

## Assessing the Knowledge, Attitudes and Practice of Diabetic Complications among Physicians in Taif Saudi Arabia

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### ABSTRACT

**Background and aim of the work:** The aim of this study is to assess the Knowledge, Attitude, and Practices (KAP) towards diabetes and its complications among physicians in Taif.

**Subjects and Methods:** this survey was done by interviewing the physicians to fill the questionnaire focusing on their awareness about screening, diagnosis, and preventive measures of diabetic complications.

**Results:** A total of 101 physicians (72% females), 88% of them were practicing in urban areas and 78% of them practiced > 5 years. 90% of the physicians had postgraduate qualifications and 49% of them had special training on diabetes management. Eighty one percent follow guidelines for care for diabetes. In 72% of practioners diabetic patients constituted 18-50% of patients in their daily practice and in 28% of practioners diabetic patient were > 50% of daily practice. Over 80% of the participants were aware about the correct answers. Comparing the percentages of awareness among practioners in tertiary hospitals and primary health care centers it was significantly higher in the formers (P< 0.05). The question which had the highest percentages of correct answer was about the value of periodic examination of diabetic patient (correct in94%) The effect of lipid profile on diabetic complications was the least to be answered correctly.

**Conclusion:** The study revealed a good to excellent awareness of Taif practioners about early detection, diagnosis and management of diabetic complications especially those practicing in tertiary hospitals, reflecting the values of continuous medical education programs applied in such hospitals.

**Keywords:** Taif physicians, diabetic complications, KAP

### INTRODUCTION

The incidence of diabetes is rising throughout the world, by 2025 it is anticipated that there will be 300 million diabetics all over the globe and more than 75 percent of the diabetics will be in the developing countries <sup>(1, 2)</sup>. In Saudi Arabia the incidence is about 30% of the population <sup>(3, 4)</sup>. Physicians can play an important role with the care and education of people with diabetes <sup>(5)</sup>. This study was designed to carry out a survey on Physicians working in the urban and rural areas of Taif, to assess Knowledge, Attitude and Practices towards diabetes mellitus and its complications. The outcome will provide appropriate guidelines to the physicians, resulting in better care to the people with diabetes, ultimately leading to a reduction in morbidity and mortality among a large segment of the population.

### SUBJECTS AND METHODS

In this prospective controlled study which was conducted at tertiary hospital, primary health care centers, and private centers in Taif, Saudi Arabia, from January 2016 to June

2016. The study was approved by the Ethics Board of the hospitals and centers. The survey was done by interviewing the physicians to fill the questionnaire which focused on physician demographics and training in addition to screening, diagnosis, and preventive measures of diabetic complications. Statistical analysis: Data were gathered, tabulated. SPSS program, version 20.0(SPSS Inc., Chicago, IL, USA) was used. The data were expressed in number and percentage (qualitative) whereas, the quantitative data were expressed as means  $\pm$ SD. The significance between 2 means was tested by Student's t test. The chi-square and Fisher exact (FE) tests were used to differentiate between two groups. P<0.05 was considered as statistically significant. Pearson and Spearman's correlation tests were used to correlate between each parameter and different variants in the same group to find significant differences.

### RESULTS

A total of 101 physicians (72% females and 28% males) participated in the study, with

