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KNOWLEDGE, ATTITUDE, PRACTICE OF MANAGEMENT OF DIABETES MELLITUS AMONG POSTGRADUATES IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Introduction: Diabetes mellitus is a chronic metabolic disorder associated with significant morbidity and mortality. A KAP (Knowledge, Attitude and Practice) study is a representative study of a specific population to collect information on what is known, believed and done in relation to a particular topic. As Postgraduates form one of the important building blocks of good clinical practice and rational therapeutics, thus they can be pooled in as potential clinicians in management of Diabetes mellitus. Hence, this study was carried out to access the knowledge, Attitude and Practice about management of Diabetes Mellitus among postgraduates. Materials and methods: The study was conducted among postgraduates of M.R.Medical College, Kalaburagi. 100 Post graduate students participated on a voluntary basis. A predesigned and pretested questionnaire was administered. Data obtained was analyzed using MS Excel and SPSS version 16. Results: - In the study over all knowledge on management of Diabetes Mellitus among Postgraduates was 76%. Amongst them 62% had positive attitude towards management of Diabetes mellitus and 38% had negative attitude. 71% of postgraduates have prescribed anti diabetic drugs in their practice and the remaining 29% did not prescribe, the most common reason for not prescribing was not having adequate knowledge about management of Diabetes Mellitus. Conclusion: Postgraduates can be source of accessible Rational Therapeutics. This study shows that postgraduates have satisfactory knowledge

about management of Diabetes Mellitus and there is a wide gap between the knowledge and management. There is a need to bring in awareness among the postgraduates and also to update their knowledge so as to have a rational therapeutics of Diabetes mellitus.

KEYWORDS: KAP, Diabetes, Postgraduates.

Introduction

Diabetes Mellitus, which is one of the oldest diseases known to man was first reported in Egyptian manuscript about 3000 yrs ago. It was estimated that 366 million people had Diabetes mellitus in 2011 and would rise upto 552 million by 2030.[1] In 2014, according to International Diabetes Federation, an estimated 381 million people had Diabetes.[2] Its Prevalence is increasing rapidly.[3] The incidence of type 2 Diabetes Mellitus varies substantially from one geographical region to the other based on their environmental and lifestyle modifications.[4] Diabetes Mellitus is associated with both micro as well as macro vascular complications which can be life threatening. The most common being the cardiovascular disease accounting for about 80% of deaths among Diabetes patients and This rapidly increasing global burden of Diabetes mellitus along with associated cardiovascular risk, brings in the need for continued generation and application of evidence based therapies to reduce cardiovascular risk in this high risk populations.[5] Diabetes mellitus caused 4.6 million deaths in 2011.[6] Advances in clinical medicine with evolution of Good Clinical practice and Evidence Based Medicine has increased the importance of Diseases like Diabetes and Hypertension which affects the Major population. Postgraduate students can be very good source of Rational therapeutics if they are motivated to learn and update their knowledge. Therefore understanding of knowledge, Attitude and Practice with regards to management of Diabetes Mellitus among Postgraduates is important. Hence this study was done to find out the Knowledge, Attitude and the Practice with regards to Management of Diabetes Mellitus among Postgraduate Students

Materials and Methods

It is a cross-sectional, observational study conducted on first, second and third year Post-graduate Students of M.R.Medical College, Kalaburagi in may 2015. The objective of the study was explained to the students. 100 Postgraduates voluntarily participated. Informed consent was obtained from them. A semi-structured and pre-tested close ended questionnaire was designed based on objective. This was given to the postgraduate students to obtain information regarding Knowledge, Attitude and Practice regarding management of Diabetes

mellitus. Knowledge regarding risk factors, precautionary measures to prevent Diabetes, Normal fasting blood glucose (FBS), HbA1c cut off level, First line anti diabetic drug, Minimum hours of fasting to do FBS, drug of choice for gestational Diabetes mellitus were asked. And also about whether the postgraduate has prescribed any anti diabetic drug to any patient and the reason for not prescribing was elicited. Data obtained was analyzed using MS Excel and SPSS version 16 presented in the form of counts and percentages.

Results

Out of 100 postgraduate students there were 11% first year, 49% second year and 40% third year students. The age of the students ranged from 26years to 30yrs.The mean age of the postgraduates was 28 years. All the participants had a satisfactory knowledge regarding the various aspects of management of Diabetes**.** The overall knowledge of the students (Table 1) was 76%. Maximum respondent's i.e, 99% of postgraduates knew the risk factors associated with diabetes mellitus and about the precautionary measures to be taken to prevent diabetes mellitus followed by 76% knew the drug of choice for gestational diabetes. Only 58% of postgraduates knew the minimum hours of fasting required before doing Fasting blood glucose test and about the first line oral anti diabetic drug used, though these were the basics of Diabetes Mellitus Management. About 71% of postgraduates have prescribed anti diabetic drugs during their practice (Table 3) and the remaining 29% did not prescribe, most common reason for not prescribing the drugs was not having adequate knowledge about the drugs. Amongst those postgraduates who have prescribed anti diabetic drug, 62% showed positive Attitude (Table 2 and Fig 2) towards management of diabetes mellitus and 38% showed negative attitude.

TABLE 1: Knowledge About Management Of Diabetes Mellitus Among Postgraduates.

