



STUDY ON AWARENESS OF SYMPTOMS OF HYPO AND HYPERGLYCEMIA AMONG DIABETIC PATIENTS OF RAIGARH.

Dr. Suyesh Shrivastava

Asst. Professor, Deptt. Of community Medicine, Late Shri Lakhi Ram Agarwaal Memorial Medical College, Raigarh (C.G.) earlier post

Prof and Dr. Pradeep Sukla*

Deptt. Of community Medicine, Late Shri Lakhi Ram Agarwaal Memorial Medical College, Raigarh (C.G.) earlier post. *Corresponding Author

Prof. (Dr.) Anand M. Lakra

Department of Anaesthesia, Late Shri Lakhi Ram Agarwaal Memorial Medical College, Raigarh (C.G.)

ABSTRACT **Background:** Diabetes Mellitus is actually a group of heterogeneous metabolic disorder and a life style disease. The effective management requires knowledge regarding the Self management of Diabetes Mellitus (DM) among the patients so that these patients will have less chance of developing hypo and hyperglycemic episodes.

Aim & Objectives: To assess the level of knowledge regarding Symptoms of Hypo and Hyperglycemia among diabetes and pre diabetes patients of district Raigarh.

Methodology: To assess the level of knowledge regarding DM, a cross-sectional observational Study amongst patients with DM having history of >3 months, of Out Patient Department (OPD) of Rural and Urban Health centres, (associated with Medical College and Hospital, Raigarh) Internal medicine and Obstetrics and Gynecology of Tertiary care hospital and Medical College and Hospital, Raigarh, was conducted between 1st December 2016 to 31st January 2017. One to one interview was taken to collect information from all the participants through team of doctors and health care providers. Statistical Methods: Data was analyzed using SPSS version 20.

Results: Approximately two third of the study subjects were confused in answering to the sign and symptoms of high and low blood sugar.

Conclusions: Study shows that specific awareness regarding symptoms of hypoglycemia or hyperglycemia in the study participants is not adequate.

KEYWORDS : Diabetes, knowledge, Raigarh.

Background: Diabetes Mellitus is a group of heterogeneous metabolic disorder and a life style disease. The effective management requires not only medication but also precise knowledge regarding the Self management of Diabetes Mellitus (DM) among the patients. It is a key factor to improve their quality of life and limit diabetic complications.

Aim & Objectives: The study aimed to assess the level of knowledge regarding Symptoms of Hypo and Hyperglycemia among diabetes patients of district Raigarh, using pre designed knowledge questionnaire for type-2 diabetes patients.

Methodology:

Ethical approval: After ethical approval from Institutional ethical committee of medical college convenient sample of 58 diagnosed diabetes and pre diabetes patients were included in the study and asked about Diabetes related knowledge.

Purpose of the Study: Academic in nature and to create awareness among diabetics.

Study Type: A cross-sectional observational Study.

Study place: Out Patient Department (OPD) of Rural and Urban Health centres, Internal medicine and Obstetrics and Gynecology of Tertiary care hospital and Medical College and Hospital, Raigarh.

Study period: 1st December 2016 to 31st January 2017

The study population: Diabetic and pre diabetics patients attending the O.P.D. of Rural and Urban Health centres, Internal medicine and Obstetrics and Gynecology.

Inclusion criteria: Patients with Type 2 diabetes (DM-type 2) having history of ≥ 3 months, pre diabetic patients attending OPD, who are up to 18 years and above and less than < 80 Yrs and patients who want to participate in study or given informed consent.

Exclusion criteria: Subjects not willing to participate & cooperate, and subjects who were suffering from psychiatric illnesses or severely ill were excluded.

Sample Size: Convenient sample of 58 diagnosed diabetes and pre diabetes patients. (The patients having Diabetes Mellitus for more than 3 months visiting Out Patient Department (OPD) of O.P.D. of Rural and Urban Health centres, Internal medicine and Obstetrics and Gynecology. (Between 1st Jan to 30th June 2017.)

Study Tool: A structured questionnaire formulated by extensive literature search. The questionnaire consists of Two parts.

First- in this section Socio-demographic profile & family history of diabetes if present was recorded.

Second- pre designed knowledge questionnaire to assess Diabetes Knowledge among study subjects.

