

## **Obesity 2019: The effect of 20 hydroxyeicosatetraenoic acid antagonism on myocardial infarction of metabolic syndrome rats - Corinna Lozano - New York Medical College, USA**

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### **Abstract**

20-hydroxyeicosatetraenoic acid (20-HETE) is an eicosanoid metabolite of that has a wide range of effects on the vascular system such as collateral cell growth, the vascular rebuilding of the heart. Metabolic syndrome and 20-HETE have been shown to be correlated together. There is a higher concentration of 20- HETE in Metabolic Syndrome patients. With a higher concentration of 20-HETE patients with metabolic syndrome have symptoms that are more severe. The effect of elevated 20-HETE is negative and can influence cell growth after a myocardial infarction. Myocardial Infarction (MI) is another term for a heart attack. In previous studies, it shows an MI size increases with an elevated level of 20-HETE. During the study, the metabolic syndrome rats and a control group of rats will be induced with an MI for about 30minutes.

After rats from both groups are given an MI and 20-HETE antagonist named 20-SOLA which counteracts 20-HETE levels will be given. 20-SOLA treatment was given to the rats at 48hours, 1 week and 8 weeks. The results indicated that the AMPK antibody for both total and phosphorylated showed a significant decrease in 48hour samples. 20-SOLA was found to create equilibrium in 20-HETE levels in all tissue samples and significantly more in JCR MI rats. 20-SOLA aided the decrease in ischemia for both rats, but again results indicate a more reliable significance in JCR MI rats. These findings are relevant to the epidemic of cardiovascular diseases plaguing populations globally.

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