THE RELATIONSHIP BETWEEN IRON DEFICIENCY ANAEMIA AND ANTENATAL DEPRESSION AMONG PREGNANT WOMEN: A CROSS-SECTIONAL STUDY

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BACKGROUND: Iron deficiency is common among pregnant women and it affects the glial cells of brain which results in altered myelination of neuronal cells along with dysregulation of neurotransmitters like serotonin, dopamine which have a vital role in the pathophysiology of depression. Though there are several factors that could lead to antenatal depression, iron deficiency anaemia is an emerging aetiology. If it is left untreated, it would result as a major risk factor for causing post-partum depression, preterm birth, developmental delays among infants and several other obstetric complications.

OBJECTIVE: The primary objective of this study is to determine the relationship between iron deficiency anaemia and antenatal depression among pregnant women.

METHODS: A cross- sectional study was conducted among the second trimester pregnant women who attended the obstetrics department for antenatal care. A total of 210 participants were categorised into iron deficient (N=140) and iron sufficient (N=70) groups based on the haematological results. The risk of depression was assessed using a validated Edinburgh depression scale (EDS). A Pearson's correlation analysis was performed to check the association of EDS scores with patient characteristics. Linear and binary logistic regression models were used for predicting depression.

RESULTS: The distribution of depression was significantly varied between the groups. EDS scores was significantly higher in the iron deficiency anaemia group in comparison with the non- iron deficiency anaemia group (12.78± 3.40 vs. 8.82± 3.12; *p* value= 0.005; 95% CI 2.94 to 4.87). There was a significant negative correlation between haemoglobin level and EDS score. The odds of developing antenatal depression was 12 times higher in the iron deficient group, *p* <0.001.

CONCLUSION: Our findings suggest that iron deficiency anaemia acts as an independent factor in influencing antenatal depression. The results from this study can be used to emphasize the impact of this correlation among the clinicians.

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