ISSN : 2350-0743

www.ijramr.com

International Journal of Recent Advances in Multidisciplinary Research
Vol. 10, Issue 10, pp.9082-9083, October, 2023

RESEARCH ARTICLE

POINT OF CARE TESTING FOR TRIGLYCERIDES IN BRAZIL: REGIONS, SEX AND AGE GROUPS

Bernardo Montesanti Machado de Almeida,[1] Mariléia Scartezini,[1] Anita L R Saldanha,[1] Ana Paula Pantoja Margeotto,[1] André Luis Valera Gasparoto,[2] Tereza Luiza Bellincanta Fakhouri,[1] Milena de Souza Vasconcelos,[1] Natália Rodrigues Daniel,[1] and Tania Leme da Rocha Martinez,[1*]

[1]Nephrology Department, BP - A Beneficência Portuguesa de São Paulo, São Paulo, Brazil
[2]Intensive Care Unit, BP - A Beneficência Portuguesa de São Paulo, São Paulo, Brazil

ARTICLE INFO

Article History:
Received 25th July, 2023
Received in revised form
28th August, 2023
Accepted 29th September, 2023
Published online 30th October, 2023

Key Words:
Triglycerides, Lipids, Survey, Brazil, Prevention.

ABSTRACT

Awareness of the prevalence of high triglycerides in an spontaneous survey in all of Brazilian regions. More recently, attention has increased to triglycerides, in particular, especially for its possible relation with remanescent chylomicrons and even Familial Hyperchylomicronemia Syndrome. Although triglycerides not being a major risk factor, it does relate to pro atherosclerotic markers. As to Brazilians controlling triglycerides levels, either by treatment or not spontaneously, in all sexes, age groups and regions, the results in Means are too abnormal. This fact points to preventive interventions and awareness actions by all sanitary politicians, medical and all other health professionals.

INTRODUCTION

Although Brazilian authors have already published results of surveys on samples of lipid profile per age and per region none of them can be characterized as the representative of the entire country's profile. Attention has been given mainly with priority to total cholesterol and its fractions. More recently, attention has increased to triglycerides, in particular, especially for its possible relation with remanescent chylomicrons and even Familial Hyperchylomicronemia Syndrome.

Objective

To evaluate how triglycerides are distributed in the five regions of Brazil, according to categories such as sex and age groups ranges, namely children, adults and elderlies in spontaneous and non-fasting conditions.

METHODS

The total sample analyzed consisted of 14.927 people, both sexes and ages starting at 20 yr old and over 80 yr, classified per two decades of life. The five regions were: Center West (CW), North East (NE), North (N), South Weast (SW) and South (S).

Corresponding author:** ***Bernardo Montesanti Machado de Almeida
Nephrology Department, BP - A Beneficência Portuguesa de São Paulo, São Paulo, Brazil.

The assay was done by Point of Care analysis (enzymatic, colorimetric) and sent to a databank using Internet of Things from where the results were extracted.

RESULTS

Sex: Female (F)=51.3%; Age Groups: 20 to 39-21(1)=55%, 40 to 59 (2)=32.32%, 60 to 79 (3)=22.80%, over 80 yr (4)=2.68% and not informed 20.65%. Triglycerides Mean of the total of sample: 272,11 mg/dl (Tg). Interpretation as to groups of results: concentration Less than 175(L), interval 175 to 400 - High (H) and over 400 as Very High (VH). As to participation in regions: CW=7.5%, NE=34.72%, N=14.88%, SE=23,65% and S=19.25%. By ranges in total by %: L=30.65, H=52.85 and VH=16.5. Means by sex: F=251.7 and male 292,16. Means by age group: 1-262,86, group 2: 296,19, group 3: 287,22 and group 4: 246,9. Tg 269,18. Means by region: CW: 269.16, NE: 283,18, N: 286,06, SE: 262 and S: 254,93.

DISCUSSION

Although triglycerides not being a major risk factor, it does relate to pro atherosclerotic markers[1-8]. Considering that all data came from spontaneous assays, interpretation can be both for baseline values of values evaluating treatments, whether lifestyle or medication, all the mean numbers presented are worrisome.

