ORIGINAL RESEARCH PAPER

Volume-7 | Issue-9 | September-2018 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A STUDY OF AWARENESS OF FOOT CARE IN PATIENTS WITH TYPE 2 DIABETES MELLITUS AND PRESENCE OF DIABETIC NEUROPATHY.

General Medicine

Dr Nisanth K Assistant Professor, Department of General Medicine, Azeezia Institute of Medical Sciences and research, Kollam, Kerala.

Dr Divya Krishnan* Assistant Professor, Department of General Medicine, Azeezia Institute of Medical Sciences and research, Kollam, Kerala. *Corresponding Author

ABSTRACT

Diabetes Mellitus is the most commonly encountered disease today in our country. In today's world where there is little time for you to maintain the Health, majority of the time this disease is diagnosed accidentally. Diabetes is a state where glucose level is abnormally high in the serum. This may be a cause of defective insulin production or regulation. On the other hand, can be due to defective non-functioning receptors. Anyways one of the many complications of this dreaded disease is peripheral neuropathy where the patient does not understand the peripheral pain and as a result cannot appreciate any insults to the extremities. This study puts in an effort to understand the awareness of foot care in patients with type 2 diabetes mellitus and presence of diabetic neuropathy.

KEYWORDS

Footcare, Diabetes, Neuropathy, Awareness.

INTRODUCTION:

India is known as the "diabetes capital" of the world with more than 40 million people with diabetes.[1] Diabetes mellitus is a multifaceted disease and foot ulceration is one of its most common complications. The incidence of foot ulcers among people with diabetes ranges from 8% to 17%.[2] Foot ulcers can cause severe disability and hospitalization to patients and considerable economic burden to families and health systems.[3],[4] Infection, occurring in about half of the diabetic foot ulcers, is a further complication.[5],[6] About 85% of diabetes-related amputations are preceded by foot ulcers, and it accounts for more than half of non-traumatic lower limb amputations.[5],[7] Individuals who develop foot ulcers have a decreased health-related quality of life.[8],[9]

Neuropathy, mechanical stresses, and angiopathy are the major aetiopathological factors in the development of foot ulcers in people with diabetes. [10] Diabetic peripheral neuropathy is a heterogeneous disorder that includes mononeuropathies, polyneuropathies, plexopathies, and radiculopathies.[11] As diabetic neuropathy frequently leads to foot ulcer, it is recommended to screen all individuals with diabetes at least annually.[12]

Of all the complications of diabetes, those that occur in the foot are considered the most preventable. Poor knowledge of foot care and poor foot care practices were identified as important risk factors for foot problems in diabetes.[13] Evidence suggests that consistent patient education with prophylactic foot care for those judged to be at highest risk may reduce foot ulceration and amputations. [14]

Diabetes Mellitus is the most commonly encountered disease today in our country. In today's world where there is little time for you to maintain the Health, majority of the time this disease is diagnosed accidentally. Diabetes is a state where glucose level is abnormally high in the serum. This may be a cause of defective insulin production or regulation. On the other hand, can be due to defective non-functioning receptors. Anyways one of the many complications of this dreaded disease is peripheral neuropathy where the patient does not understand the peripheral pain and as a result cannot appreciate any insults to the extremities. This study puts in an effort to understand the awareness of foot care in patients with type 2 diabetes mellitus and presence of diabetic neuropathy.

AIMS AND OBJECTIVES:

To Study of Awareness of foot care in patients with Type 2 diabetes mellitus and presence of diabetic neuropathy

MATERIALS AND METHODS:

This study was done in Azeezia Institute of Medical Sciences in the Department of General Medicine.

This study was done on 100 patients who attended the OPD.

INCLUSION CRITERIA

1. Aged between 40 to 70 years.

EXCLUSION CRITERIA:

1. Amputated limbs.
2. Confirmed cases of ulcers and is on treatment.

The Michigan Neuropathy Screening Instrument (MNSI), which had two components, the history and the physical assessment, was used to identify high risk feet. [17] The MNSI is designed to be used in an outpatient setting by primary care or other providers. The first part of the screening instrument consists of 15 self-administered "yes or no" questions on foot sensation including pain, numbness, and temperature sensitivity. A higher score (out of a maximum of 13 points) indicates more neuropathic symptoms. The second part of the MNSI is a brief physical examination involving 1) inspection of the feet for deformities, dry skin, hair or nail abnormalities, callous, or infection; 2) semi-quantitative assessment of vibration sensation at the dorsum of the great toe; 3) grading of ankle reflexes; and 4) monofilament testing. Patients screening positive on the clinical portion of the MNSI (greater than 2.5 points on a 10 point scale) were considered neuropathic. The sensitivity and specificity of MNSI with a cut-off values of 2.5 were 50% and 91%, respectively.

