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Prevalence of Diabetes Mellitus in Raysan Village, Gandhinagar, Gujarat, India

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ABSTRACT:

Little work has been done on prevalence of diabetes mellitus in the rural area of Gandhinagar. This paper reports the prevalence of both type 1 and type 2 diabetes mellitus of Raysan Village, Gandhinagar, Gujarat, India. The community based study was conducted by home to home survey through interviewing and communication technique. Specific data collection form was prepared for taking demographic details, medical history, medication history, past bio-chemical investigation reports, current medication. Total population of Raysan Village was 2673 and 34 diabetic were found. So, the prevalence rate of Raysan Village in Diabetes Mellitus was 1.27%. Among 34 diabetic, 23 were male and 11 were female respectively. This report highlights the prevalence of Diabetes mellitus in Raysan Village.

KEY WORDS: Diabetes Mellitus, Prevalence, India, Epidemiology, Rural area, Gujarat

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INTRODUCTION

"In every country and in every community worldwide, we are losing the battle against this cruel and deadly disease" said Jean Claude Mbanya, President of the International Diabetes Federation (IDF).[1]

The number of people with diabetesis increasing due to populationgrowth, aging, urbanization, and increasingprevalence of obesity and physicalinactivity. Quantifying the prevalenceof diabetes and the number of people affectedby diabetes, now and in the future,is important to allow The prevalence of both type 1 and type 2 DM is increasing worldwide, the prevalence of type 2 DM is rising much more rapidly because of increasing obesity, reduced activity levels and population aging.[3]

The International Diabetes Federation (IDF) estimates that 366 millionpeople had DM in 2011; by 2030this would have risen to 552 millionworldwide whilein India it estimates the total number of people with diabetes to be around 61.3 million in 2011, projected to reach 101.2 million by 2030.[4]

Gujarat is having the second highest number ofdiabetics in the country after Tamil Nadu. Though no exact figures were available for diabeticsin the state, their number might bearound 10 per cent of the total population.[5]

There are few community based studies were done in Ahmedabad city for prevalence of Diabetes Mellitus.Prevalence of diabetes mellitus in Ahmedabad was 7.33%. Majority of the study population was between 45-60 years.[5]It is importantto have region-specific prevalence data ofdiabetes so that appropriate public health measurescan be initiated by public policymakers andsupported by all those concerned. So this studywas conducted to find out prevalence of diabetesmellitus among rural area of Gandhinagar i.e. Raysan Village, Gandhinagar, Gujarat.

MATERIALS AND METHODS

This study was planned to assess the prevalence of DM in Raysan Village, Gandhinagar, Gujarat.

A community basedstudy was conducted in Raysan village by home to home survey through interviewing and communication technique for finding the prevalence rate.

Raysan Village is a part of Gandhinagar. It is a rural area located in Gandhinagar district.

This study was performed over a period of 2 month from October 2015 to November 2015.

The person who is on Anti-Diabetic Medication or his/her medical reports suggesting DM was taken in study group.Before the execution of this survey we have prepare a data collection form for diabetic patient which includes following parts like Demographic Details, Patient Medication History, Patient Medication History, Past Bio-chemical investigation reports and Current Medication which were collected through Communication and interviewing technique.

RESULTS

The survey reveals totalpopulation of Raysan village is 2673 people.Out of 2673 people total 34 were diabetic. The overall prevalence rate of Diabetes Mellitus among the individual of Raysan Village was 1.27%. Among 34 Diabetic patients, 23 were male and 11 were female.Out of 34 Diabetic patients, 29 were having Type 2 Diabetes Mellitus, while 5 were having Type 1 Diabetes Mellitus.Total 5 diabetic patients were among the age group of 5-18 years, while other 29 patients were above 18 years.

