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KNOWLEDGE, ATTITUDE AND PRACTICE OF FOOT CARE IN PATIENTS OF DIABETES FOOT

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ABSTRACT

Background: Diabetes currently affects about 200 million people globally and is expected to reach 333 million by 2025. Diabetic foot ulcer is a result of microvascular and neuropathic complications in diabetics. People with poor knowledge and practice regarding diabetic foot care are known to have a higher incidence of diabetic foot ulcers and ultimately leading to lower limb amputation. **Aim and objectives:** the study was carried out to assess the knowledge, attitude and practices among the diabetic patients regarding foot care. It can lead to the early appearance of chronic complications such as retinopathy, nephropathy, neuropathy, coronary artery disease, cerebro-vascular disease and peripheral vascular disease. **Material and methods:** Present study is a cross sectional observational study. 150 participants were enrolled for the study after following inclusion and exclusion criteria. They were assessed on the basis of a well designed questionnaire that consisted of fifteen questions regarding knowledge and practices of foot care. It was classified as good, satisfactory and poor depending upon the scores. **Result:** Among 150 participants 54.7 % were females, 142 patients (94.7 %) aged ≥ 30 years. 67.3 % patients were rural dwellers. Positive family history of diabetes was found in 68% of patients. Out of all, 32 % patients had good knowledge about foot care while only 16 % were practicing it. 27.3 % were lacking the satisfactory knowledge about foot care. **Conclusion:** The overall rate of adequate knowledge regarding diabetic foot care among participants was unsatisfactory. Daily foot care is essential for preventing complications of diabetic

neuropathy and vascular insufficiency. Stringent and continuous efforts are required to improve KAP of diabetic patients about diabetic foot care.

KEYWORDS: Diabetes, knowledge, practice, diabetic foot, education, motivation.

INTRODUCTION

Diabetes Mellitus (DM), especially type 2 (DM2), is becoming a serious public health issue. Today, diabetes is considered as a global epidemic.[1] Diabetes Mellitus is a syndrome of chronic hyperglycaemia due to relative insulin deficiency, resistance or both.[2] Diabetes currently affects about 200 million people globally and is expected to reach 333 million by 2025, with most massive burden falling on developing countries like India.[1,3] India is estimated to have 61.3 million diabetics, which is projected to cross 100 million by the year 2030.[1] Hyperglycaemic rates usually lead to the early appearance of chronic complications such as retinopathy, nephropathy, neuropathy, coronary artery disease, cerebrovascular disease and peripheral vascular disease.[4,5,6] Diabetes along with its complications is expected to result in increasing morbidity, mortality and health expenditure due to the requirement of specialized care.[7,9] Foot ulcers are among the most common complications of diabetes with prevalence of 4-10%.[2,8] Diabetic foot ulcer is a result of microvascular and neuropathic complications in diabetics.[10,11] People with poor knowledge and practice regarding diabetic foot care are known to have a higher incidence of diabetic foot ulcers.[12,13] They become infected frequently and usually are the first step towards amputation of a lower extremity.[14] It has been shown that 50-80% of all diabetic foot related problems are preventable if appropriate measures are taken. It can be achieved by combination of good foot care and appropriate education for both people with diabetes and health care professionals.[15,16] There is an increasing amount of evidence that the patient education is the most effective way to lessen the complications of diabetes and its management. There is a paucity of studies in India, which assess the effect of health education on diabetic foot care practice of patients.[17] This study was carried out to assess the knowledge and practices among the diabetic patients regarding foot care.

MATERIAL AND METHODS

This study is a cross-sectional study, conducted in the diabetic clinic situated in outpatient department of tertiary care hospital of Lucknow, India. 150 participants were selected randomly on the basis of inclusion and exclusion criteria.

Inclusion criteria: a DM2 diagnosis; both sexes; over 18 years of age.

Exclusion criteria: patients who were unable to provide the required information during data collection, such as elderly patients, those having complications of cognitive problems.

Data were collected by means of a well structured Knowledge, Attitude and Practice (KAP) questionnaire.