Translation of the Questionnaire: For convenience, as the majority of diabetics (Study Subjects) communicate in Hindi and Chhatisgarhi language, the "pre designed knowledge questionnaire" was converted to both Hindi and local Chhatisgarhi language to save time and get correct information. A team of three doctors and a language expert, scrutinized the translated questionnaire, compared it with the original tool and appropriate changes were made, including modifications for making the tool culturally more acceptable. This Hindi/ Chhatisgarhi version was translated back to English language, by another person proficient in both languages. This modified translated version was compared with the original English tool. A pilot study was conducted among known diabetics to evaluate the feasibility of questionnaire with reference to time, place & person.

One to one interview was taken to collect information from all the participants through pre designed knowledge questionnaire. The purpose of the study was explained and the written informed consent was obtained.

Statistical Methods: Data was analyzed using SPSS version 20.

Results: Data were collected as per objectives through the interview with all Type-2 Diabetes Mellitus patients registered in Health Centre.

Mean age of the patients was 48 ± 10.2 years. The distribution of the patients according to age shows that fewer patients were in age group

of 21-30 (5.2 %) and 31 to 40 (13.88 %) years age groups, while the majority (29.3 %) were between 51-60 years age group (Table 1). Family history of diabetes was present in around one fourth of the patients.

Although questionnaire included 24 questions regarding Diabetes management, here we are presenting data regarding knowledge of the patients with respect to symptoms of hypo and hyperglycemia. Most alarmingly, approximately 70% to 60 % of the study subjects were confused in answering to the sign and symptoms of high and low blood sugar respectively. (Figure 1) More than 95% of the study subjects could not answer correctly that lack of insulin causes diabetes, or from where insulin is secreted.

Discussion: Diabetes is one of the major causes of morbidity, it has an impact on the patients' quality of life and involves enormous health costs for every society (Kasper L, 2008) and various micro and macrovascular complications are found in Diabetes Mellitus patients (Shrivastava and Khalique, 2017). Knowledge of Symptoms of Hypoglycemia and Hyperglycemia is very essential not only for diabetics but for general population as well. Unawareness to this particular domain may lead to complications which are fatal like hypoglycemic unconsciousness episodes and hyper-osmolar Coma. As we found that knowledge regarding symptoms of hypoglycemia was poor among study participants, similar results were obtained from other authors as well. Jackson et al (2014) in their study at Nigeria found that general performance of the knowledge items was high, areas like glycosylated haemoglobin (HbA1c), physical activities, hypoglycaemic symptoms, and medication-related items performed relatively poorly. They have used Diabetes Self-care Knowledge (DSCK-30) questionnaire. Similarly Arora et al (2011) conducted a study in star county, USA through "24-item Diabetes Knowledge Questionnaire (DKQ)", it was administered to 291 primarily Latino adults who either had diabetes or who identified themselves as a caregiver for an immediate family member with diabetes. At the end result of study, they found that Diabetes knowledge that frequently missed questions involved diet, signs of high/low blood sugar, organ function, and wound care and diabetes-specific knowledge was poor in both patients and primary family caregivers.

Conclusions: Findings of the present study show that specific awareness regarding symptoms of hypoglycaemia or hyperglycaemia in the Type -2 diabetes patients and pre diabetics is not adequate. There should be reinforcement of health education made at additional points of contacts; this may provide the best opportunity for improvements in patient's knowledge.

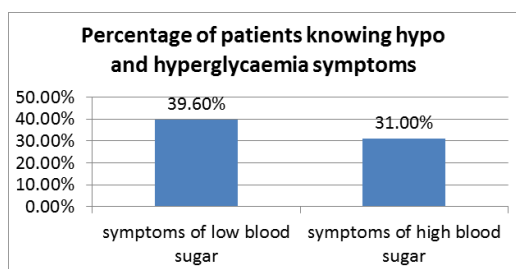
Limitations of study: Study was done in convenient sample size of 58 subjects (small sample compared to other studies with the same objectives) which included both diabetic and pre-diabetic subjects.

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TABLE- 1: Age wise distribution of study population (n= 58)

Socio- demographic profile	Male	Female	Total N(%)
Age group			
21 – 30	1	2	3 (5.2 %)
31 – 40	3	5	8 (13.8 %)
41 – 50	11	5	16 (27.6)
51 – 60	9	8	17 (29.3)
> 60	6	8	14 (24.1)
Total			58

Figure- 1: Responses of individual questions regarding knowledge of Hypo and Hyperglycemia (n = 58)



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