Sr. no	Knowledge	First year(n=11)	Second year (n=49)	Third year (n= 40)	Total (n=100)
1	Risk factors for diabetes mellitus	11(100%)	48(98%)	40(100%)	99%
2	Precautionary measures to prevent Diabetes mellitus	11 (100%)	48(98%)	40(100%)	99%
3	Normal fasting blood sugar	10(90.9%)	33(67.34%)	32(80%)	75%
4	HbA1c cut off level for considering as diabetes	7(63.6%)	36(73.46%)	27(67.5%)	70%
5	First line oral hypoglycemic agent	5(45.45%)	31(63.26%)	22(55%)	58%
6	Minimum hours of fasting	7(63.6%)	28(57.14%)	23(57.5%)	58%
7	Drug of choice for gestational diabetes mellitus	11(100%)	34(69.38%)	31(77.5%)	76%

TABLE 2: Attitude Of Postgraduates Regarding Management Of Diabetes Mellitus.

Attitude	First year (n=11)	Second year (n= 49)	Third year (n=40)	Total (n=100)
Positive	7(63.6%)	32(65.30%)	23(57.5%)	62%
Negative	4(36.36%)	17(34.69%)	17(42.5%)	38%
Total	11	49	40	100%

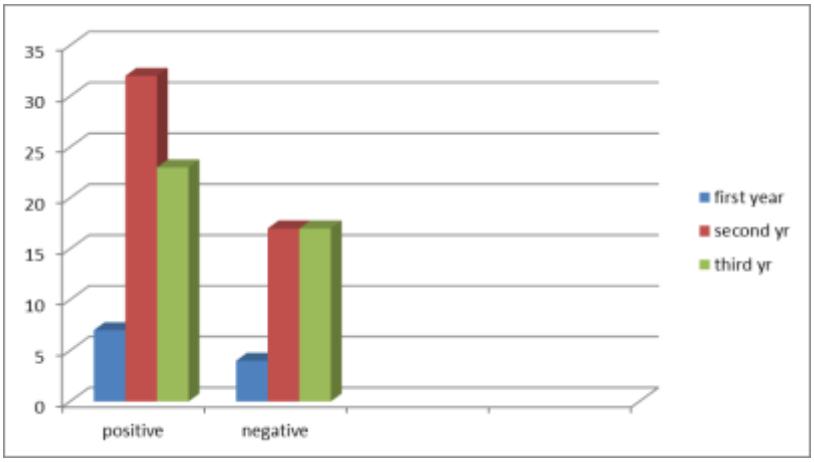

Figure 1: bar graph showing attitude of postgraduates regarding management of diabetes mellitus.

Table 3: distribution of postgraduates in respect to practice.

Practice	First year (n=11)	Second year (n= 49)	Third year (n=40)	Total (n=100)
Prescribed	7(63.6%)	36(73.46%)	28(70%)	71%
Not prescribed	4(36.36%)	13(26.53%)	12(30%)	29%
Total	11	49	40	100%

Discussion

Type 2 DM is characterized by insulin insensitivity caused due to insulin resistance, declining insulin production and eventually leading to pancreatic beta-cell failure[7,8] and decrease in glucose transport into the liver, muscle cells, and fat cells. There is an increase in the breakdown of fat with hyperglycemia. The involvement of impaired alpha-cell function was also one of the pathophysiology of type 2 DM[9], that was recently been recognized. Patients with type 2 DM should receive a medical nutrition evaluation, lifestyle recommendations, physical and functional ability training which will enable to reduce the mortality and morbidity of the disease.[10] Metformin which is an oral hypoglycemic drug belonging to Biguanide group forms the first line of drug for treatment of Type 2 Diabetes mellitus.[11] For successful implementation of 100% voluntary management of Diabetes mellitus it is necessary to conduct various studies to understand and access the knowledge

and perception regarding management of diabetes mellitus. The present study assessed the knowledge, Attitude and Practice regarding management of Diabetes Mellitus among postgraduate students as they can be one of the important sources of rational therapeutics in coming years. Knowledge on management of Diabetes among postgraduates was measured using the following questions; which comprised of respondents' understanding on the risk factors for Diabetes; precautionary measures to prevent Diabetes; normal fasting blood glucose levels; HbA1c cut off to be considered as Diabetic; first line oral anti diabetic drug; minimum hours of fasting required for testing of fasting blood glucose; drug of choice for gestational diabetes. Overall knowledge was 76% thus satisfactory knowledge was seen among postgraduates. An awareness session can be conducted as early as possible when the students are admitted to Post graduation. The present study indicates about 71% of postgraduates have prescribed antidiabetic drug and 29% of postgraduates have not prescribed antidiabetic drug and 62% of postgraduates showed positive attitude and the most common reason for not prescribing was not having adequate knowledge about the drugs.

Postgraduate students who have not prescribed any antidiabetic drugs should be educated about the Drugs and the management of Diabetes. Postgraduates with positive attitude should be made aware of the updates, and their doubts about the management of Diabetes mellitus has to be cleared so as to do Rational Therapeutics. Provision of adequate knowledge, awareness, communication materials among the postgraduates about the updates and current trends in management of Diabetes mellitus helps in having a Good and Effective Clinical practice in future and thus decrease the global burden of disease

Conclusion

Postgraduate students have shown satisfactory knowledge about management of Diabetes mellitus which is one of the hindrances in achieving Rational Therapeutics. An awareness program at the entry of the Post graduation can be conducted so as to guide them at the right time. Making Postgraduates aware about the management of Diabetes Mellitus not only benefits for the Patient but also for the Doctor himself, as it could be a motivating factor. Making postgraduates aware of current trends, like number of hours of fasting required before testing of fasting blood glucose, HbA1c cut off levels for considering as Diabetes mellitus , accurate management of Diabetes helps in reducing the global burden of disease as the postgraduate students form an important role and bridge between the full fledged practitioners and the budding doctors. This young active and receptive population of

Postgraduates can be encouraged to know and update about management of Diabetes mellitus and to meet the requirements of Good Clinical practice and Rational Therapeutics

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