

- [Epub Ahead of Print](#)
- [Editorial Board](#)

You have to be [registered](#) and [logged in](#) for purchasing articles.

Abstract

Natural Antioxidant Vitamins Status in Pregnancies Complicated with Intrauterine Growth Restriction by Amita K. Gadgok, Tarun K. Sharma, Maheep Sinha, Rakesh Khunteta, Satish K. Vardey, Poonam Sahni, Manisha Sankhla

Background: The weight of the infant at birth is a powerful predictor of infant growth and survival and is dependent on maternal health and nutrition during pregnancy. Pregnant women have a defense mechanism against increased oxidative stress composed of antioxidant enzymes and natural antioxidant vitamins like vitamin C and E. Therefore, we evaluated whether differences exist in serum levels of vitamin C and E in pregnant women complicated with intrauterine growth restriction (IUGR).

Methods: This study was done in 180 pregnant women admitted in hospital for delivery. Blood samples were collected and stored at -70°C until analysis. Among 180 pregnant women 150 were identified as IUGR pregnant women according to the weight of the infant and the remaining 30 normal healthy pregnant women as controls. Blood hemoglobin and serum vitamin C and E levels were measured in both groups.

Results: The mean hemoglobin concentration was significantly decreased ($p < 0.001$) in IUGR pregnant women (8.92 ± 1.35 g/dL) as compared to the normal healthy pregnant women (10.51 ± 1.04 g/dL) in our study. The serum concentration of vitamin C in the group of pregnant women with IUGR was 0.54 ± 0.15 mg/dL, whereas in the group of normal healthy pregnant women it was 0.91 ± 0.23 mg/dL. The serum vitamin E level in the normal healthy pregnant women group was 1.22 ± 0.35 mg/dL and 0.65 ± 0.24 mg/dL in IUGR pregnant women group. The serum vitamin C and E level in IUGR pregnant women group was found to be significantly decreased as compared to the normal healthy pregnant women group.

Conclusions: The study indicates the importance of natural antioxidants vitamin C and E against increased oxidative stress in pregnancies complicated with IUGR. Therefore, it may be useful to measure serum vitamin C and E levels in IUGR pregnant women. This study suggests further research to investigate the role of these natural antioxidant vitamins in fetal growth at various gestation stages.

DOI: 10.7754/Clin.Lab.2017.161120

- [Impressum](#)
- [Datenschutz](#)
- [Disclaimer](#)
- [Contact](#)
- [Author Guide](#)
- [Subscription Rates](#)