Table: 1 Prevalence of Diabetes among the population of Raysan Village, Gandhinagar, Gujarat

Population	Male (n= 1546)(%)	Female (n= 1127)(%)	Total (n= 2673)(%)
Diabetic	23 (1.48%)	11 (0.97%)	34 (1.27%)
Non-Diabetic	1523 (98.51%)	1116 (99.02%)	2639 (98.72%)

Table: 2 Demographic Details of diabetic population of Raysan Village, Gandhinagar, Gujarat

Demographic Variables	Male (n=23) (%)	Female (n=11) (%)	Total (n=34) (100%)
AGE (IN YEARS)			
5-18	5 (21.7%)	0	5 (14.7%)
19-30	6 (26%)	0	6 (17.6%)
31-40	5 (21.7%)	5 (45.4%)	10 (29.4%)
41-50	4 (17.3%)	4 (36.3%)	8 (23.5%)
>50	3 (13%)	2 (18.1%)	5 (14.7%)
RELIGIONS			
Hindu	19 (82.6%)	11 (100%)	30 (88.2%)
Muslims	3 (13%)	0	3 (8.8%)
Others	1 (4.3%)	0	1 (2.9%)
MARITAL STATUS			
Married	17 (73.9%)	10 (90.9%)	27 (79.4%)
Unmarried	5 (21.7%)	0	5 (14.7%)
Widow	1 (4.3%)	1 (9%)	2 (5.8%)
Divorce	0	0	0

EDUCATION			
Illiterate	15 (65.2%)	9 (81.8)	24 (70.5%)
Primary	5 (21.7%)	2 (18.1)	7 (20.5%)
Secondary	2 (8.6%)	0	2 (5.8%)
Higher Secondary	1 (4.3%)	0	1 (2.9%)
Graduate	0	0	0
Post-Graduate	0	0	0
OCCUPATION			
Housewife	0	10 (90.9%)	10 (29.4%)
Student	5 (21.7%)	0	5 (14.7%)
Retired	1 (4.3%)	0	1 (2.9%)
Unemployed	2 (8.6%)	0	2 (5.8%)
Laborer	5 (21.7%)	0	5 (14.7%)
Business	6 (26%)	1 (9.09)	7 (20.5%)
Private Job	3 (13%)	0	3 (8.8%)
Government Job	1 (4.3%)	0	1 (2.9%)

DISCUSSION

This prevalence study uses a simple method of data collection, focusing on finding pharmacoepidemological data of rural area of Gandhinagar. Pharmacoepidemiological data plays significant role in health care. Such data is not compiled or available in our setting. Therefore, it is important to find out prevalence rate of diabetes which can render pharmaceutical care to persons with diabetes for future studies.This study finding highlights the fact that diabetes which was erstwhile associated with urban lifestyle is also prevalent in the rural population. This may be because urban ways of living and sedentary lifestyles are gradually being adopted by the rural masses as well.[6]Another important finding of this study is finding the perfect population of Raysan Village up to November2015.Prevalence of Diabetes in the present piece of study was 1.27% which is similar to the study reportedMirpur and Kotli districts of Azad Jammu and Kashmir (AJ & K) carried out few years back which found prevalence of 1.26%.[7]Around the same period the prevalence of type 2 diabetes mellitus in Ahmedabad was reported to be 21% which is higher than the rural areas.[8]The data reveals the lower prevalence of diabetes mellitus in rural area as compared to urban areas.The data has important implications for health policy makers, service providers and all stakeholders in diabetes.[9]The study done by Mohan V et al, Urban rural differences in prevalence of self-reported diabetes in India, as part of the WHO-ICMR Indian NCD risk factor surveillance, has found the prevalence of self reported diabetes in urban areas was more than rural areas.[10]

In this study, majority of diabetic was in the age range of 40-60 year. The finding from our study show that male diabetic patients were more than females and It is scientifically proven and as wells as discussed in a number of articles reviewed so far that males are more prone to get diabetes mellitus compared to females.

CONCLUSION

This paper adds a little important information about the epidemiologyof diabetes in India. The observed data indicate diabetes mellitus is not a serious health concern in rural area of Gandhinagar. The present piece of study shows prevalence of diabetes is higher in the age group of 30-50 years, which shows increase in prevalence of onset of diabetes in young adult's and the prevalence increases with age. Our data underline the need for diabetes awarenessprograms including early diagnosis measures as well as structured and timely health surveys for majordiseases such as type 2 Diabetes Mellitus and its concomitant co-morbidities.

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