*-test to compare between literate and illiterate persons score)

Literacy	Number (%)	Score
Literate	28 (28)	10
Illiterate	72 (72)	7

Table 5: Effect of occupation on knowledge and practice of foot care (unpaired *t*-test to compare between score)

Occupation status	Number (%)	Score
Employed	56 (56)	9
Unemployed	44 (44)	8

- Age-wise distribution revealed better scores among young patients. This may be attributed to higher literacy rates among young population as a confounding factor (Table 3).
- Literate and employed patients performed better in scores of knowledge and practice as compared to illiterate and unemployed ones (Tables 4 and 5).

CONCLUSION

There is considerable lack of education for foot care measures among diabetes patients in rural setup. Health-care workers can play a pivotal role in delivering effective care and necessary health education about foot care to reduce the burden of foot complications among diabetic patients.

REFERENCES

1. International Diabetes Federation. Diabetes Atlas. 32nd ed. Belgium: IDF; 2006. p. 15-103.
2. Wild S, Roglic G, Green A, Sicree R, King H. Global prevalence of diabetes: Estimates for the year 2000 and projections for 2030. *Diabetes Care* 2004;27:1047-53.
3. Sicree R, Shaw J, Zimmet P. Diabetes and impaired glucose tolerance. In: Gan D, editor. *Diabetes Atlas*. Belgium: International Diabetes Federation; 2006.
4. Sandeep , Ganesan A, Mohan V. Development and Upgradation of the Diabetes Atlas of India. Chennai: Madras Diabetes Research Foundation; 2006. p. 2-3.

How to cite this article: Shinde K, Chate NN. A Study to Assess the Knowledge and Practice Regarding Foot Care among Type-2 Diabetes Mellitus Patients Attending Tertiary Health-Care Center. *IJSS Journal of Surgery* 2017;3(2):1-3.

Source of Support: ICMR Funded Research, **Conflict of Interest:** None declared.