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KNOWLEDGE, ATTITUDE AND PRACTICE OF FOOT CARE AMONG DIABETIC PATIENTS IN A TERTIARY CARE HOSPITAL, KANYAKUMARI- DESCRIPTIVE ANALYTICAL STUDY

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ABSTRACT:

Background: Globally diabetes and its complications due to poor socio economic condition, bare foot walking, inadequate facilities and education for diabetic care, infections and amputations pose a higher threat on public health causing severe mortality and morbidity.There is dearth of studies on KAP of foot care among diabetic patients in Tamil Nadu.Thusthe study was carried out to assess knowledge, attitude and practice of foot care among diabetic patients attending tertiary care centre, Kanyakumari and to find its associations with socio demographic characteristics.

Material and Methods: The present descriptive analytical study was conducted using a semi-structured questionnaire among diabetic patients in Tertiary care centre, Kanyakumari over a period of 3 months after ethical clearance. Using p value of 54.4% from SumanSaurabh[7] sample size was calculated.

Results: The study was conducted among 150 (53% female and 47% male) diabetic patients with mean age 60.23 ± 12.059 and 40 to 50% aware that diabetes causes preventable foot ulcer. Only 36% aware the availability of special foot wears. The attitude towards foot ulcer due to diabetic and bare foot walking was 45.3% and 54.7% respectively. Among 150 cohorts, 53.3%, 48% and 44% were with adequate knowledge, good attitude and adequate practices.

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Conclusion: Education on self-care management with the emphasis on lifestyle modifications and behavioural changes regarding foot care using audio-visual (AV) aids plays a significant role not only in the prevention of diabetes but also in preventing its complications.
Keywords: Diabetic, Foot care, Awareness, Practices, Complications.

Introduction:

Globally diabetes and its complications pose a higher threat on public health causing severe mortality and morbidity.[1]Owing to higher prevalence in diabetes and enormous arise of newer complications in recent days, India is considered as the diabetic capital.[2] Due to poor socio economic condition, bare foot walking, inadequate facilities for diabetic care and lack of education on diabetic care, diabetic foot infection and amputations are the most common complication needs hospital care and are easily preventable.[3,4]These non-traditional risk factors if detected early, with adequate knowledge and practice on foot care, can be modified at an early stage itself.[5,6] Prevalence of Diabetic foot ulcer (DFU) among rural out/in patients was found to be 10.4%.[7,8] The study from South India reported that >30% of total income were spent on treatment for foot problems than non-foot problems (>9%) and it also increase the economic burden of diabetes.[9] Some studies proved that those who received continue and focussed foot care education alone prevents DFU and amputation even those who are at high risks.[10] Patient counselling is a process of improving them to cope with the disease and make valid decision on management and medication. It also helps them to motivate and change any harmful dietary and life style habits.[11] Though many literature on prevalence and importance of foot care, there are dearth of studies on KAP of foot care among diabetic patients in Tamil Nadu. Thus, the study was carried out to assess knowledge, attitude and practice of foot care among diabetic patients attending tertiary care centre, Kanyakumari and to find its associations with socio demographic characteristics.

Material &Methods

The present descriptive analytical study was conducted using a self-administered semi-structured questionnaire among outpatient and inpatient diabetic patients in SreeMookambika Institute of Medical Sciences, Kulasekharam in Kanyakumari district, Tamil Nadu state over a period of 3 months (October to December 2020) after ethical clearance. Using a p value of 54.4% in a study by SumanSaurabh,[7] 15% precision in Cochran's formula 3.84pq/d2, sample size was calculated as 150. All diabetic patients above 18 years were included by convenient sampling. Those who submitted incomplete questionnaires, with previous history of diabetic foot ulcer and amputations were excluded from the final analysis.

The self-administered questionnaire was compiled from questions assessing demographic features, medical history and seven questions each for assessing knowledge, attitude and practice of diabetic foot care. KAP was assessed by giving scores of 1 for correct answer and 0 for incorrect answer.Data was entered into MS Excel-2010 and analyzed with SPSS version 20. Descriptive statistical analysis and Chi square tests were done with the significance level fixed at 5%.