RESULTS:

Table 1: Mean age and mean age of Diagnosis of the population:

	Mean	Mean age of Diagnosis	Range	Std. Deviation
age	46.16	42.98	40-60 years	12.48

Graph 1: Age Distribution of the Population:

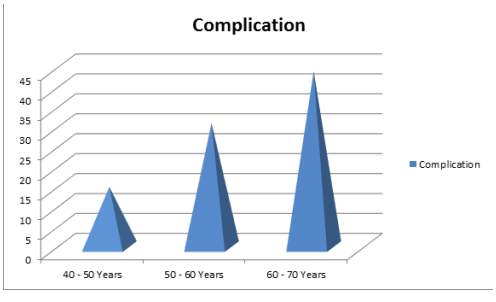

Table 3: Education of the Patients

< 7th Standard	33
Degree Holder	41
Post Graduate	16

Table 4: Responses to Questions:

Question/response	Percentage
Feet should be inspected daily	74.5
Footwear should be inspected every time before wearing	49.0
Examined feet once a day or more	71.7
Checked foot wear before wearing them on each time	44.3
Walk bare feet in the house often	87.3
Walk barefoot outside the house	10.4
Use oil on feet daily	29.24

Table 5: Michigan Neuropathy Screening Instrument (MNSI) for Neuropathy.

Positive	Negative	X-Value	P-Value
48	42	0.625	0.004

DISCUSSION:

Thus, the level of awareness and good self-care practices is higher in the present study population compared to some other Indian studies and studies from developing countries. The possible reasons for the greater knowledge, awareness, and health behaviors could be many. Important among them could be the fact that the community health program has been giving multiple specific inputs to this cohort of diabetics being followed up in the hospital. The very participation of these patients in this focused diabetes care program could influence awareness, attitudes, and behavior. Since this is a clinic-based study, the level of knowledge and practices do not reflect those of the community. Nevertheless, the level of awareness is much higher compared to other clinic-based studies in India indicating that the health education sessions, motivational counseling services, and good quality care provided to them as part of the program has influenced their awareness and behaviors. Another potential factor which could have biased the finding is that the instrument used in all these studies was not identical. Most of the studies used instruments generated for the purpose of the study, which was the case in the current study also and the issue of comparability with other studies is questionable. In a study done in a specialized diabetic clinic in Mumbai, only 45% of patients with diabetes said they walked barefoot indoors.[14] Those study subjects were urban, and probably more educated which could explain the lower percentage of patients with diabetes walking barefoot indoors.Poor educational status was associated with poor knowledge about foot care in this study. A hospital-based study done in Chennai also showed the association between poor education and poor knowledge on foot care. [15]

REFERENCES:

1. World Health Organization. Diabetes Fact Sheet N0312. Geneva, Switzerland: World Health Organization; 2009.
2. Crawford F, Inkster M, Kleijnen J, Fahey T. Predicting foot ulcers in patients with diabetes: A systematic review and meta-analysis. Q J Med 2007;100:65-86.
3. Margolis DJ, Malay DS, Hoffstad OJ. Economic burden of diabetic foot ulcers and amputations. 2011 Mar 8. In: Data Points Publication Series [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2011.
4. Stockl K, Vanderplas A. Costs of lower-extremity ulcers among patients with diabetes. Diabetes Care 2004;27:2129-34.
5. Dang CN, Boulton AJ. Changing perspectives in diabetic foot ulcer management. Int J Low Extrem Wounds 2003;2:4-12
6. Pinzur MS, Slovenkai MP. Guidelines for diabetic foot care: Recommendations endorsed by the Diabetes Committee of the American Orthopaedic Foot and Ankle Society. Foot Ankle Int 2005;26:113-9.
7. The diabetic foot. Position statement. International Diabetes Federation
8. Goodridge D, Trepman E, Embil JM. Health-related quality of life in diabetic patients with foot ulcers: Literature review. J Wound Ostomy Continence Nurs 2005;32:368-77.
9. Oliver RH, Schnepp W, Monika AR. A systematic review on the impact of leg ulceration on patients′ quality of life. Health Qual Life Outcomes 2007;5:44
10. Rahman S. Diabetic Foot Ulcer. Predisposing factors and Management. BMJ 2006;332:407-10.
11. Simmons Z, Fieldman EL. Update on diabetic neuropathy. Curr Opin Neurol 2002;15:595-603.
12. American Diabetes Association. Standards of medical care in diabetes-2006. Diabetes Care 2006;29:S4-42.
13. Chandalia HB, Singh D, Kapoor V, Chandalia SH, Lamba PS. Footwear and foot care knowledge as risk factors for foot problems in Indian diabetics. Int J Diabetes Dev Ctries 2008;28:109-13.
14. Calle-Pascual AL, Durán A, Benedı A, Calvo MI, Charro A, Diaz JA, et al. A preventative foot care programme for people with diabetes with different stages of neuropathy. Diabetes Res Clin Pract 2002;57:111-7.
15. Viswanathan V, Shobhana R, Snehalatha C, Seena R, Ramachandran A. Need for education on footcare in diabetic patients in India. J Assoc Physicians India 1999;47:1083-5
16. Lincoln NB, Jeffcoate WJ, Ince P, Smith M, Radford KA. Validation of a new measure of protective footcare behaviour: The Nottingham Assessment of Functional Footcare (NAFF). Pract Diab Int 2007;24:207-11.
17. University of Michigan. How to Use the Michigan Neuropathy Screening Instrument.[Internet]. Michigan.Availablefrom: http://www.med.umich.edu/mdrtc/profs/ documents/svi/MNSI_howto.pdf.