

Complications of diabetes: how to address & how to manage?

Editorial

Despite tremendous efforts for early diagnosis, investments on public awareness programs and increasing number of congresses and symposiums about better understanding of development of diabetes and its complications, we are still way behind our expectations for satisfying our patients as well as our budgets reflecting the treatment and complication costs.¹ While HbA1c remains the main source of following glycaemic regulation as a biochemical parameter, yet standardization studies for this unique item remains as a problem for many countries since the issue takes place one of the main topics of the sessions being held in diabetes society meetings.² Oral Glucose Challenge Test (OGTT) does stay the most important diagnostic tool, however cost of time pushed many authorities use A1c as part of the diagnosis. Meanwhile, normal levels not only did not prove that the patient did not have diabetes, but this new criteria in case of a widely use in either hospital or outpatient settings will diminish clinicians possible efforts due to ignorance of daily postprandial blood glucose monitoring.

Today, no one can barely state that all of the diabetes occurrence and mechanisms for complications are obvious today, since at least increasing number of immuno-pathologic evidence of the disease itself and disappointing outcomes of the newly discovered drugs leading to cardiovascular events and cancer, although the latter is on debate. Multi-center randomized studies performed during less than a decade ago, now announced that personalized diabetes management is utmost important and values equal to 6.5 or 7% for A1c for the elderly especially when they do suffer from cardiovascular disease, did diminish the life expectancy.³ Therefore, I would suggest to say 'diabetes treatment should be suitable according to the season of the diabetes that the patient is experiencing.' That is actually why we are re-shaping the prescription at least almost once a year for both monitoring the best glucose numbers that body does need and the complications before that is too late-irreversible.

Of the diabetes patients who have type 2, 50% have neuropathy. Symptoms do not regress in all, and does aggravate in some while glucose numbers diminish, and even within normal range of A1c care obtained, since glucose spikes during day and night, even adding many hypos will reveal a normal Hb glycosylation, which in fact will cheat the clinician about patient care and future plan during decision making. Owing to almost three months of diabetes duration reflection, A1c may not represent how carbohydrate, lipid and protein metabolism work for a patient –let's say- who has diabetes for 15years. Currently, we are aware of the fact that 15years of diabetes duration is not a real 2 digit number, but just luckily when the patient remembers his/her diabetes diagnosis. We believe at least we are 5years late today for the real-time diagnosis of diabetes, and this might be upto 20years if we take into consideration of the pre-diabetes state where already cardiovascular disease-endothelial dysfunction was given a start. Additionally, diabetic might have visited to a diabetes center for excellence for the last year and put an almost normal A1c level in front of you. But still your efforts on management, do not erase the risk of

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complications oral ready the represent deleterious glucose toxicity.

Scientists are working on better convenient diabetes drugs, less painful insulin injections, painless glucose measurement devices, better insulin delivery system that will catch up the postprandial glucose excursions, but also probability of complications even during existing normal A1c levels. Clear Path DS-120 is one of them, which does easily work in an office, i.e. an eye clinic such as ours where diabetologists work together with ophthalmologists. The instrument is developed in University settings and on market from San Diego now.⁴ It is not for diagnosis, definitely. But for suitable eyes for screening by ophthalmologists even some diabetologists who do not understand the biochemical and clinical differences in certain cases. During busy daily practice we do have the ability of having all our patients seeing atleast three months a part, so as to have more clues on what is going on throughout the body oral ready does have metabolic disaster. Machine is not useful in all cases for example those who have cataracts. Lens proteins are capable of reflecting somehow the rest of the body glycosylation or invasion of advanced glycosylation end products (AGEP) that may take place inside the vessel walls. Wide spread multi-center and multi-country studies and collaborations will identify the use of this fairly new challenge and also help clear out the situation that may better improve the conditions of the instruments depending on the feedbacks from clinicians.

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Conflict of interest

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