

## **Pro and Anti-Oxidants in Cardiomyopathy**

Matsa Lova Satyanarayana<sup>1</sup>, Rangaraju Advithi<sup>1</sup>, Ananthapur Venkateshwar<sup>2</sup> and Pratibha Nallari<sup>1\*</sup>

*1. Department of Genetics, Osmania University, Jamai Osmania P.O, Hyderabad 500 007,  
Andhra Pradesh, India*

*2. Institute of Genetics and Hospital for Genetic Diseases, Begumpet, Hyderabad 500 016,  
Andhra Pradesh, India*

**KEYWORDS** Dilated Cardiomyopathy. Hypertrophic Cardiomyopathy. Malondialdehyde. Nitric Oxide, Ceruloplasmin

**ABSTRACT** Free radicals play an essential role in maintaining the physiological condition of the body and oxidative stress is a result of an imbalance between free radicals and protective endogenous antioxidants, mostly associated with inflammatory disorders. Since cardiomyopathy is also an inflammatory disorder, the role of pro and anti oxidants is executed. Overall 180 cases (83 HCM and 97 DCM cases) and 100 healthy volunteers were included in the study. 5ml of venous blood samples were collected for the analysis of Malondialdehyde, Nitric oxide and Ceruloplasmin levels. MDA was found to be high in HCM whereas NO and Cp levels were high in DCM. Based on the findings it can be concluded that, Hypertrophic cardiomyopathy can results due to an imbalance in pro-oxidants while Dilated cardiomyopathy is an end result of oxidative stress. Hence the pro-oxidants MDA and NO, and antioxidant ceruloplasmin levels, may serve as prognostic indicators in hypertrophic and dilated cardiomyopathy, with failing hearts.