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Results

The study was conducted among 150 diabetic patients consisting of 53% female and 47% male. The mean age of total cohort was 60.23 ± 12.059 and the mean duration of diabetes was 10.39 ± 7.655. Among religious status of cohort, majority were found to be Hindus (64%), Christians (31%) and Muslims (5%). The socio economic status of the test group was assessed and reported that 68%, 25% and 7% belongs to upper lower, lower middle and upper middle respectively.

Among the study population, 56% had family history of diabetes of which majority had diabetic among fathers (18%), mothers (9.3%), siblings (7.3%), spouse (4.7%), daughter / son (1.5%). We observed that in the test group, 74%, 19%, 5% and 2% patient were on treatment with oral hypoglycaemic drugs, insulin, diet modification and exercises respectively.

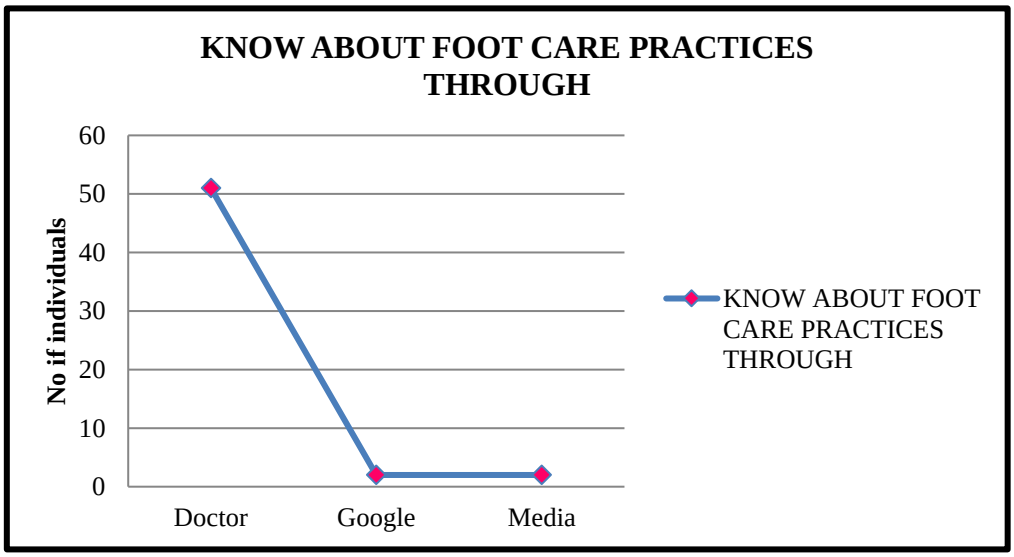

Figure 1: Source of information on foot care

Among 150 cohorts surveyed, 40 to 50% aware that diabetes causes foot ulcer and it is preventable. Almost half (57.3%) reported that wound healing will be delayed in them, 64.7% aware that it should be reported to health care professionals immediately even for small ulcer if not can lead to amputation on later times and mode was given in [Figure 1]. Only 36% aware the availability of special foot wears for diabetes.

As per the study attitude towards foot ulcer due to diabetic was 45.3%, harmful caused by bare foot walking was 54.7%. They also reported inspecting feet (38.7%), need of washing and drying feet regularly (44.7%) are must for preventing DFU. Among the cohort only 52% reported that foot care practices are must among the diabetics.

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Table 1: Diabetic foot care practices

Practices	Correct responses	
	Frequency (N)	Percentages (%)
Examines feet regularly	47	31.3%
Washes feet regularly	63	42%
Trims toe nails regularly	128	85.3%
Checks foot wear for sharp objects before wearing	47	31.3%
Walks barefoot	126	84%
Applies oil on feet	53	35.3%
Foot wear fits properly	143	95.3%

As shown in Table 1, majority 68.7%, 58% and 68.7% were not examining, washing their feet and checking before wearing foot wear regularly. Among 47 examining individuals 51%, 28%, 11% and 10 % were examined immediately waking up, morning time, evening time and before going to bed at least once respectively. Among 126 bare foot walkers 81 (64%) were walking bare foot inside alone and 75 (36%) were walking bare foot outside even on roads. Among 63 cohorts 53%, 41% and 6% were using cold, lukewarm and hot water respectively for washing their feet. Only 62% dries their feet after washing. For trimming their nails, majority used nail cutter (82%), blade (12%) and knife (6%).

