

### Management of type 2 diabetes. *Current practice in Saudi Arabia*

*To the Editor*

I read with interest the article of Dr. Al-Elq concerning ongoing trends in managing type 2 diabetes (T2DM) in the Kingdom.<sup>1</sup>

First, I was really surprised to read that just 0.6% of the studied sample of T2DM were managed without oral glycemia lowering drugs (OGLDs) or insulin. This is because standard texts as late as the last decade state that “approximately 50% of new cases of diabetes can be controlled by diet alone”.<sup>2</sup> To put the blame on the patients for such a vast change, as Dr. Al-Elq remarked<sup>1</sup> is not enough. The recent suggestion of the American Diabetes Association (ADA) to initiate metformin therapy in all T2DM patients with absent contraindications at or near the time of diagnosis of diabetes<sup>3</sup> might have played a more important role in this vast change. But, this would have necessitated calculation of those T2DM patients on metformin alone separately, which was not shown in the results. Incidentally, this important drug waited more than 15 years to be approved by the USA Food and Drug Administration. Naturally, a study planned by a giant of the pharmaceutical industry will be steered in its favor; Sanofi-Avantis “group” is the owner of 9 out of the 33 insulin and insulin delivery device proprietary items that the September, 2009 issue of the British National Formulary (BNF) embraced, but none of the 18 proprietary OGLDs that the same issue of the BNF included.<sup>4</sup> Thus, insulin therapy was segregated into basal and premix preparations and projected in a table and a figure, but nothing more than the abbreviation “OGLDs” for the many groups of such drugs was shown.

Dr. Al-Elq succinct introductory section well projected the facet of the expenses that the epidemic of T2DM entails. Contrariwise, the least expensive therapeutic option of lifestyle modification alone is regressing in alarming recession. However, the brief communication that appeared in February issue of Saudi Medical Journal<sup>5</sup> stands as solace because it embraces a plan likely to hit the actual cause of the epidemic of non-communicable diseases including T2DM. The article of Dr. Al-Elq would have needed a “disclosure” more than his other article that appeared in the same issue of the Journal.<sup>6</sup>

Dr. Al-Elq appears to have tackled the statistics of body mass index (BMI) and waist circumference

similarly deducing no significant gender difference. He remarked that Al-Nozha et al found in their study<sup>7</sup> more evident central obesity in diabetic Saudi women. I wonder whether the gender difference in the risky level of waist circumference of 102-88=14 cm lower in women has been taken into consideration on conducting the statistical evaluation; the BMI does not necessitate a gender difference. A mean waist circumference of 15.67 cm above the 88 cm upper acceptable level for women as opposed to just 0.85 cm for men sounds very likely to conform to and confirm Al-Nozha et al’s findings.

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### *Reply from the Author*

I appreciate Prof. Al-Dabbagh’s interest in my article on “Current practice in the management of patients with type 2 diabetes mellitus in Saudi Arabia.”<sup>1</sup>

First of all, I would like to remind Prof. Al-Dabbagh that the study evaluated several important aspects related to the management of patients with T2DM on which the pharmacological industry has no direct influences, such as patients’ education, screening for diabetic complications, and extent of metabolic control. Also, I would like to stress the point that my data are part of an international study using a standard case report form and although the research was funded and coordinated by Sanofi-Avantis International, use of medications was one of several components related to the care of patients with T2DM, which have been discussed in the article. To document the pattern of insulin usage was one of the objectives of the International Diabetes Management Practice Study (IDMPS).<sup>8</sup> Such an objective necessitated the segregation of insulin therapy into basal and premix preparation while analyzing the result of the study. Despite the fact that insulin is the most effective drug at lowering glycemia and the recent literature supporting the benefits of early insulin treatment in T2DM,<sup>9</sup> insulin therapy remained to be underutilized in many countries including Saudi Arabia.<sup>10</sup>

Our finding of only 0.6% of patients being controlled by lifestyle alone raises a concern regarding the attention taken to such an important mode of therapy. Part of the blame can be put on the patients themselves since evidence to date indicates low long-term adherence of T2DM patients to lifestyle recommendations.<sup>11</sup> Unfortunately, the type of OGLDs was not specified

in the case report form used by IDMPS. But, we have to keep in mind that the initial consensus statement of the ADA and the European Association for the Study of Diabetes regarding medical management of hyperglycemia in T2DM, where they suggested the initiation of metformin therapy in all T2DM patients with absent contraindications at or near the time of diagnosis was published in August 2006,<sup>12</sup> and it is unlikely that such a document has been translated into clinical practice to the degree that it significantly influences the type of therapy used for T2DM patients by the time our study was conducted in December 2006.

As Prof. Al-Dabbagh correctly mentioned, standard texts state that “approximately 50% of new cases of diabetes can be controlled by diet alone.” In fact, Al-Nuaim et al<sup>10</sup> and during a national survey conducted between 1990 and 1993 for chronic metabolic diseases among Saudi subjects found that 44% of patients with T2DM were treated by diet alone. The percentage of patients with T2DM being “treated” or “controlled” by diet alone varies between practices. The prevalence of patients with T2DM followed at 42 general practices in the UK and treated with diet only was 33.3% and it was in the range of 15.6-73.2%.<sup>13</sup> In this regard, I would like to draw the attention of Prof. Al-Dabbagh that the above statement is related to “new cases,” which may not be applied to our patients since the mean disease duration at my study was 8.25±6.49 years. Also, it is likely that glycemia of our patients was difficult to be controlled and hence they were followed by “diabetologists, endocrinologists, and general practitioners expert in managing diabetic patients.” Nathan et al<sup>14</sup> stated in their paper at the end of the section related to lifestyle intervention that “However, the limited long-term success of lifestyle programs to maintain glycemic goals in patients with type 2 diabetes suggests that the large majority of patients will require the addition of medications over the course of their diabetes.” For example, only 9% of patients treated with diet from the UK Prospective Diabetes Study (UKPDS) achieved hemoglobin A1c (HbA1c) level below 7% after 9 years of follow up.<sup>15</sup>

Prof. Al-Dabbagh’s point regarding the statistical method used to evaluate waist circumference is valid. Data available did not permit taking into consideration the baseline difference in the normal cutoff value of waist circumference between male and female patients. However, our study is a hospital based while the study of Al-Nozha et al<sup>7</sup> was a community based, which can partially explain the difference in the finding between the 2 studies.

Finally, I strongly support Prof. Al-Dabbagh’s opinion that the growing epidemic of non-communicable diseases including T2DM needs to have more attention and to be prioritized in the medical literature. We all need to work hard to “prevent” the occurrence of diabetes mellitus and the development of its devastating complications.

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#### Related topics

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