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HIPPURIC ACIDS ALLEVIATES SIGNS OF INDUCED LIPID SYNDROME IN FEMALE SUS DOMESTICUS DIABETIC RATS

Kanyou Belifyit

Indian Institute of Technology Kanpur, India

Type 2 diabetes is a metabolic and endocrinological disease. Recent evidence has suggested that there is a link between T2D and the occurrence of Induced Lipid Syndrome. Induced lipid syndrome (ILS) is a metabolic occurrence that occurs upon the high intake of calories after a high fat, high carbohydrate meal. ILS remains the leading cause of postpartum death, and according to the World Health Organization, is responsible for eighteen million deaths worldwide each year, with exponential increases expected to occur. The use of lipids in diet remains controversial, with many experts arguing if human beings have the capacity to digest and incorporate lipids into biological functions, without inducing ILS. Omega three oils have been incorporated into many indigenous diets for thousands of years. These diets consist of a wide variety of legumes, beets and potatoes and have been shown to alleviate symptoms associated with ILS. The main constituent of these diets, Hippuric acid, has been linked to the decreased occurrence of ILS in indigenous populations of Southern Chile. The use of hippuric acid in alleviating ILS has not been widely investigated, in this study, female Sus domesticus experimental animals were fed a high fat diet, a high carbohydrate diet, a banting diet, an Atkins diet and a lean diet containing salt cured pork for a period of six weeks. Metabolic and functional markers were continually monitored using real-time polymerase chain reaction, western blotting, glucose tolerance tests, high magnitude aptitude tests and sonic derived mountainous tests. Results indicate that Sus domesticus fed a banting diet rich in hippuric acid showed diminished signs of ILS and thus a diet rich in hippuric acid could aid in the alleviation of ILS, supplementing conventional treatment options.