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Editorial
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Interventions Obes Diabetes

Interventions in Obesity and Diabetes: Point of View

Rao GHR*

Laboratory Medicine and Pathology, University of Minnesota, USA

***Corresponding author:** Gundu HR Rao, Laboratory Medicine and Pathology, University of Minnesota, USA

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Editorial

Modern medicine has failed to reduce or prevent the incidences of cardio metabolic diseases such as obesity, metabolic syndrome and type-2 diabetes. Integrated approach to health care seems to be the future for effective management of these chronic diseases [1-5]. Obesity, excess weight and type-2 diabetes have reached an epidemic status, pose a global health crisis and as such contribute significantly to healthcare burden. According to various estimates, excess weight and obesity are the driving force for the observed epidemics of type-2 diabetes. The Non Communicable Disease (NCD) Risk Factor Collaboration Group, in their article in Lancet (April 2016) concluded that, "if the post-200 trends continue in the incidence and rise of type-2 diabetes, the probability of meeting the global target of halting or reducing the rise in the prevalence of type-2 diabetes by 2025, to the 2020 level worldwide is lower than one percent". According to the Institute for Health Matrices and Evaluation (IHME), currently 2.1 billion people (nearly 30% of the global population) are either obese or overweight. Since 1980, obesity has increased worldwide by two fold and diabetes by four fold, In this mini review, we will discuss some recent strategies and interventions for management of these chronic metabolic diseases.

Since we firmly believe, that early detection of the risks for cardio metabolic disease (CMDs) and effective management of the observed risks is the best choice, we will have to start any prevention strategy at the earliest stages of the disease initiation. What is the earliest stage that one can start prevention strategies? We have initiated a bilateral preliminary investigation between Children's National Memorial Hospital (Washington DC, USA) and Diabetes Group of King Edward Memorial (KEM) Hospital, Pune, India, to explore whether exosome shed by obese pregnant women can work as "biological tweets" for intercellular communication and alter the gene expression in growing fetus [6-8]. We also are interested in nutritional interventions of pregnant mother and growing child to improve the intrauterine growth conditions [9]. In Asian countries like India and China, even to this day, thirty percent of the children born are of low birth weight (LBW) and these LBW children are predisposed to develop excess CMDs [10].

Irrespective of which CMDs we are discussing, atherosclerosis and related vasculopathies play a very important role in disease progression. At present, diagnosis of altered vascular physiology and function is by and large done by measuring endothelial dysfunction (ED), intimal medial thickness (IMT) or by monitoring arterial stiffness by calcium scoring. Professor Jay Cohn a leading cardiologist at the University of Minnesota says that there is no coronary disease without endothelial dysfunction. In view of these observations, monitoring ED and preventing further deterioration in the vessel wall pathology becomes one of the preferred interventions.

We the members of South Asian Society on Atherosclerosis and Thrombosis have been advocating early detection of the risks for obesity and diabetes and better management of identified risks for preventing the progress of these diseases. In China a 6-year intervention with diet, exercise and lifestyle resulted in reduction (diet alone 31%, exercise 36%. Diet and lifestyle 42%) of risk for diabetes–related clinical complications [11]. A Finnish and US Diabetes prevention strategy using lifestyle intervention demonstrated 58% reduction in diabetes incidence [12]. As a part of the 2020 impact goals, the American Heart Association (AHA) has published seven ideal health goals; not smoking, maintaining normal weight, increased physical activity, a healthy diet, normal blood lipids, normal blood pressure and a normal fasting glucose. A publication of the National Health and Nutritional Examination Survey (NHANES) of the USA showed that individuals who met five of the seven ideal metrics of AHA, had 78% reduction in the hazard ratio for heart disease in Men and 94% for the Women [13]. A recent article by Khera and associates showed that in four studies with over 55,000 participants, a favorable lifestyle intervention was associated with nearly 50% lower relative risk for coronary artery disease, in spite of the genetic risk [14].

I am delighted to join the editorial board of the newly initiated journal, Intervention in Obesity and Diabetes (IOD). I hope as the title of your journal indicates, the editorial board will actively solicit articles related to not only obesity and diabetes but also to associated areas of cardio metabolic diseases. Wishing your effort a great success.

References

1. Rao GHR (2015) Integrative approach to health: Challenges and opportunities. J Ayur Integr Med 6(3): 215-219.

2. Rao GHR, Nagendra HR (2012) Holistic approaches for prevention of heart disease and diabetes. J Prevent Cardiol 12(2): 231-238.

3. Rao GHR (2014) Gandhi PG: Integrative Medicine: Global perspective. J Homeo and Ayurved Med.

4. Rao GHR (2014) Non-traditional approaches to diagnosis and management of type-2 diabetes mellitus: Point of view. J Diabetes and Metabolism 6: 489.

5. Rao GHR, Gandhi PG, Sharma V (2014) Clinical complications of Type-2 diabetes mellitus in South Asian and Chinese populations: An overview. Diab Met 5: 420.

6. Deng ZB, Poliakov A, Noels H (2009) Adipose tissue exosome-like vesicles mediate activation of macrophage-induced insulin resistance. Diabetes 58(11): 2489-2505.

7. Fain JN, Tichansky DS, Madan AK (2005) Transforming growth factor beta 1 release by human adipose tissue is enhanced in obesity. Metab Clin Exp 54(11): 1546-1551.

8. Ferrante SC, Nadler EP, Pillai DH (2015) Adipocyte-derived exosomal miRNAs: a novel mechanism for obesity-related disease. Pediatr Res 77(3): 447-454.

9. Rao GHR, Bharathi M (2016) Mother and child: First step for prevention of cardiometabolic diseases. The J Cardiol (Photon Journal) Photon 109: 179-186.

10. Scrimshaw NS (1997) The relation between fetal nutrition and chronic disease later in life: good nutrition and lifestyle matter from womb to tomb. BMJ 12: 506.

11. Pan XX, Li GW, Hu YH (1997) Effect of diet and exercise in preventing NDDM in people with impaired glucose tolerance. The D Quing IGT and Diabetes Studies. Diabetes Care 20(4): 537-544.

12. Lindstorm J, Parikka PI, Peltonen M (2006) Sustained reduction in the incidence of type-2 diabetes by lifestyle interventions: Follow up of the Finnish Diabetes Prevention Studies. Lancet 368(9548): 1673-1679.

13. Knowler WC, Connor BE, Fowler SE (2002) Diabetes Prevention Program Group. Reduction in the incidence of type-2 diabetes with life style intervention or metformin. N Engl J Med 346(2): 393-403.

14. Khera AV, Emdin CA, Drake I (2016) Genetic risk, adherence to healthy lifestyle single and relative risk of coronary disease. N Engl J Med 375: 2349-2358.

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