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**Original article:**

**Gender disparity in Oxidative stress in healthy preterm neonates delivered vaginally**

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**Abstract:**

Oxidative stress occurs as a consequence of imbalance between the formation of oxygen free radicals and inactivation of these species by antioxidant defencesystem**.** Birth exposes the neonate to a higher PO2 than experienced in utero. Studies have shown that female neonates have better survival as compared to male babies especially in the preterm group. This study was undertaken to find out early sex differences in oxidative stress. The oxidative stress biomarkers MDA and Nitrites and the antioxidant vitamins C & E were measured in cord plasma of these neonates. It was observed that Males had higher levels of plasma MDA and Nitrites (p< 0.05) than females. No difference was found in the antioxidant vitamin C and E levels (p>0.05) in the males and females respectively. Thus,sex-based differences in oxidant injury vulnerability occurring early in life could represent a biological mechanism contributing to better survival and gender disparity later in life.

**Keywords:** Oxidative stress, Gender disparity, Preterm neonates