

## ***Effect of Beta Thalassaemia Trait in Pregnancy with Particular Reference to its Complications and Outcome***

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Beta-thalassaemia trait condition is expected to have no significance to the person besides the mild anaemia. Pregnancy is expected to increase the anaemia in beta-thalassaemia traits, but how this and other factors could affect maternal and fetal outcomes are unclear. Many previous studies on this issue give inconsistent and even contradictory results. Thus, we decided to study the outcomes of pregnancy in pregnant women with beta-thalassaemia trait. The prospective case-control study included 121 pregnant women with beta-thalassaemia trait and 121 normal pregnant women. Patients in case and control groups were matched according to maternal age, gestational age and number of previous pregnancies. Participants were followed up at similar intervals for the duration of the pregnancy, and clinical information was obtained from available medical records without interfering with the management. Hb, MCV, MCH and MCHC in all three trimesters were significantly lower among cases (Hb in g/dL;  $9.50 \pm 0.64$ ,  $9.03 \pm 0.85$  and  $9.52 \pm 0.68$ ) than controls (Hb in g/dL;  $11.62 \pm 1.15$ ,  $11.01 \pm 1.94$  and  $11.74 \pm 1.81$ ). Overall, the signs and symptoms, anaemia and rate of blood transfusion (2<sup>nd</sup> trimester; 18.3% vs 0%, 3<sup>rd</sup> trimester; 16.7% vs 0.83%) were significantly high among cases ( $p < 0.05$ ) compared to the controls. No statistically significant differences were observed for pregnancy complications (preeclampsia, eclampsia, pregnancy-induced hypertension, oligohydramnios, polyhydramnios, IUGR, placental abruption and preterm labor), perinatal outcomes (postpartum hemorrhage, packed cell transfusion and Apgar score < 7 at 5 min, resuscitation at birth and liquor and ICU admissions) and neonatal outcomes (congenital abnormalities and neonatal complications, birth weight, body length and head circumference). However, in labor, the rate of caesarean deliveries (cases; 61%, controls; 45%) was significantly higher among cases ( $p < 0.05$ ) with no definite indications for such in most cases. In conclusion, the perinatal, maternal or neonatal outcomes in pregnancies are unlikely to be affected by the beta-thalassaemia trait condition except for the intensification of maternal anaemia.

**Keywords:** Beta-Thalassaemia Trait, Pregnancy Outcomes, Neonatal Outcomes, Maternal Anaemia, Case-Control Study