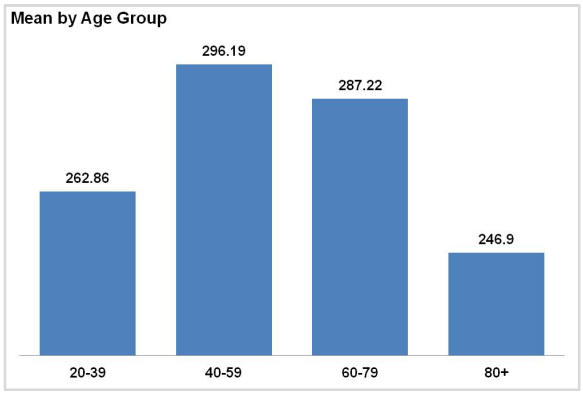

Figure 1. Triglycerides distribution by age group

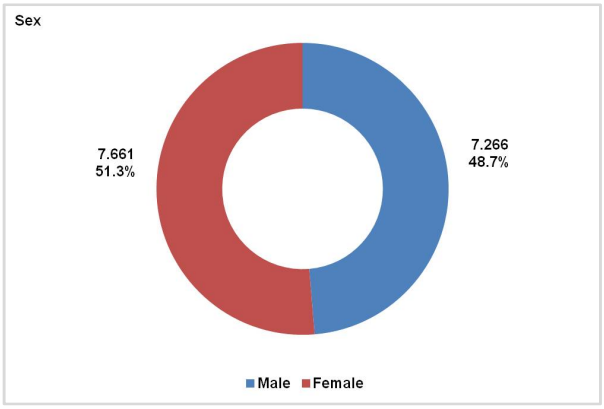

Figure 2. Triglycerides distribution by sex

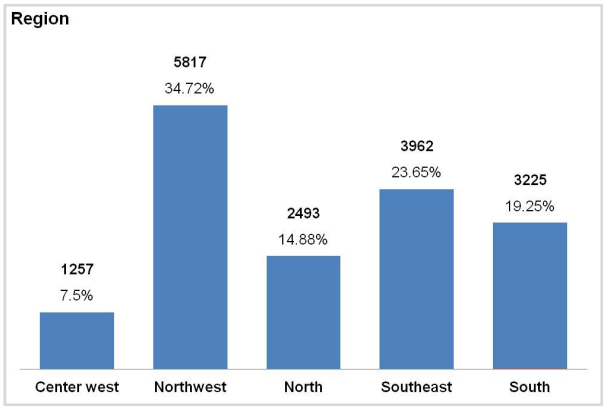

Figure 3. Triglycerides distribution by region

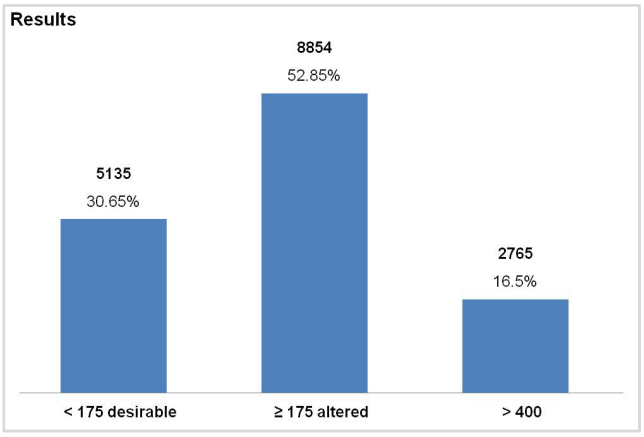

Figure 4. Triglycerides distribution in Total

CONCLUSION

As to Brazilians controlling triglycerides levels, either by treatment or not, spontaneously, in all sexes, age groups and regions, the results in Means are too abnormal. This fact points to preventive interventions and awareness actions by all sanitary politicians, medical and all other health professionals.

Acknowledgments: None.

Conflict of interest: None.

REFERENCES

Zou Q, Su C, Du W, Wang H, Zhang B, *et al*. 2023. Longitudinal Association between Physical Activity, Blood Lipids, and Risk of Dyslipidemia among Chinese Adults: Findings from the China Health and Nutrition Surveys in 2009 and 2015. *Nutrients*, 15(2): 341. doi: 10.3390/nu15020341

Patel CJ, Cullen MR, Ioannidis JP, Butte AJ. 2012. Systematic evaluation of environmental factors: persistent pollutants and nutrients correlated with serum lipid levels. *Int J Epidemiol*, 41(3): 828-843. doi: 10.1093/ije/dys003

Imano H, Li J, Tanaka M, Yamagishi K, Muraki I, *et al*. 2023. Optimal cut-off points of nonfasting and fasting triglycerides for prediction of ischemic heart disease in japanese general population: The Circulatory Risk in Communities Study (CIRCS). *J Atheroscler Thromb*, 30(2): 110-130. doi: 10.5551/jat.63358

Munter JS, van Valkengoed IG, Stronks K, Agyemang C. 2011. Total physical activity might not be a good measure in the relationship with HDL cholesterol and triglycerides in a multi-ethnic population: a cross-sectional study. *Lipids Health Dis*, 10: 223. doi: 10.1186/1476-511X-10-223

Siri SRA, Eliassen BM, Jacobsen BK, Melhus M, Broderstad AR, *et al*. 2019. Changes in conventional cardiovascular risk factors and the estimated 10-year risk of acute myocardial infarction or cerebral stroke in Sami and non-Sami populations in two population-based cross-sectional surveys: the SAMINOR Study. *BMJ Open*, 9(7): e028939. doi: 10.1136/bmjopen-2019-028939

Alexopoulos AS, Qamar A, Hutchins K, Crowley MJ, Batch BC, *et al*. 2019. Triglycerides: emerging targets in diabetes care? Review of moderate hypertriglyceridemia in diabetes. *Curr Diab Rep*, 19(4): 13. doi: 10.1007/s11892-019-1136-3

Haug EB, Horn J, Markovitz AR, Fraser A, Vatten LJ, *et al*. 2018. Life course trajectories of cardiovascular risk factors in women with and without hypertensive disorders in first pregnancy: The HUNT Study in Norway. *J Am Heart Assoc*, 7(15): e009250. doi: 10.1161/JAHA.118.009250

Mascarenhas P, Furtado JM, Almeida SM, Ferraz ME, Ferraz FP, *et al*. 2023. Pediatric overweight, fatness and risk for dyslipidemia are related to diet: a cross-sectional study in 9-year-old children. *Nutrients*, 15(2): 329. doi: 10.3390/nu15020329

****