

**Background:** Iron deficiency anemia (IDA) and thalassemia are the most common microcytic anemia in children. Sometimes, expensive or invasive investigations are necessary for their distinction. Red cell distribution - coefficient variation (RDW-CV) is a new generation marker more often used in differentiating IDA from thalassemia. A number of hematological indices are also useful (Mentzer, Shine&Lal, Green&King, Ricerca).

**Aim** To demonstrate the effectiveness RDW - CV in differentiating microcytic anemia.

**Method** Retrospective study conducted on a total of 215 patients with microcytic anemia. Criteria for study group selection: MCV and Hb below the minimum age reference (mild anemia, Hb between 9–11 g/dl and moderate anemia from 8.5–9 g/dl), without a history of other hematologic disorders or chronic diseases.

Sideremia was determined to all patients to confirm the diagnosis of IDA (the least expensive investigation for distinction). The RDW - CV > 16% was considered pathological.

**Results** 98 patients had low levels of sideremia, 134 patients had mild anemia and 81 - moderate anemia. RDW-CV was significantly correlated with sideremia, strongly for the group with mild anemia ( $p < 0.05$ ). Statistical significance was observed for Shine&Lal ( $p < 0.006$ ), Green & King ( $p < 0.005$ ), Ricerca ( $p < 0.05$ ). The greatest sensitivity presented Green&King (72%), followed by Shine&Lal and Ricerca, and the highest specificity Shine&Lal and Ricerca (92%).

**Conclusions** RDW-CV is useful in differentiating IDA, especially in mild forms. Although Green&King index is the most sensitive, we support Ricerca index for simple calculation formula.

#### 757 PREVALENCE OF MATERNAL ANEMIA AND ITS ASSOCIATION WITH HEMOGLOBIN LEVELS OF NEWBORN BABIES

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**Background and Aims** There are some reports regarding to the association between maternal and fetal hemoglobin level. The present study aimed to determine the prevalence of maternal anemia and its association with hemoglobin levels in their newborn babies.

**Methods** It was a descriptive analytical study in which mothers who referred for delivery to the Besat Hospital in Sanandaj city, Kurdistan province, western Iran were investigated. Overall, 604 mothers was recruited using easy sampling method. Blood assessment was conducted using the cell counter machine. The statistical tests of Chi square and t were used. Meanwhile, the Spearman correlation coefficient was used to test all correlations. The multiple regression analysis was also undertaken to assess the relationship between maternal and fetal hemoglobin versus confounding factors.

**Results** The prevalence of maternal anemia (Hb < 11 g/dLit) before delivery was 24.8% (n=150) and Hb levels less than 10 g/dLit was 6.6%. Overall, 5.8% (n= 34) newborns had a mean Hb levels of less than 13.7 g/dLit. A small number of mothers (3.3%, n=20) had preterm delivery and 31 newborn babies (5.3%) were low birth weight. There was no significant relationship between fetal Hb and gender, twins, and preterm babies. There was also a positive and significant correlation between maternal and fetal Hb levels ( $r = 0.143$ ,  $p < 0.001$ ).

**Conclusion** A significant association was observed between fetal as well maternal anemia with mothers' age, preterm birth, duration of iron therapy and occupation.

#### 758 DISTAL ULNAR CHANGES IN THALASSEMIC CHILDREN WITH DEFERIPRONE RELATED ARTHROPATHY

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Abstract 758 Figure 1



Abstract 758 Figure 2

**Background** Regular blood transfusion and iron chelation are the standard of care for thalassemic children. Deferiprone is an effective oral iron chelator but causes significant arthropathy. Though clinical and radiographic features deferiprone related arthropathy have been described, the long-term effects are not known.

**Aims** To report clinical and radiographic findings in thalassemic children with deferiprone related arthropathy.

**Methods** Evaluation of routine radiographs of left wrist and hand done for bone age estimation in 40 thalassemic children revealed unique radiographic changes in 13 children with previous or current deferiprone related arthropathy. Subsequently, these children underwent radiographs of both the knee joints.

**Results** Thirteen patients (10 males: 3 females) aged 10–16 years had abnormal radiographic findings. Median duration of deferiprone