



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2019; 5(8): 21-23
www.allresearchjournal.com
Received: 11-06-2019
Accepted: 15-07-2019

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Retrospective study to assess the cause for diabetic foot ulcer among patient with diabetic foot ulcer in Saveetha Medical College and Hospital, Thandalam, Chennai

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Abstract

Diabetes Mellitus is a silent disease and now recognized as one of the fastest growing threat to public health in almost all countries of the World. They estimated that by 2025, 300 million people worldwide will have diabetes and by 2030, 360 million people. Thus, by 2030, worldwide prevalence will approach 5 percent. 1-4 In general; the incidence of non-traumatic lower extremity amputations (LEAs) has been reported to be at least 15 times greater in those with diabetes than with any other concomitant medical illness. The need for the study was to assess the cause for diabetic foot ulcer among patient with diabetic foot ulcer in Saveetha Medical College and Hospital.

Objectives: To assess the cause for diabetic foot ulcer among patient with diabetic ulcer foot in patients admitted in Saveetha Medical College.

Methodology

Research approach: quantitative approach, retrospective research design was used for 30 samples by convenience sampling technique.

Results: The results shows that regarding the type of diabetes mellitus among 30 patients all 30(100%) were in the Type II, the duration of Diabetes Mellitus 15(50%) were less than 5years, 9(30%) were between 5-10years and 6(20%) were more than 10years duration, the type of treatment 17(56.66%) were on oral hypoglycaemic agent, 10(33.33%) were on insulin, 3(10%) were on both. the body mass index 24(80%) were between 18-24.49, 4(13.33%) were between 24.5-29.5, 2(6.66%) were more than 29.5 and the socio economic status 3(10%) were under middle class, 27(90%) were under lower class.

Keywords: diabetic foot, patient, saveetha medical college, hospital

Introduction

The term diabetes mellitus is derived from a Greek word which means to go through or a siphon and the word Mellitus is derived from a Latin word Me (honey) describes the sweet odour of the urine. Diabetes Mellitus is a silent disease and now recognized as one of the fastest growing threat to public health in almost all countries of the World. It is also called the disease of prosperities. Prevention is better than cure. Diabetes is an 'ice berg disease. Although it increases in both the prevalence and incidence of non-insulin dependent diabetes occurred globally, they have been especially dramatic in societies in newly industrialized countries and in developing countries.

International Journal of Medicine Research 88 (U.S) they estimated that by 2025, 300 million people worldwide will have diabetes and by 2030, 360 million people. Thus, by 2030, worldwide prevalence will approach 5 percent. 1-4 In general; the incidence of non-traumatic lower extremity amputations (LEAs) has been reported to be at least 15 times greater in those with diabetes than with any other concomitant medical illness. It has been reported that annually, about 1 to 4 percent of those with diabetes develop a foot ulcer; 10 to 15 percent of those with diabetes will have at least one foot ulcer during their lifetime. Foot ulceration is preventable and relatively simple interventions can reduce amputations by up to 80%. Good control of haemoglobin, blood pressure and lipid levels are well established as being crucial elements in the reduction of risk for complications of diabetes. Regular evaluation and early treatment are the most effective mechanisms to prevent the devastating diabetic foot complications. Unfortunately, the majority of patients admitted to the hospital for diabetic foot complications receive a less than adequate lower extremity evaluation.

Though there is an obvious increase in diabetic foot care awareness, there are tremendous gaps in routine foot evaluations. To achieve such aims, early detection of the foot at risk should be afforded a high clinical priority. Our interest in identifying the prevalence of risk factors aroused mainly due to the fact that the number of cases attending to university hospital with diabetic foot ulcers has increased tremendously during the last 3 to 4 years.

The study has been made to assess the involvement of risk factors in diabetic foot infection among the patients of North India. To our knowledge, this is probably the first report wherein a hospital-based survey from North India was conducted to evaluate the role of risk factors involved in DFUs. Lower extremity amputation is among the most feared complications of diabetes. The best approach in dealing with diabetic foot is prevention of ulcer through the identification of individuals at risk, patient education and follow-up. It is possible through routine foot exam, including previous history of the patient, the overall look, neurologic assessment and vascular assessment (Pulse Palpation and Measuring Ankle Brachial Index (ABI)). Papanas *et al.* (2007) identified that people with diabetic foot lesions and renal diseases have increased risk of 6.5 to 10 times that of people with diabetic foot lesions alone. Diabetic foot ulcer is the most devastating problem which affects the human life as a whole. We had observed diabetic patients with foot ulcers during our working experience. The individual who doesn't have adequate knowledge about the foot care are more prone to get the foot ulcers and foot complications leading to amputation. These all critical situation has given us enough interest and enthusiasm to start a research on diabetic foot ulcer and to provide awareness among the diabetic clients. Hence we found it necessary to perform a study to assess the knowledge regarding diabetic foot care among diabetic patients.

Need for the study

People with diabetes have a number of potentially serious health problems that can be cause by the condition, including eye, heart, feet and kidney diseases, One of the most common is diabetes related foot problems. High glucose levels from diabetes can result in poor circulation to our lower legs and feet. Often it causes nerve damage, called neuropathy, which can lead to a lack of sensation in the feet, foot ulcers and in severe cases results in amputation.

