

# L-ARGININE SUPPLEMENTATION IN IUGR AND IT'S EFFECT ON FETAL OUTCOME - A RANDOMISED CONTROL TRIAL

## ABSTRACT

### **OBJECTIVE:**

Intrauterine growth restriction (IUGR), a condition in which the foetal growth is restricted pathologically in utero, remains a serious health problem. The main aim of this study was to evaluate the effect of L-Arginine administration on the fetal outcome in pregnancies complicated by intra uterine growth restriction.

### **METHODS:**

This randomized control study was undertaken in the Department of Obstetrics and Gynaecology at Government Kilpauk Medical College and Hospital, Chennai from March 2017 to August 2017. The study included 60 randomly chosen pregnant women diagnosed with intrauterine growth restriction (IUGR). 30 women received 3 g of L-Arginine daily as a supplement to standard therapy (case group) and 30 women received only routine therapy (control group). The ultrasound and clinical examination were done on the first day of hospitalization and then every week in both the groups.

### **RESULTS:**

In the group treated with L-Arginine, we observed higher Estimated fetal weight after 4 weeks of treatment ( $p < 0.05$ ), higher birth weight at delivery ( $p < 0.05$ ), and APGAR score at 5 minutes ( $p < 0.05$ ) compared to control group. There were no significant differences in IUGR (at entry and at delivery) between

two groups. We also observed that there was an improvement in the liquor status of the group treated with L-Arginine ( $p < 0.05$ ).

### **CONCLUSION:**

Our study demonstrated that L-Arginine administration to pregnant women with IUGR may improve fetal condition and neonatal outcome after delivery by prolonging pregnancy and delivering a child with higher birth weight, better APGAR score and decrease the rate of cesarean sections. However, these benefits require confirmation by larger, more-powered study.

**Key words:** IUGR, L-Arginine, neonatal outcome, oligohydramnios