mean age of  $42.3 \pm 10.5$  years. 88% of them were practicing in urban areas and 12% in rural area, 45% practiced > 15 years and only 18% practiced < 5 years. Only 2% of them, their practice in private centers and the other 98% were in public centers and hospitals. Ninety percent of the physicians had postgraduate qualifications, and they included; internal medicine in 43%, general surgery in 25%, 17% were practicing family medicine, 12% ophthalmologists, and in the other 3% they were other specialties. Forty nine percent of the practitioners had special training on diabetes management and the other 51% were not. Eighty one percent follow guidelines for care for diabetes specially the American guidelines. In 72% of practitioners diabetic patients constituted 18-50% of patients in their daily practice and in 28% of practitioners diabetic patient were > 50% of daily practice. Over 70% of the participants were aware about the correct answers. Comparing the percentages of awareness among practitioners in tertiary hospitals and primary health care centers especially in rural areas it was significantly higher in the formers ( $P < 0.05$ ). The questions which had the highest percentages of correct answer were; all diabetic patients should have a periodic examination for early detection of complications? (Correct in 94%) and in a question about diabetic retinopathy and if early detection of the complication and treatment plays a critical role in the prevention of permanent visual loss? the answer was correct in 90%. The effect of lipid profile on diabetic complications was the least to be answered correctly followed by the relation of duration of the disease and development of complications.

## DISCUSSION

Physicians have essential role in diagnosis, caring, and education of diabetic patients in addition, they can augment the knowledge and motivate them to acquire a healthy life style, which would further lead to a good glycemic control providing protection from the chronic complications<sup>(4)</sup>. Complications of DM account for increased morbidity, disability, and mortality and represent a threat for the economies of all countries, especially the developing ones<sup>(5)</sup>. The present special issue has been devoted to the recent progress in our understanding of diabetic complications,

including the underlying molecular mechanisms, new diagnostic tools that facilitate early diagnosis, and novel treatment options<sup>(6)</sup>. The results of this study revealed variable aspects of the diabetic complications related KAP of Taif physicians. Ninety four per cent of the participants were qualified doctors with experience > 5 years in 98% of them. Over 80% of the physicians considered diabetes to be a dangerous disorder and early detection and proper management of its complications are mandatory to prevent serious outcome. Our results were comparable with other similar studies<sup>(7-9)</sup>. Diabetic subject must be oriented with the diabetic care guidelines which reflect the physician knowledge, implementation techniques and attitude<sup>(8)</sup>.

In the study of Chwalow *et al.* conducted on Family Physicians to assess their attitudes and practices in managing people with Type 2 diabetes mellitus about 90% of them follow the clinical guide lines for diabetic management and knew that estimation of blood glucose was the best parameter for assessing glycemic control and the majority of them were aware about the different medications used in the 2 types of diabetes either for glycemic control or to decrease the probability of renal impairment and the use of ACE Inhibitors for treating hypertension in diabetics<sup>(7)</sup>. Our results were in adherence with that of the previous study where Ninety percent of the physicians had postgraduate qualifications, Forty nine percent of the practitioners had special training on diabetes management, and eighty one percent follow guidelines for care for diabetes specially the American guidelines. Similar results were obtained from the study of Vinker *et al.* who evaluated the knowledge and attitudes of family physicians toward clinical guidelines in management of diabetes and prevention of its complications<sup>(8)</sup>.

In the study of Shera *et al.* they found that physicians in the rural areas had better level of knowledge on diabetes suggesting that, the rural physicians try to update their knowledge than the urban physicians, when it comes to life long common diseases such as diabetes.<sup>(9)</sup> in the present study we found that the percentages of awareness among practitioners in tertiary hospitals was significantly higher than those working primary health care centers especially in rural areas. However in

the same study of Shera *et al.* they found that of all the regions surveyed, the province of Sindh scored the maximum correct answers which suggested that this group of physicians had more opportunities to attend educational programs which are a regular feature in Karachi, the largest city of the province<sup>(9)</sup>. Mackenzie concluded in his study that diabetes is a lifelong disorder and diabetics are deficient in resources for comprehensive care and he added; for the successful management of a diabetics, the family physician has to be a part of team work, where the education of the diabetics is shared and coordinated by Continuing Medical Education (CME) Programs and he has to acquire the understanding, cooperation and involvement of other family members<sup>(10)</sup>.

#### CONCLUSION

The study revealed a good to excellent awareness of Taifractioners about early detection, diagnosis and management of diabetic complications especially those practicing in tertiary hospitals, reflecting the values of continuous medical education programs applied in such hospitals.

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