Fortunately, with conscious treatment of diabetes and good foot care, many of this problem can be avoided or atleast treated.

Diabetic ulcers are the most common foot injuries leading to lower extremity amputation. Researcher has a role in the prevention or early diagnosis of diabetic foot complications. The most common risk factors for ulcer formation include diabetic neuropathy, structural foot deformity and peripheral arterial occlusive disease. Patient education regarding foot hygiene, nail care and proper footwear is crucial to reducing the risk of an injury that can lead to ulcer formation.

Statement of the problem

Retrospective study to assess the cause for diabetic ulcer foot among patient with diabetic foot ulcer in Saveetha Medical College and Hospital, Thandalam.

Objectives of the study

To assess the cause for diabetic foot ulcer among patient with diabetic ulcer foot in patients admitted in Saveetha Medical College.

Methods and materials used

The research approach used in the study was quantitative approach using retrospective research design. The study was conducted at Saveetha Medical College and Hospital with 30 samples, the samples were selected using convenience sampling technique. Confidentiality was maintained for each sample while collecting the data. Informed consent was obtained. Clinical variables data was collected from each patient and the data was analyzed using descriptive statistics.

Results

The results shows that regarding the type of diabetes mellitus among 30 patients all 30(100%) were in the Type II, the duration of Diabetes Mellitus 15(50%) were less than 5years, 9(30%) were between 5-10 years and 6(20%) were more than 10years duration, the type of treatment 17(56.66%) were on oral hypoglycaemic agent, 10(33.33%) were on insulin, 3(10%) were on both. the body mass index 24(80%) were between 18-24.49,4(13.33%) were between 24. 5-29 .5,2 (6.66%) were more than 29.5 and the socio economic status 3(10%) were under middle class, 27(90%) were under lower class.

Table 1: Type of Clinical variables

S. no	Clinical variables	frequency	Percentage
1.	Type of Diabetes Mellitus		
	a)Type 1	0	0
	b)Type11	30	100%
2.	Duration of DM		
	a) < 5years	15	50%
	b) 5-10	09	30%
	c) More than 10 years	06	20%
3.	Type of treatment		
	a) Insulin	10	33%
	b) Oral Hypoglycaemic agent	17	57%
	c) Both	03	10%
4.	Blood glucose controlled by current medication		
	a. Good controlled	24	80%
	b. Poorly controlled	06	20%
S. no	Clinical variables	frequency	Percentage
5.	Special prescribed diet		
	a. Yes	27	90%

	b. No	03	10%
	Presence of Peripheral vascular disease		
6.	a. Yes	27	90%
	b. No	03	10%
	Sensory loss to vision		
7.	a. Yes	02	7%
	b. No	28	93%
	Body mass index		
8.	a. <18	0	0
	b. 18-24.49	24	80%
	c. 24.5-29.5	04	13%
	d. >29.5	02	07%
	Regular follow up treatment		
9.	a. Yes	27	90%
	b. No	03	10%
	Practicing Foot self-care practice		
10.	a. Poor	21	70%
	b. Good	9	30%
	Gender		
11.	a. Female	08	27%
	b. Male	22	73%
	Fasting blood sugar		
12.	a. <120mg %	23	77%
	b. 121-150mg %	07	23%
	c. >150mg %	0	0
	Any h/o previous ulcer foot		
13.	a. Yes	02	7%
	b. No	28	93%
	Socio economic status		
14.	a. Upper class	0	0
	b. Middle class	03	10%
	c. Lower class	27	90%
	Previous foot deformity		
15.	a. Yes	01	03%
	b. No	29	97%

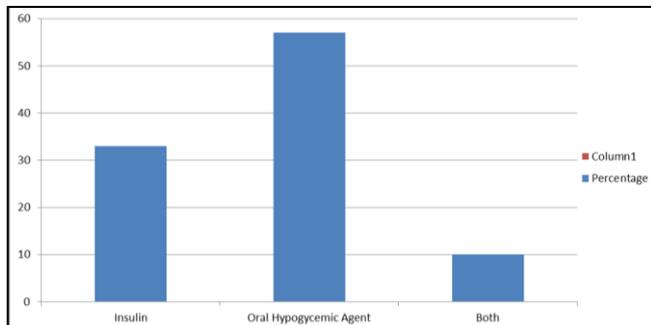


Fig 1: The figure shows the type of treatment of patient with diabetes mellitus

The table shows the distribution of type of treatment obtained by the diabetic foot ulcer patient. Regarding the type of treatment 17 (56.66%) were on oral hypoglycaemic agent, 10(33.33%) were on insulin, 3(10%) were on both.

Conclusion

The study concludes the majority of type II diabetes mellitus clients have diabetic foot ulcer and they are unaware of their condition. It is necessary to screen the diabetic clients for diabetic peripheral neuropathy, hence various complications can be prevented.

Recommendation

The study can be replicated in large samples to strengthen the findings.

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