



Study of the significance of iron deficiency indexes and erythrocyte parameters in anemic pregnant women and their newborns

L. Liu^{1*}, Y. Xiao^{2*}, B. Zou³ and L.L. Zhao¹

¹Department of Pediatrics, The Third Xiangya Hospital, Central South University, Changsha, China

²Neonatology Department, Guangzhou Women and Children's Medical Center, Guangzhou, China

³Department of Otolaryngology, Children's Hospital of Chongqing Medical University, Chongqing, China

*These authors contributed equally to this study.

Corresponding author: B. Zou

E-mail: ZouBin929@163.com

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ABSTRACT. This study aimed to analyze the iron deficiency index and erythrocyte parameters in anemic pregnant women and their newborns, and explore their implications for anemia during pregnancy. Pregnant women (70) in the third trimester with hemoglobin (Hb) <100 g/L who registered and delivered from June 2012-2013 were randomly selected as the observation group, 70 pregnant women at similar gestational ages with Hb >110 g/L were selected as the control group, and 70 newborns delivered by women in each group were included in corresponding offspring observation and control groups, respectively. Periodic physical examinations were conducted on the infants, and blood samples were drawn from the women and infants at birth, 42 days, 4 months, and 6 months old for detection of Hb and soluble transferrin receptor (sTfR) levels. Pregnant women and their 6-month-old infants

in the observation group had significantly different Hb and sTfR levels compared to controls ($P < 0.01$). There were no significant differences in Hb and sTfR levels of infants at birth, 42 days, and 4 months old ($P > 0.05$). The detection rate of iron deficiency anemia (IDA) was significant, at 61.43% among 6-month-old infants in the observation group and 22.86% among controls ($P < 0.01$). There were no significant differences in the detection rate of IDA among infants at birth, 42 days, and 4 months old between observation and control groups ($P > 0.05$). Therefore, anemia during pregnancy is a major contributing factor of IDA and subclinical iron deficiency among 6-month-old infants.

Key words: Anemia during pregnancy; Iron deficiency index; Erythrocyte parameter