Table 2: Association between Socio demographic characteristics and KAP

Variables	Chi square value	P value
Age and knowledge	5.748	$<0.01^{*}$
Socio economic status and knowledge	16.564	$<0.001^{**}$
Socio economic status and attitude	12.177	$<0.001^{**}$

Highly high significant with P value<0.01** *****Very high significant with P value<0.001

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On computing all the knowledge, attitude and practice correct responses and considering median scores, above to it were considered adequate one. Among 150 cohorts, 53.3%, 48% and 44% were with adequate knowledge, good attitude and adequate practice.
Chi square test for correlation between socio-demographic characteristics and KAP levels of diabetic patients were given in [Table: 2].

Discussion:

Our study was conducted among 150 diabetic patients without previous history of DFU in view of avoiding bias. But the study conducted byFaraja S. Chiwanga[5] reported that the duration of diabetics and previous history of DFU has no effect on the awareness. The importance of knowledge, attitude and practise on foot care in prevention of DFU is a widely accepted fact; however half of the cohort never receives any information about foot care.

Our study shows good knowledge on foot care of 53.3%, some studies done by HanuGeorge[12] and Hasnain S[13] even shown higher knowledge of 75%. The study done by ViswanathanV,[14] Pollock RD,[15]Desalu OO,[16] and AL Khaldi YM[17]reported even poor knowledge (<20%). In our cohort > 75% aware that medications, diet and exercises can prevent diabetics and DFU which is similar to the study done by HumeraBanu.[18] SumanSurabh et al[7] in their study reported that > 90% aware the prevention modalities. > 65% of the cohorts were not examining their feet at any time, which is similar to the study done by HanuGeorge[12] and even some study done by Shyam Kishore[19] shows very low inspection of feet (6.5%). Only 42% were washing their feet regularly but in the study done by Kaur K,[20] SumanSaurabh,[7]Shyam Kishore[19] shows higher rate of washing their feet regularly with 63.3%, 80.6% and 98% respectively.
In our study, indoor bare foot walkers were 64% but studies done by SumanSaurabh,[7]Hanu George,[12]Desalu OO,[16] Al-Khaldi YM,[17]Hasnain S,[13] Viswanathan V[21] shows 92.4%,87.3%,62%, 38%, 18% and 10% were bare foot walkers inside the house respectively. Least of less than 36% cohorts were walking barefoot outside the house which is similar to the study done by ShyamKishore.[19] Majority were trimming their nails properly (>80%) which is similar to the study done by SumanSurabh[7] (72%) and Shyam Kishore[19] (>60 %).
Adequate practises on foot care among our cohort were less (44%) compared to the studies done by HanuGeorge,[12]Shyam Kishore.[19] Some studies done by CallePascualAL[22] and Jayaprakah P[23] even shows poor practise on foot care of less than20%.
Among associated factors for foot care on diabetics age, socio economic status were associated with knowledge and attitude on foot care practices, but in the study done by SumanSurabh[7] shows less education status is associated with poor diabetic awareness.

Conclusion:

This being a cross-sectional study, the impression of foot care education onchanges in foot care practices and thereby ulcer development (follow up) could not be investigated. Education plays a significant role not only in the prevention of
diabetes itself but also in preventing its complication and is likely to be effective in reducing the burden of diabetic foot ulcer. Since diabetic foot is preventable, create awareness and dissemination of knowledge on self-care management with the emphasis on lifestyle modifications and behavioural changes regarding foot care using audio-visual (AV) aids at all

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healthcare centres. And health care facilities should include foot care services among other routine services that are provided to diabetics in order to identify the patients with risk factors and those who already have foot ulcers at the earliest.

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