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**Original article:**

**Study of Parasympathetic activity of different trimester of pregnancy in rural area**

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**Abstract:**

**Introduction:** The present study was designed to evaluate the physiological responses to noninvasive cardiovascular autonomic function tests in normal pregnancy and compare them with non- pregnant controls. All types of behavioral and hormonal changes occur in women especially during reproductive life. Therefore, it is worth, while to assess autonomic functions during various phases of woman’s reproductive life. These would also help to predict any existing autonomic dysfunction during various phases of woman’s life.

**Objectives**: The present study was designed to the physiological responses of parasympathetic activity tests of different trimester of pregnancy and non pregnant women in rural area.

**Materials and Methods:** Variations in parasympathetic activity study was carried out in the Department of Physiology in Rural Medical College, Loni, Maharashtra during the period of Feb2013 to Feb 2015. Study population was 160 pregnant and non-pregnant women, pregnant and non-pregnant women are equally divided in to four groups during study period. Hence the total 160 women were interviewed and examined. Data were analysed statistically using ANOVA and Multiple Comparison analysis.

**Results**: In the present study, For parasympathetic activity, it was observed that heart rate response, E:I ratio and valsalva ratio were significant (p < 0.05) in both pregnant and non-pregnant women.

**Conclusion**: The study showed significant increase in heart rate response, E:I ratio and valsalva ratio in the different trimester of pregnancy, reflecting parasympathetic activity as compared to non pregnant group.

**Key words**: Autonomic function tests, pregnant women.