RESULTS

Characteristics of the Participants [N= 150]

Variable	Value	Percentage
Age in years		
< 30	8	5.3
≥ 30	142	94.7
Sex		
Male	68	45.3
Female	82	54.7
Residence		
Rural	101	67.3
Urban	49	32.7
Education		
Illiterate	53	35.3
Upto 10^{th}	45	30.0
≥ 10^{th}	52	34.7
Duration of diabetes		
<1 year	11	7.3
1-5year	43	28.7
5-10 year	57	38.0
>10 year	37	24.7
Can't recall	2	1.3
Family history of diabetes		
No	38	25.3
Yes	102	68.0
Don't know	10	6.7

Out of 150 participants 54.7 % were females. 142 patients (94.7 %) aged ≥ 30 years. 67.3 % patients were rural dwellers. About 62.7 % of the patients have been diabetic since more than 5 years. Positive family history of diabetes was found in 68% of patients.

Questions determining the knowledge and practices about foot care

Fifteen questions were asked regarding knowledge and practices of foot care. Each correct Answer was given one mark. Scores were classified as follows

Good knowledge: If score is more than 70% (11-15)

Satisfactory knowledge: If score is 50-70% (10-8)

Poor knowledge: Scores less than 50% (<8)

Good Practices: If score is more than 70% ranging from (11- 15)

Satisfactory practices: If score is between 50-70% (10-8).

Poor practices: Score less than 50% (<8).

Questions asked to determine the Knowledge Practices knowledge and practices about foot care	**Knowledge (%)**	**Practices (%)**
1.Importance of taking antidiabetic treatment to prevent complications	120 (80.0)	122 (81.3)
2. Daily washing the feet	126 (84.0)	134 ()
3. Using warm water for washing/bathing	81(54.0)	83 (55.3)
4. Checking temperature of water before Using	79 (52.7)	77 (51.3)
5. Drying the feet after washing	51 (34.0)	49 (28.7)
6. Talcum powder usage for keeping interdigital spaces dry	29 (19.3)	6 (4.0)
7. Keeping skin of the feet soft to prevent Dryness	110 (73.3)	99 (66.0)
8. Lotion not to be applied in the interdigital spaces	23 (15.3)	56 (37.3)
9. Daily change of socks	69 (46.0)	37 (24.7)
10. Trimming nails of feet straight with care	95 (63.3)	97 (64.7)
11. Inspection of feet once a day by Respondents	60 (40.0)	56 (37.3)
12.Wearing comfortable coat shoes	78 (52.0)	40 (26.7)
13. Checking the shoes from inside before Wearing	106 (70.7)	112 (74.7)

14. Not walking bare foot	121 (80.7)	98 (65.3)
15.Warning signs for which consultation is required	133 (88.7)	131 (87.3)

A total of 120 participants (80%) knew the importance of keeping the blood glucose level within normal limits to prevent themselves from its complications and 122 (81.3 %) were taking the antidiabetic treatment regularly. The knowledge and practices regarding foot care is approximately the same for most of the questions asked except few questions like use of talcum powder to keep the interdigital spaces dry, lotion application on the feet interdigital spaces.

Percentage scoring of knowledge and practices about foot care among the subjects

Scoring (Out of15)	Knowledge	Practices
> 70% (Good)[11-15]	48 (32.0%)	24 (16.0%)
50-70% (Satisfactory)[8-10]	61 (40.7%)	86 (57.3 %)
< 50%(Poor) [Less than 8]	41 (27.3%)	40 (26.7 %)

About 32 % patients had good knowledge about foot care while 16 % were practicing it. 27.3 % were lacking the satisfactory knowledge about foot care.

DISCUSSION

The present study was conducted to assess the knowledge and practices of foot care among diabetic patients. Daily foot care is essential for preventing complications of diabetic neuropathy and vascular insufficiency. Only 32 % patients had good knowledge about proper foot care. Various studies have shown that low scores were common in those having poor formal education. Education has also shown positive relationship with good practices. In our study, 57.3 % of the patients had satisfactory practices regarding foot care, 26.7 % had poor practices and only 24% had good practices. Health care professionals have a very important in improving the knowledge and practices regarding foot care. Such interventions may improve the outcomes. This study has shown that there is marked lacuna in the knowledge and practices of the diabetic patients regarding foot care in a diabetic clinic of a tertiary level hospital. Proper education about foot care is one of the most crucial tools for preventing lower leg amputation. Health personnel should be motivated for educating diabetics about self care. They should be able to perform proper examination whenever required. Television,

radio and various organisations should enhance the public awareness of diabetes and its complications.

CONCLUSION

The overall rate of adequate knowledge regarding diabetic foot care among participants was unsatisfactory. Health education should be provided to the patients. Training and empowering of health care providers is essential for delivering adequate health message. Media and nongovernmental organizations should play a role in raising the awareness the problem in a simplified way.

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