Comments on Aisha Sheikh et al (J Pak Med Assoc. 70: 1477, 2020)

Changing prevalence of Gestational Diabetes Mellitus during pregnancy over more than a decade : letter to the editors

Mohammad Yawar Yakoob

Madam, I read the letter[1] published in the August 2020 issue of Journal of Pakistan Medical Association with interest and have some concerns. Firstly, although the authors mention about 5000 deliveries on average per year but the burden of gestational diabetes mellitus (GDM) is not expressed in absolute numbers. That is, what is missing is when authors say 6.3% prevalence in 2005 but this percentage is in relative term so what was the exact numerator and denominator to know if GDM burden is in hundreds or thousands and if number of total deliveries per year increased over time because only average is mentioned. Secondly, the prevalence figures are not population or age adjusted. It may be possible that the prevalence may have shown a temporal trend of increase over the years because of increase in population/total deliveries or more older women visiting clinics (if age is a risk factor/confounder of GDM) rather than increased pathophysiology/greater screening/diagnosis of disease or increased obesity. Population increase and age redistribution should be separated from these factors or at least mentioned as a limitation. I believe that population increase can be somewhat adjusted in percentage i.e. per 100 deliveries but what about age? If authors can provide (according to epidemiological terminology) both standardized (usually age- and sex—adjusted) and non-standardized (crude) estimates for this descriptive frequency comparison if age group-wise data is available. Thirdly, we want to inform the authors, of our study[2] at The Indus Hospital in Karachi, Pakistan where we estimated the prevalence of GDM to be in the same range during approximately January to August 2017 at 17.8% (436/2451) as in this study.

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1. Sheikh A, Sheikh L. Changing prevalence of Gestational Diabetes Mellitus during pregnancy over more than a decade. J Pak Med Assoc. 2020 Aug; 70:1477-1478.
2. Wali AS, Rafique R, Iftikhar S, Ambreen R, Yakoob MY. High proportion of overt diabetes mellitus in pregnancy and missed opportunity for early detection of diabetes at a tertiary care centre in Pakistan. Pak J Med Sci. 2020 Jan; 36:S38-S43.

Response to Comments on Aisha Sheikh et al (J Pak Med Assoc. 70: 1477, 2020)

Changing prevalence of Gestational Diabetes Mellitus during pregnancy over more than a decade

Aisha Sheikh,[1] Lumaan Sheikh[2]

We are grateful for the valuable comments on our letter "Changing prevalence of Gestational Diabetes Mellitus (GDM) during pregnancy over more than a decade".[1]

In response to the first comment, we are sharing the exact numerator and denominator for this data from our institution in the table below, which could not be added because of the limit of submission of 1 table/graph in the letter.

The second comment is regarding the possibility of rise in prevalence of GDM due to increasing maternal age and thus the commenter has asked for age-adjusted data. Thanks for pointing that out, since,

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Table : Percentage of GDM per 100 live births

Year	Live births (n)	GDM (n)	Percentage GDM per 100 live births
2005	3690	233	6.3 %
2006	3999	352	8.8 %
2007	3919	331	8.4 %
2008	4088	351	8.58 %
2009	4026	337	8.37 %
2010	4205	373	8.8 %
2011	4380	432	9.86 %
2012	4447	589	13.2 %
2013	4513	726	16.08 %
2014	4792	984	20.5 %
2015	4910	736	14.98 %
2016	5065	749	14.78 %
2017	5397	1046	19.38 %
2018	5498	1065	19.37 %

ours is a huge data set, our team is working on different risk factors and reasons of rising GDM prevalence and we will be publishing that as a separate paper. The exact reasons for this temporal change in trend can only be explained from prospective cohort studies. However, the probable contributing reasons for this rise in prevalence that we have mentioned are well-reported in medical literature. A recent article by Dr. Moshe Hod has thoroughly commented on all these reasons including increasing maternal age.[2] So, although advancing maternal age is one reason, it is not the sole cause of this rise in prevalence; lower diagnostic thresholds for GDM on oral glucose tolerance test (OGTT) in the International Association of Diabetes in Pregnancy study groups' (IADPSG) criteria and requirement of only one single deranged glucose reading to make a diagnosis definitely leads to a rise in numbers. In addition, the increase in rates of obesity, prediabetes and diabetes in our population are contributing to the escalation of GDM in our pregnant women. The objective of our letter-to-editor was to show that the prevalence of GDM has gone up over all these years which further emphasize the need for concrete measures to screen and manage GDM to enhance maternal and fetal well being

Lastly, we are thankful for the commenter to share their very informative data from year 2017[3] which is showing comparable rates of GDM analogous to ours. The almost similar rates are justified by the fact that both the institutions (The Indus Health network and The Aga Khan University Hospital) are utilizing universal screening through IADPSG criteria for GDM screening which further corroborates with final comments of our letter to editor: "We need more data on GDM prevalence based upon the IADPSG criteria from different parts of Pakistan to know the exact burden of the disease".

Disclaimer: None to declare.

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1. Sheikh A, Sheikh L. Changing prevalence of Gestational Diabetes Mellitus during pregnancy over more than a decade. J Pak Med Assoc. 2020 Aug; 70:1477-1478.
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