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Prevalence of Diabetes Mellitus (DM) in São Paulo, an observational study

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Introduction

Diabetes mellitus (DM) is a group of metabolic disturbs that has the presence of hyperglycemia. Mostly of people with diabetes (PwD), appears to have the type 2 and are above 40 years old. Nowadays, it is estimated that there are 415 million PwD around the world. The greater part of them are in developing countries. In 2016, in Brazil, DM prevalence was estimated over 9.4% of the population (14.3 million people). Thus, since DM can bring a lot of chronic conditions and high cost of healthcare system, it is important to know its prevalence to provide better knowledge, diagnostic and prevention. Our target is to verify the prevalence of DM in the local population in a period of three years.

Methods

The information were collected for three years in health events hosted by the FCMSCSP in places with a huge circulation of people in the city of São Paulo. Medical students measured arterial blood pressure (BP), weight, height, body mass index (BMI), abdominal waist (AW) and capillary blood glucose (BG), as well as data about comorbidities and drugs. The collected data was stored and compared with IDF diagnostic criteria for improved glucose tolerance (IGT), considering that the last meal referred by the individuals was comparable to an OGTT (IGT if BG ≥ 150 mg/dl 2h after meal) and the prevalence was calculated accordingly to specific treatment for DM.

Results

In three years, we have obtained 838 entries (CI = 95%), of those 445 were women and 393 were men. The prevalence average in three years was of 10.45% (women) and 12.45% (men), 11.45% for both. Detailed results can be seen in Table 1 and 2 and Graphic 1.

Year	Sex	Blood Glucose			DM
		Average	SD	% altered	
2015	F	110.17	31.99	4.87%	12.72%
	M	114.75	32.26	2.00%	9.90%
2016	F	102.58	31.19	4.80%	10.60%
	M	115.17	56.35	2.54%	13.85%
2017	F	110.25	40.03	7.69%	8.05%
	M	115.93	49.55	8.69%	13.60%

Table 1 - Prevalence of DM and BG average per sex in the period

	Mean Age	SD	30-44	45-59	60+	Overweight	Obesity
Women	62,14	10,07	6,38%	21,27%	72,34%	82,97%	36,17%
Men	63	11,28	8%	28%	64%	69%	26,53%

Table 2 - Age Groups and prevalence of Obesity and Overweight per sex among people with DM in the period.

Graph 1 Blood Glucose (BG) Average and Diabetes Mellitus (DM) Prevalence per gender and year, 2015 to 2017

Discussion

We had satisfactory representation in the sample. Women with diabetes had higher prevalence of overweight and higher prevalence in comparison with men with diabetes. Data variation may indicate that MDs and medical students gave variable importance to DM, concerning about medical education and professionals prepare. There is a chance that the individuals did not know how to inform about their diseases, once the responsible one for the patients' instruction is the MD, this reinforces the concern. The prevalence above national average is a factor that must be taken account for the basic attention in the city, as well as for the healthcare expenditures and new screening and control strategies.

References

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