

## عنوان مقاله:

Hematological indices in differentiation between iron deficiency anemia and beta-thalassemia trait

## محل انتشار:

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## خلاصه مقاله:

Background: Mild microcytic hypochromic anemias caused by iron deficiency (IDA) and beta-thalassemia trait ( $\beta$ -TT) continue to be problematic and a significant threat to society, particularly in relatively poor developing countries. The goal of this study was to use an accuracy approach to improve the diagnostic function of eight different prejudiced indices in Egyptian pediatric patients with microcytic anaemia. Methods: Eight discrimination indices for diagnostic performance are introduced to analyze the differences between  $\beta$ - $\beta$ -TT and IDA among Egyptian paediatric patients by using evaluation metrics calculated from RBC indices by various mathematical formulae. CBC, iron study and hemoglobin electrophoresis were performed to all included participants. Results: A total of ۳۰۰ Egyptian paediatric patients with  $\beta$ -TT or IDA were enrolled. The Mentzer and Ehsani index exhibited the highest diagnostic accuracy (۱۰۰%) followed by Sirdah (۹۷.۵%), Sirvistava (۹۵%), MDHL (۹۲.۵%) Green & King, Recierca, (۹۰%), and Matos (۷۰%). Indices with AUCs greater than ۰.۸, such as Mentzer, Ehsani, and Sirdah had very valuable predictive accuracy in distinguishing between  $\beta$ -TT and IDA. Conclusion: Although Hb electrophoresis is the gold standard for diagnosing  $\beta$ -TT, in developing countries, the Mentzer index, followed by the Ehsani and Sirdah indices, could be used as a simple and cheap method to distinguish  $\beta$ -TT from IDA in pediatric patients with mild microcytic hypochromic anaemia.

## کلمات کلیدی:

Hematological indices, beta-thalassemia trait, Iron Deficiency Anemia, Egyptian children

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1371632>



