

Iron Status of Newborns and Umbilical Cord Blood Hepcidin Levels in Gender Differences

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Abstract	<p>Fetal gender might affect the iron status of newborns. Hepcidin has an important role in the process of maternofetal iron transport. This study aims to compare the newborn iron status and the umbilical cord hepcidin levels between male and female gender. A cross-sectional study was conducted with subjects of 84 clinically healthy newborns. Written informed consent and ethical approval were carried out. Newborn iron status observed included (i) hematologic markers (RBC count, Hb, hematocrit, mean corpuscular volume (MCV) and red cell distribution width), and (ii) biochemical markers (serum iron (SI), serum ferritin (SF), soluble transferrin receptor (sTfR) and cord blood hepcidin). Hematologic markers were checked using Sysmex, XN-1000, while Hepcidin and sTfR were using ELISA. Serum iron was checked using IRON Flex[®]. Statistical analysis was tested with the independent t-test and the Mann-Whitney. All newborns and their mothers were in normal condition. The mean sTfR levels of newborns were significantly higher in the male group than females (38.3\pm9.06 vs. 34.3\pm8.16 nmol/L) with p=0.033. High sTfR levels reflect a low iron status. In conclusion, fetal gender differences influence the iron status of newborns, and male newborns have a potentially higher iron deficiency.</p>
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